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W OPOLU

SYNERGIA ROZWOJU SPOŁECZNO-GOSPODARCZEGO

SYNERGY OF SOCIO-ECONOMIC DEVELOPMENT

СИНЕРГІЯ СОЦІАЛЬНО-ЕКОНОМІЧНОГО РОЗВИТКУ

Akademia Nauk Stosowanych
Wyższa Szkoła Zarządzania i Administracji w Opolu

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Edited by ***Mykola Ohiienko***
Tadeusz Pokusa

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INTRODUCTION
ВСТУП

Актуальність та важливість синергії соціально-економічного розвитку є не лише теоретичними проблемами, але й ключовими факторами практичної реалізації сталого прогресу сучасного суспільства. Метою цієї монографії є дослідження взаємодії та синергії різних складових соціально-економічного розвитку на прикладі таких важливих сфер, як фізична культура і спорт, управлінські процеси, індустрія гостинності та туризму, а також транспортно-логістичні системи. Кожна з цих сфер має значний вплив на економічний потенціал країни, рівень соціального добробуту населення та сприяє розвитку інших галузей. Водночас, сучасні глобальні та локальні виклики вимагають інноваційних підходів до управління і синергії цих сфер для досягнення стійкого розвитку. Монографія складається з чотирьох основних розділів, кожен з яких розглядає окремий аспект соціально-економічного розвитку в умовах сучасних трансформацій:

1. Сучасні проблеми фізичної культури та спорту. Цей розділ присвячено аналізу розвитку фізичної культури та спорту в контексті сучасних соціальних і економічних викликів. Особливу увагу приділено ролі спорту у формуванні здорового способу життя населення, а також його впливу на економіку через створення робочих місць, інфраструктуру та міжнародну співпрацю.
2. Актуальні проблеми управління: за видами діяльності. Розділ досліджує проблеми, пов'язані з управлінням у різних сферах економічної діяльності, акцентуючи увагу на оптимізації управлінських процесів, інтеграції інноваційних методів управління та розвитку людського капіталу як основи для сталого розвитку.
3. Індустрія гостинності та туризму: стан та виклики. У цьому розділі аналізується роль індустрії гостинності та туризму у формуванні соціально-економічного розвитку, зокрема, в умовах постійних змін попиту, розвитку технологій та зростаючих вимог до екологічної сталості і соціальної відповідальності підприємств цієї галузі.
4. Транспортно-логістичні системи в умовах сьогодення. Останній розділ присвячений транспорту та логістиці, їх впливу на економіку та інтеграцію різних регіонів у глобальні виробничі та торговельні мережі. Обговорюються проблеми ефективності, безпеки, екологічності та адаптації транспорту до змінюваних умов, включаючи цифровізацію та розвиток інфраструктури.

Загалом, монографія пропонує системний підхід до розгляду проблем соціально-економічного розвитку через призму взаємодії ключових секторів економіки та суспільства.

Part 1

MODERN PROBLEMS OF PHYSICAL CULTURE AND SPORTS

СУЧАСНІ ПРОБЛЕМИ ФІЗИЧНОЇ КУЛЬТУРИ ТА СПОРТУ

1.1. Development of speed qualities of football players at the stage of preliminary basic training

Розвиток швидкісних якостей футболістів на етапі попередньої базової підготовки

Футбол на сучасному етапі пред'являє до спортсменів високі вимоги до розвитку усіх фізичних якостей, особливо це стосується розвитку швидкісних якостей, які є провідними у футболістів. Темп і швидкість гри з кожним роком збільшуються і професійні футболісти повинні відповідати стандартам розвитку швидкісних якостей.

На основі аналізу досліджень провідних науковців втановлено, що швидкісні якості найскладніше піддаютья розвитку, порівняно з іншими фізичними якостями. Швидкість генетично зумовлена і залежить від вроджених якостей спортсмена, а саме: рухливості нервових процесів, оперативності діяльності нейромоторного механізму, співвідношення швидких та повільних мязових волокон. Але в той же час, прояв швидкісних якостей залежить від нервово-м'язової координації, здібностей організму до швидкої мобілізаці рухової дії, а ці якості можливо удосконалювати шляхом правильно організованих тренувань. Отже, потребує дослідження проблема диференційованого розвитку швидкісних якостей футболістів на етапі попередньої базової підготовки.

Мета дослідження полягає в науковому обгрунтуванні диференційованого підходу до розвитку і оцінювання швидкісних якостей футболістів на етапі попередньої базової підготовки.

Прояв форм швидкісних якостей залежить від ряду факторів:

- Стану нервової системи та нервово-м'язового апарату;
- Морфологічних особливостей м'язової тканини;
- Сили м'язів;
- Здібностей м'язів швидко переходити від напруження до розслаблення;
- Здібностей до координаційних рухів при швидкісній роботі;
- Амплітуди рухів та ступеня рухливості суглобів та ін.

Найбільш сприятливими періодами для розвитку швидкісних якостей як у хлопців, так і у дівчат є вік від 7 до 11 років. Зменшується темп розвитку різних показників швидкості у віці від 11 до 14-15 років. Саме в цьому віці фактично стабілізуються результати показників швидкості простої реакції і максимальної частоти рухів.

У зв'язку з цим, процес розвитку і удосконалення швидкісних якостей спортсменів можна розділити на два етапи: етап диференційованого розвитку окремих складових швидкісних якостей (частота рухів, швидкість поодинокого руху, швидкість реакції) та етап інтегрального удосконалення, на якому відбувається об'єднання елементарних здібностей в цілісні рухові дії, що є специфічними для певного виду спорту.

Дослідження, проведені за останні десятиліття, дають все більше підстав вважати, що принаймні деякі з проявів швидкості відносно незалежні один від одного (наприклад, час простої рухової реакції і темп відтворення рухів) і що фактори, що лежать в їх основі, далеко не однозначні. З урахуванням цього, замість терміна «швидкість» все частіше користуються узагальненим терміном «швидкісні здібності».

У футболі важливі всі прояви швидкісних здібностей, починаючи від простої рухової реакції та закінчуючи швидкістю гальмування.

Кожен з компонентів швидкості (швидкість дії з м’ячем, швидкість дії без м’яча, швидкість реакції, швидкість реакції вибору, швидкість сприйняття і прогнозування) є відносно самостійним, але відіграє важливу роль в досягненні високого результату у змаганнях.

При розвитку швидкісних якостей найбільш ефективним є комплексне поєднання розвитку усіх складових з етапом спортивного удосконалення.

Для розвитку швидкості основною умовою є використання на тренуванні вправ з інтенсивністю, наближеною до максимуму і вони повинні відповідати наступним вимогам:

- техніка вправи повинна забезпечувати можливість виконання швидких рухів;
- вправи на швидкість повинні бути добре засвоєні і прості у виконанні;
- тривалість вправи повинна бути такою, щоб у кінці її виконання швидкість не знижувалася в наслідок втомлення.

У останніх дослідженнях провідних фахівців [1, 3, 4] показано, що всі вищезгадані види швидкісних можливостей специфічні. Діапазон взаємного переносу швидкісних здібностей обмежений (наприклад, можна мати гарну реакцію на сигнал, але мати невисоку частоту рухів; здатність виконувати з високою швидкістю стартовий розгін у спринтерському бігу ще не гарантує високої дистанційної швидкості та навпаки).

Пряме позитивне перенесення швидкості має місце лише в рухах, у яких подібні змістові сторони, а також руховий склад. Зазначені специфічні особливості швидкісних здібностей вимагають застосування відповідних тренувальних засобів і методів відповідно до кожного їх різновиду [2, с.17].

Основними методами розвитку швидкісних якостей є:

— метод строго регламентованої вправи;

— метод змагання;

— ігровий метод [6].

Специфічні закономірності розвитку швидкісних якостей зобов'язують особливо ретельно поєднувати зазначені вище методи, у доцільних співвідношеннях. Справа в тому, що відносно стандартне повторення рухів з максимальною швидкістю сприяє стабілізації швидкості на досягнутому рівні, виникненню «швидкісного бар'єру». Тому в методиці розвитку швидкості центральне місце посідає проблема оптимального поєднання методів, що включають відносно стандартні та варіативні форми вправ.

Швидкісні якості розвиваються при виконанні короткочасних вправ з максимальною швидкістю. При цьому необхідно пам'ятати, що при виконанні цих вправ необхідно дотримуватись певних правил:

1. Швидкість не може розвиватися у людини, якщо вона стомлена. Ця якість краще розвивається в емоційних, змагальних умовах (естафети, ігри, групові старти та ін.). Частота серцебиття у запропонованих вправах змінюється залежно від віку та рівня підготовленості тих, хто займається межах 170-180 ударів за хвилину;

2. При виконанні нової, недостатньо засвоєної вправи, не треба прагнути виконувати її з граничною швидкістю;

3. Виконуючи вправу на швидкість, необхідно звертати увагу на вміння розслаблювати м'язи, що беруть участь в основному руховому акті;

4. Відпочинок між вправами на швидкість має бути достатньо тривалим та займати – 3-5 хв. і більше. Необхідно навчати того, хто займається при виконанні вправи, вмінню добре налаштовуватися на кожну чергову спробу [5, с. 78]

Основними засобами розвитку швидкості рухів є вправи, що виконуються з граничною або близько до граничної швидкістю:

1) власне швидкісні вправи;

2) загально-підготовчі вправи;

3) спеціально-підготовчі вправи [6].

Власне швидкісні вправи характеризуються невеликою тривалістю (до 15-20 с) і анаеробним алактатним енергозабезпеченням. Вони виконуються з невеликою величиною зовнішніх обтяжень або за відсутності їх (оскільки зовнішні прояви максимумів сили і швидкості пов'язані зворотно пропорційно).

У якості загально-підготовчих вправ найбільш широко у фізичному вихованні та спорті використовуються спринтерські вправи, стрибкові вправи, ігри з вираженими моментами прискорень (наприклад, баскетбол за звичайними та спрощеними правилами, міні футбол тощо).

При виборі спеціально-підготовчих вправ з особливою ретельністю слід дотримуватися правил структурної подібності. У більшості випадків вони є «частинами» або цілісними формами змагальних вправ, перетворених таким чином, щоб можна було перевищити швидкість по відношенню до досягнутої на змаганнях.

За результатами аналізу наукових джерел інформації та власних висновків, з метою розробки методики розвитку швидкісних якостей футболістів на етапі попередньої базової підготовки, швидкісні якості були поділені на дев'ять їх проявів у спортивній діяльності:

— проста реакція;
— складна реакція;
— швидкість поодинокого руху;
— частота (темп) рухів;
— швидкість цілісної рухової дії;
— стартовий розгін;
— вибухова сила;
— дистанційна швидкість (швидкісна витривалість);
— швидкість гальмування (швидкість зупинки руху)

Дослідження провідних вчених останніх років дають підставу вважати, що різні прояви швидкісних якостей є незалежними одні від одного. Можна мати високу стартову швидкість, але програвати на дистанції. Можна мати високу швидкість реакції, але мати невисоку частоту рухів. Швидкісні якості – це комплексні якості.

У спортивній практиці існують вправи, за допомогою яких можна розвивати кожен із дев'яти проявів швидкісних якостей окремо, враховуючи їх особливості.

У групі обстежуваних, що складалася з 20 спортсменів, що в свою чергу було поділено на експериментальну та контрольну групи по 10 спортсменів є ті, хто відстає по кожному з проявів швидкісних здібностей. Незважаючи на те, що у віці 11-13 років швидкісні якості піддаються найкращому розвитку, за умови що це є сенситивним періодом, але за допомогою диференційованого підходу та правильно підібраних вправ можна значно покращити кожен із показників.

Нами було розроблено методику розвитку швидкісних якостей футболісті на етапі попередньої базової підготовки, що включала вправи та комплекси вправ для розвитку кожного з дев'яти проявів швидкісних якостей, а також було сформульовано рекомендації щодо їх правильного виконання.

Усі вправи слід виконувати, будучи свіжим і після відпочинку, щоб ефект втоми не заважав розвитку швидкісних якостей. Бажано виділяти в тренувальному процесі спеціальний мікро- або мезоцикл для вдосконалення швидкісних якостей Нами було проведено експеримент протягом підготовчого та предзмагального етапу річного макроциклу з лютого по травень 2024 року, що включав три мезоцикли. Розподіл тренувань в даних мезоциклах наведено в таблиці 1.

Таблиця 1.

Розподіл тренувань в мезоциклах

№	Тип мезоциклу	Тривалість мезоциклу	Кількість тренувань
1	Втягуючий	Лютий	12
2	Базовий	Березень	17
3	Передзмагальний	Квітень	22

На кожному тренуванні експериментальної групи було включено комплекси вправ на розвиток відповідних швидкісних якостей.

Експеримент проводився на базі СДЮСШОР «Миколаїв» з футболу і тривав протягом підготовчого та передзмагального періоду з лютого по травень 2024 року. Експериментальна група працювала за розробленою нами методикою удосконалення швидкісних якостей, а контрольна група за стандартною методикою тренування футболістів групи попередньої базової підготовки.

До проведення оцінювання швидкісних якостей футболістів було сформовано групу з 20 спортсменів віком 11-13 років, що відносяться до групи попередньої базової підготовки. Результати тестів футболістів наведено в таблиці 2.

Таблиця 2.

Результати тестів футболістів контрольної та експериментальної груп на розвиток швидкісних якостей на початку експерименту

Тест	Групи	Середнє значення	Стандартне відхилення	Max	Min	Норма
Біг на 30 метрів,с	ЕГ	4,0	0,3	4,5	3,5	4,15
	КГ	3,8	0,4	4,3	3,3	
Дальність удару, м	ЕГ	42	5,3	53	31	41,5
	КГ	42,5	4,8	55	30	
Стрибок в довжину, см	ЕГ	212,5	11,5	230	195	220
	КГ	215	10,5	235	195	
Т-тест, с	ЕГ	9,0	0,3	9,5	8,5	9,3
	КГ	9,3	0,4	10,1	8,5	

Усі середні результати тестів в контрольній та експериментальній групі мають незначні відхилення з нормами. Це свідить про те, що швидкісні якості футболістів контрольної та експериментальної групи мають показники, що відповідають нормам для групи попередньої базової підготовки.

Після проведення експерименту, що тривав протягом трьох місяців нами було проведено повторні тестування розвитку швидкісних якостей футболістів контрольної та експериментальної групи. Результати тестів після експерименту контрольної та експериментальної групи наведено в таблиці 3.

Таблиця 3.

Результати тестів футболістів контрольної та експериментальної груп на розвиток швидкісних якостей в кінці експерименту

Тест	Групи	Середнє значення	Критерій Стьюдента, Т	Р
Біг на 30 метрів, с	ЕГ	3,5± 0,3	2,27	<0,05
	КГ	3,7 ±0,35	2,54	<0,05
Дальність удару, м	ЕГ	45±6,3	2,8	<0,05
	КГ	43±5,4	2,67	<0,05
Стрибок в довжину, см	ЕГ	220±8,3	2,43	<0,05
	КГ	216± 9,5	2,34	<0,05
Т-тест, с	ЕГ	8,5±0,3	2,56	<0,05
	КГ	9,0±0,5	2,67	<0,05

Приріст результатів контрольної та експериментальної груп за програмою тестів на визначення швидкісних якостей до та після експеимету наведено в таблиці 4.

Таблиця 4.

Приріст результатів контрольної та експериментальної груп за програмою тестів на визначення швидкісних якостей до та після експеименту

№	Тест	Групи	До експерименту	Після експерименту	Приріст Результатів,%
1	Біг на 30 метрів, с	ЕГ	4,0 ± 0,3	3,5± 0,3	12,5
		КГ	3,8±0,4	3,7 ±0,35	2,6
2	Дальність удару, м	ЕГ	42 ± 5,3	45±6,3	7,1
		КГ	42,5 ± 4,8	43±5,4	1,2
3	Стрибок в довжину, см	ЕГ	212,5 ± 11,5	220±8,3	2,1
		КГ	215±10,5	216± 9,5	0,5
4	Т-тест, с	ЕГ	9,0±0,3	8,5±0,3	5,6
		КГ	9,3±0,4	9,0±0,5	3,2

Отже за результатами експерименту ми можемо підвести наступні підсумки:

1. В тесті на визначення дальності удару по мячу та швидкості поодинокого руху приріст результатів експериментальної групи склав 7,1 %, а контрольної 1,2 %;
2. Результат тесту в бігу на 30 метрів з ходу став критерієм для визначення дистанційної швидкості. У експериментальній групі даний показник збільшився на 12,5%, а в контрольній лише на 2,6%.
3. Стрибок в довжину з місця дав можливість оцінити одноразовий прояв концентрованого вибухового зусилля. За результатами експерименту показники експериментальної групи зросли на 2,1 %, а контрольної на 0,5%.
4. Проведення Т-тесту сприяло виизначенню швидкості гальмування, як одного з проявів швидкісних якостей, особливо важливих у футболі. Приріст результатів експериментальної групи склав 5,6%, а контрольної 3,2%.

На основі цих даних експерименту ми можемо стверджувати, що дана методика розвитку швидкісних якостей футболістів на етапі попередньої базової підготовки є ефективною і може бути запропонована тренерам для застосування при оцінюванні швидкісних якостей футболістів.

Ефективність методики розвитку швидкісних якостей футболістів з використанням диференційованого підходу підтверджується достовірними результатами тестів, так як $p<0,05$ в усіх тестах контрольної та експериментальної груп до та після завершення експерименту.

Перспективами подальшого дослідження є пощук нових підходів і методик для удосконалення фізичної підготовленості футболістів протягом багаторічного спортивного удосконалення.

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1.2. Assessment of the effectiveness of using complexes of special preparatory exercises for the development of speed and speed-power qualities of sprinters in specialized training groups

Оцінка ефективності використання комплексів спеціально-підготовчих вправ для розвитку швидкісних та швидкісно-силових якостей спринтерів в групах спеціалізованої підготовки

Постійне прагнення досягти високих показників спеціальної працездатності у бігу на короткі дистанції за рахунок підвищення обсягу та інтенсивності тренувальних навантажень найчастіше не забезпечує якісного вдосконалення підготовленості атлетів та досягнення запланованих результатів. Така тенденція призвела до цілого ряду проблем, одна з яких пов'язана зі складністю реалізації аспектів впровадження у практику результатів фундаментальних досліджень у галузі теорії та методики спортивного тренування.

Тому дуже актуальним стає пошук нових шляхів невикористаних резервів в організації навчально-тренувального процесу на всіх етапах становлення спортивної майстерності, а особливо, на етапі спеціалізованої підготовки.

Провідні фахівці пов'язують підвищення якості спортивної підготовки юних спринтерів із науково-обґрунтованими рішеннями проблеми управління структурою бігу, що передбачає виявлення ефективності та дотримання програмно-цільового використання спеціально-підготовчих вправ на тренуваннях, що мають високий взаємозв'язок з біодинамічними характеристиками змагальної вправи спортсменів та підвищують руховий потенціал.

Спеціальні бігові вправи та методику їх виконання було викладено в дослідженнях провідних науковців теоретиків та практиків, а саме: Аврутіна С., Артюшенка А., Демчука М., Кевпанича В., Клочка В., Маріонди І., Моргунова О., Соколова О., Шкірти М. Але більшість з цих досліджень не розкривають методику використання спеціально-підготовчих вправ на етапі спеціалізованої підготовки, а лише дають класифікацію та характеристику техніки виконання окремих вправ.

Також не повною мірою розроблені підходи до використання спеціально-підготовчих вправ відповідно до етапу підготовки спортсменів-легкоатлетів враховуючи їх функціональні можливості. Відсутність чітких рекомендацій організації тренувального процесу, що забезпечують взаємодію основних засобів підготовки спринтерів із системним та цілеспрямованим застосуванням спеціально-підготовчих вправ, перешкоджає поетапному переходу від науково-теоретичних передумов до практичних дій, що, у свою чергу, знижує ефективність проведення тренувальних занять в групах спеціалізованої підготовки.

Розробка нових методологічних підходів до програмно-цільового використання спеціально-підготовчих вправ у навчально-тренувальному процесі підготовки спринтерів є актуальною і важливою проблемою, яка не отримала дотепер достатнього наукового обґрунтування і потребує детального теоретичного дослідження та експериментальної перевірки ефективності її використання.

Мета дослідження – удосконалення змісту навчально-тренувального процесу за рахунок програмно-цільового використання комплексів спеціально-підготовчих вправ у річному цикл підготовки юних бігунів на короткі дистанції на етапі спеціалізованої підготовки.

У теорії та методиці спортивного тренування бігунів на короткі дистанції одним із найважливіших питань є пошук найбільш прогресивних способів та прийомів удосконалення швидкісно-силової та технічної підготовленості спортсменів. Провідні вчені та практики проводять необхідну роботу щодо створення передових методів проведення навчально-тренувальних занять, що дозволяють з найбільшою ефективністю використовувати поєднання рухових якостей зі спеціальною працездатністю спринтера, що повинно забезпечувати досягнення стабільних та надійних результатів.

Фахівці сходяться на думках, що проблема організації навчально-тренувального процесу на сучасному етапі спортивних досягнень у бігу на короткі дистанції, незважаючи на зовнішню простоту основної змагальної вправи, представляється складною і, мабуть, недостатньо розробленою, в порівнянні з іншими видами легкої атлетики.

Нами було проведено анкетування провідних тренерів Миколаївської спеціалізованої дитячо-юнацької школи олімпійського резерву з легкої атлетики з метою вивчення досвіду використання спеціально-підготовчих вправ в тренувальному процесі бігунів-спринтерів на етапі спеціалізованої підготовки. У анкетуванні взяли участь 5 тренерів СДЮСШОР м. Миколаєва з легкої атлетики серед яких: один тренер, що має вищу категорію, два тренери першої категорії та два тренери другої категорії.

Підводячи підсумки даного анкетування ми можемо зробити висновки:

1. Методика підготовки спортсменів-спринтерів потребує подальшого удосконалення.
2. Провідні тренери використовують в підготовці спортсменів спеціально-підготовчі вправи, але або епізодично, або лише у першій частині тренування.
3. При використанні спеціально-підготовчих вправ на тренуванні одні тренери віддають перевагу вправам, що направлені на засвоєння форми та техніки виконання основної змагальної вправи, а інші надали перевагу вправам, що сприяють розвитку провідних якостей спринтерів швидкісним і швидкісно-силовим.
4. Усі тренери зазначили на важливості використання спеціально-підготовчих вправ і подальшого удосконалення методики їх застосування.

Отже, результати опитування провідних тренерів з легкої атлетики СДЮСШОР м. Миколаєва дало підстави для розробки комплексів спеціально-підготовчих вправ та методики їх використання для удосконалення швидкісних та швидкісно-силових якостей спортсменів на етапі спеціалізованої підготовки

У комплекси спеціально-підготовчих вправ швидкісної та швидкісно-силової спрямованості, окрім вправ, за рекомендацією тренерів, були включені вправи, що використовуються в системі навчально-тренувальних занять.

Спеціально-підготовчі вправи готують зв'язки та суглоби до бігу, ці вправи відмінно розвивають силу, витривалість та координують м'язи ніг – особливо ті, на які припадає основне навантаження під час бігу. Спеціально-підготовчі вправи підвищують частоту кроків при бігу, силу відштовхування кожного кроку та вдосконалюють техніку бігу. Атлети, які регулярно виконують спеціально-підготовчі вправи, витрачають менше сил на дистанції та значно покращують свій результат.

Спеціально-підготовчі вправи поділяються на підвідні та розвиваючі. Перші спрямовані головним чином освоєння форми, техніці рухів, другі –

розвиток функціональних можливостей (швидкості, сили, спритності тощо.). Спеціально-підготовчі вправи зазвичай є елементом, частиною або «зв'язкою» кількох рухів, взятих з даного виду легкої атлетики. Необхідно, щоб за кінематичною та динамічною характеристиками рухів, а також за психологічною спрямованістю спеціально-підготовчі вправи підходили якомога ближче до обраного виду легкої атлетики чи його частини.

Розвиток психофізичних якостей за допомогою спеціально-підготовчих вправ відбувається одночасно з оволодінням, удосконаленням раціональної техніки рухів та вмінням її демонструвати у складних умовах боротьби у кожному виді легкої атлетики лише у різних співвідношеннях.

Підставою для розробки схеми програмно-цільового використання комплексів спеціально-підготовчих вправ швидкісної та швидкісно-силової спрямованості в річному циклі підготовки юних бігунів на короткі дистанції у віці 18-20 років стало прагнення тренерів знайти та визначити ефективні шляхи підвищення спортивної працездатності за рахунок нових підходів оптимізації навчально-тренувального процесу та невикористаних резервів.

При складанні комплексів спеціально-підготовчих вправ швидкісної та швидкісно-силової спрямованості враховувалися результати аналізу біодинамічних характеристик, а також їх кореляційних взаємозв'язків із основною вправою змагання бігу на 100 метрів. Важливим аспектом у визначенні схеми застосування комплексів спеціально підготовчих вправ стали результати динаміки відновлювальних процесів функціонального стану нервово-м'язового апарату спортсменів у процесі виконання основних бігових вправ спринтерів та спеціально-підготовчих вправ.

До комплексів спеціально-підготовчих вправ швидкісної та швидкісно-силової спрямованості, крім вивчених вправ, за рекомендацією тренерів, були включені й вправи, що використовуються у системі навчально-тренувальних занять.

У зв'язку з використанням комплексів спеціально-підготовчих вправ подальший шлях спортивного вдосконалення підготовки спринтерів на етапі спеціалізованої підготовки багато в чому залежить:

- від пошуку ефективних шляхів побудови навчально-тренувального процесу;
- підбору спеціальних вправ, адекватних за своїми характеристикам із змагальною вправою;
- послідовної системи використання спеціально-підготовчих вправ у навчально-тренувальному процесі.

Цей напрямок стає пріоритетним для проведення досліджень у природних умовах підготовки юних спринтерів, де в системі тренувань передбачено використання у річному циклі комплексів спеціально-підготовчих вправ, що формують відповідні значення біодинамічних характеристик змагальної вправи бігу на 100 метрів та підвищують ефективність реалізації індивідуального рухового потенціалу спортсменів.

Загальновідомо, що надійність тренувального процесу багато в чому залежить від організації та змісту занять, що проводяться, на окремих етапах річного циклу [1, 2, 3, 5].

Сьогодні спостерігається тенденція до значної інтенсифікації всього багаторічного процесу підготовки спортсменів в окремих видах спорту, у тому числі й у бігу на короткі дистанції. У цьому напрямі провідні фахівці все частіше висловлюють думку, що підготовка спринтерів різних кваліфікацій за рахунок постійного збільшення обсягу тренувальних навантажень найчастіше призводить до протилежних результатів.

З цією метою, спільно з тренерами, було розроблено схему застосування комплексів спеціально-підготовчих вправ на окремих етапах річного циклу. Зокрема, на першому етапі, що втягує (тривалістю 3 тижні) в кожному мікроциклі було заплановано виконання по одному разу 3-го і 4-го комплексів. На першому загально-підготовчому етапі (тривалістю 8 тижнів) у кожному мікроциклі було заплановано виконання по два рази обсягу вправ 2-3-4-5-х комплексів. На першому спеціально-підготовчому етапі (тривалістю 6 тижнів) на 1-2 мікроциклі було заплановано виконання по одному разу 1-й і 2-й комплекси. На 3-4-5-6-му мікроциклі заплановано виконання двічі 3-4-5 комплексів.

На етапі безпосередньої підготовки до головних стартів (тривалістю 4 тижні) було заплановано виконання у кожному мікроциклі виконання по 1 разу обсягу навантаження 1-3-5-х комплексів. На етапі найвищої готовності (тривалістю 4 тижні) було заплановано виконання у кожному мікроциклі по 1 разу обсяг навантаження 1-го комплексу.

В таблиці 1. наведено схему застосування комплексів спеціально-підготовчих вправ швидкісної та швидкісно-силової підготовки протягом експерименту.

Отже, експеримент тривав з січня по червень 2024 року і включав у себе 21 тиждень спеціально організованого процесу тренувань спортсменів експериментальної групи з використанням комплексів спеціально-підготовчих вправ швидкісної та швидкісно-силової підготовки.

Таблиця 1.

Схема застосування комплексів спеціально-підготовчих вправ швидкісної та швидкісно-силової підготовки протягом експерименту

№	Етап підготовки	Кількість тижнів		Комплекси спеціально-підготовчих вправ	Кількість повторів
1	Втягуючий макроцикл	3		3, 4	1
2	Загально-підготовчий етап	8		2-3-4-5	2
3	Спеціально-підготовчий етап	6	2	1,2	1
			4	3,4,5	2
4	Етап безпосередньої підготовки до головних стартів	4		1,3,5	1
5	Етап найвищої готовності	4		1	1

Для оцінювання ефективності запропонованої нами методики було організовано тестування швидкісних та швидкісно-силових якостей за обраною програмою тестів, що включали: біг на 30 метрів з ходу та з низького старту, біг на 60 метрів з ходу та з низького старту, біг на 100 метрів з низького старту та стрибки у довжину з місця та потрійний стрибок у довжину з місця.

Тестування швидкісних та швидкісно-силових якостей спринтерів проводилося відповідно до програми тестів та орієнтованих нормативів для спринтерів юнаків віком18-19 та 19-20 років, що вказані в Навчальній програмі для дитячо-юнацьких спортивних шкіл, спеціалізованих дитячо-юнацьких спортивних шкіл олімпійського резерву, шкіл вищої спортивної майстерності та спеціалізованих навчальних закладів спортивного профілю [4].

Динаміку результатів розвитку швидкісних якостей контрольної та експериментальної груп до та після експерименту наведено в таблиці 2.

Результати тестів на виявлення швидкісних якостей до експерименту в контрольній та експериментальній групі є близькими, що свідчить про однаковий вихідний рівень швидкісної підготовки обох груп. Після експерименту ми спостерігаємо зростання результатів в обох групах, але результати експериментальної групи кращі за контрольну. В усіх тестах результати є достовірними. Приріст результатів тестів на виявлення розвитку швидкісних якостей експериментальної та контрольної групи наведено в таблиці 3.

Таблиця 2.

Динаміка результатів розвитку швидкісних якостей контрольної та експериментальної груп до та після експерименту

№	Тести	До експерименту		Після експерименту		*P*
		КГ	ЕГ	КГ	ЕГ	
1	Біг на 30 м., с	4,1±0,06	4,0± 0,07	4,0±0,08	3,8±0,06	≤0,05
2	Біг на 30 м. з ходу, с	3,0±0,05	3,1±0,04	2,9±0,06	2,8±0,04	≤0,05
3	Біг на 60 м., с	7,0±0,05	7,0±0,04	6,9±0,04	6,8±0,06	≤0,05
4	Біг на 60 м. з ходу, с	5,7±0,04	5,8±0,05	5,6±0,05	5,5±0,04	≤0,05
5	Біг на 100 м., с	11.0±0,05	11.0±0,04	10,8±0,05	10,7±0,06	≤0,05

Таблиця 3.

Приріст результатів тестів на виявлення розвитку швидкісних якостей експериментальної та контрольної групи

№	Тести	Приріст результатів %	
		КГ	ЕГ
1	Біг на 30 м., с	2,44	5,0
2	Біг на 30 м. з ходу, с	3,33	6,45
3	Біг на 60 м., с	1,43	2,86
4	Біг на 60 м. з ходу, с	1,75	5,17
5	Біг на 100 м., с	1,82	2,73

Приріст результатів контрольної та експериментальної групи наочно продемонстровано на гістограмі 1.

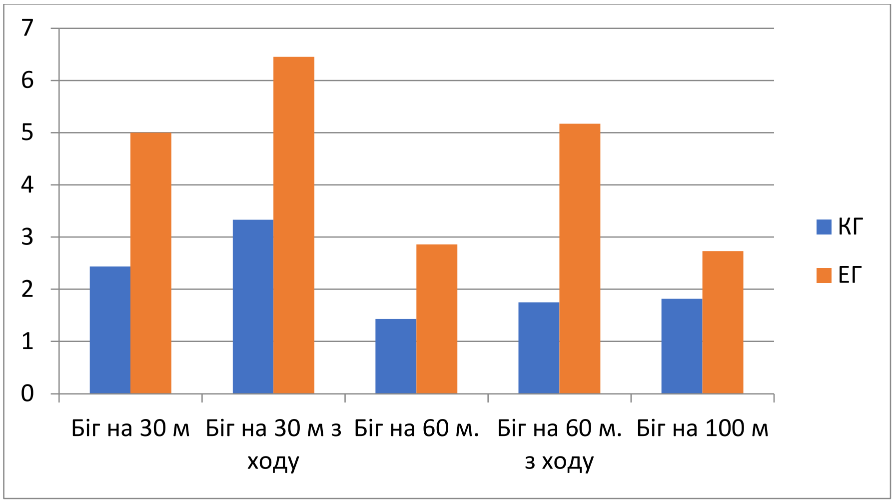

Рис 1. Приріст результатів контрольної та експериментальної групи

Наступні тести проводилися з метою визначення швидкісно-силових якостей спринтерів, а саме вибухової сили ніг. Результати тестування наведено в таблиці 4.

Таблиця 4.

Результат розвитку швидкісно-силових якостей контрольної та експериментальної груп до та після експерименту

№	Тести	До експерименту		Після експерименту		*P*
		КГ	ЕГ	КГ	ЕГ	
1	Стрибок у довжину з місця, см	280 ±11	284±13	290±12	300±15	≤0,05
2	Потрійний стрибок з місця, см	810± 16	824± 18	824±14	846±17	≤0,05

Результати тестів на початку і в кінці експерименту свідчать про приріст результатів в обох групах, але експериментальна група продемонструвала кращі результати порівняно з контрольною В усіх тестах ми отримали достовірні результати. В таблиці 5. наведено приріст результатів в тестах на визначення швидкісно-силових якостей спринтерів

Таблиця 5.

Приріст результатів в тестах на визначення швидкісно-силових якостей спринтерів в контрольній та експериментальній групах

№	Тести	Приріст результатів %	
		КГ	ЕГ
1	Стрибок у довжину з місця	1,42	3,44
2	Потрійний стрибок з місця	1,73	2,67

На гістограмі 2. продемонстровано наочно результати приросту швидкісно-силових якостей спортсменів спринтерів в контрольній та експериментальній групах.

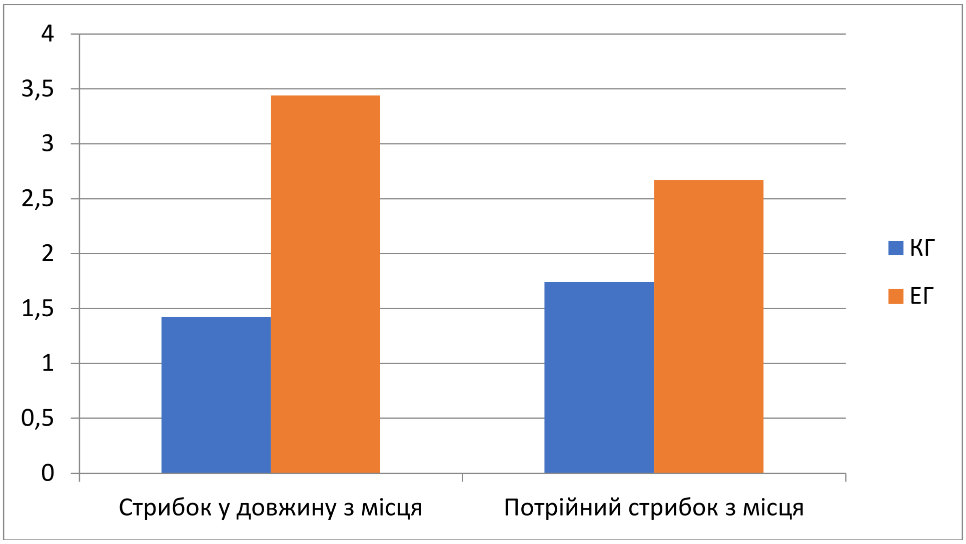

Рис 2. Результати приросту швидкісно-силових якостей спортсменів спринтерів в контрольній та експериментальній групах.

В нашому дослідженні ми намагалися визначити можливість підвищення рівня спеціальної працездатності юних спринтерів не за рахунок виконання у річному циклі об'ємних бігових тренувальних навантажень, а за рахунок комплексного застосування спеціально-підготовчих вправ швидкісної та швидкісно-силової спрямованості.

Результати педагогічного експерименту показали, що в обох групах відбувалися позитивні зміни, проте якіснішими вони були в експериментальній групі.

Результати педагогічного експерименту підтвердили гіпотезу дослідження та дозволили обґрунтувати програмно-цільове використання комплексів спеціально-підготовчих вправ швидкісної та швидкісно-силової спрямованості у підготовці юних спринтерів у віці 18-20 років.

Приріст результатів контрольної та експериментальної групи наочно демонструє ефективність використання комплексів спеціально-підготовчих вправ для розвитку швидкісних та швидкісно-силових якостей спринтерів групи спеціалізованої підготовки.

Шляхами подальших досліджень є пошук нових методик удосконалення фізичної на технічної підготовки спринтерів на різних етапах багаторічної підготовки.

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1.3. Experience of teaching medical and biological disciplines to bachellor students of the specialty "sports" in Ukraine during the ongoing russian-ukrainian war

Досвід викладання медико-біологічних дисциплін студентам-бакалаврам спеціальності "спорт" в Україні за триваючої російсько-української війни

Розпочата Російською Федерацією у 2014 р. триваюча російсько-українська війна проти України та її загострення 24 лютого 2022 р. змінило звичний мирний ритм життя, у тому числі й навчання. Агресор обстріляв у Миколаєві Національний університет кораблебудування двічі – вранці 15 липня 2022 р. дві ракети С-300 влучили у будівлю головного корпусу, ще одна – у зварювальний навчально-виробничий цех, а дві ракети впали на територію університету, ударною хвилею вибиті вікна в Навчально-науковому гуманітарному інституті, пошкоджені стіни корпусу. Під час нічного обстрілу 10 жовтня 2022 р. дві ракети С-300 влучили у головний корпус. Обстрілами зруйновано кілька поверхів одного з блоків будівлі навчального закладу, суттєво пошкоджений інший. Вибуховою хвилею на усіх поверхах будівлі пошкоджені вікна та двері навчальних приміщень, лабораторне та навчальне обладнання, ліфти. Внаслідок руйнацій, спричинених обстрілами, неможливе навчання в аудиторіях кафедри теоретичних основ олімпійського та професійного спорту Навчально-наукового гуманітарного інституту.

У першому півріччі 2022 р. місто зазнавало постійних щодобових обстрілів, перервалося водопостачання. Значна частина містян, у тому числі й студентів, виїхала. Зважаючи на захоплення агресором сусіднього Херсону, особливості географічного розташування Миколаєва – місто зайняло кругову оборону та стало перешкодою подальшому просуванню ворога вглиб країни. На допомогу Україні прийшли країни-партнери, у першу чергу Сполучені Штати Америки (США), Велика Британія, Федеративна Республіка Німеччина, Республіка Польща, Литовська Республіка, Латвійська Республіка, Естонська Республіка, Канада та цілий ряд країн по всьому світу.

З квітня 2022 р. уряд України отримав від незалежного Агенства США з міжнародного розвитку (*англ*. United States Agency for International Development, USAID), що відповідає за невійськову допомогу американської держави іншим країнам, 26,8 млрд. доларів прямої бюджетної підтримки для компенсації критичних соціальних видатків, попри повномасштабну військову агресію Російської Федерації. Кошти спрямовуються на компенсаційні видатки уряду України на виплату заробітних плат для приблизно 1,4 млн. працівників, безперебійна робота яких є надзвичайно важливою для теперішнього існування та майбутнього відновлення країни. У першу чергу це стосується медиків, рятувальників, держслужбовців та освітян, у тому числі зарплат працівникам вишів та стипендій студентам. Американські кошти передані через механізми Світового банку і напряму поступають у державний бюджет України.

Попри триваючу війну навчальний процес в навчальних закладах не припинявся, але набув інших форм. Варто зауважити, що в нормативних документах, які регулюють організацію української освіти, терміни онлайн (*англ*. online) та офлайн (*англ*. ofline) не існують. Водночас, під онлайн навчанням розуміють навчальний процес у синхронній взаємодії між суб'єктами дистанційного навчання, під час якого усі учасники одночасно перебувають у веб-середовищі з використання комп'ютерних технологій у реальному часі (вебінар, відеоконференція, онлайн-семінар). Натомість офлайн навчання передбачає асинхронний режим взаємодії суб'єктів дистанційного навчання, які застосовують цифрові ресурси для навчання у бажаний і зручний для нього час (відео- чи аудіо-записи, електронні публікації, віртуальну бібліотеку), використовуючи при цьому електронну пошту, соціальні мережі тощо.

У суспільстві та серед освітніх кіл побутує думка, що дистанційне навчання погіршило якість освіти. Водночас не береться до уваги те, що сучасні комунікативні технології покращили у рази доступ до контенту іншого рівня, що значно розширило можливості отримання інформації активним здобувачем освіти, а відповідно поглибило його знання. Доступ до кращих та різноманітних освітніх джерел, стрімкий розвиток українського контенту сприяв та сприяє тому, що навчатися можна швидше і цікавіше.

У літературі розглядаються критерії оцінювання, які об'єднують у групи: технічні, навчальні, організаційні та етичні. Виділяють й етапи оцінювання: планування, розробка управлінських програм, отримання та аналіз інформації про процес, який впливає на якість; прийняття рішень щодо управління якістю освітніх послуг та забезпечення впливу на об'єкти і процеси; забезпечення контрольної дії; отримання та аналіз інформації про зміни якості, викликані контрольними діями [1; 2; 9].

Мета дослідження: дослідити академічну успішність з медико-біологічних дисциплін студентів перших-четвертих курсів спеціальності 017 "Фізична культура і спорт" в Україні за умови триваючої російсько-української війни.

Наукова новизна. Вперше на матеріалах екзаменаційних відомостей з медико-біологічних дисциплін досліджена академічна успішність студентів спеціальності 017 "Фізична культура і спорт" в Україні за умови триваючої російсько-української війни.

Матеріал та методи. Аналіз зроблений на підставі екзаменаційних відомостей 2021–2024 рр. з медико-біологічних дисциплін українських студентів перших-четвертих курсів спеціальності 017 "Фізична культура і спорт" Національного університету кораблебудування імені адмірала Макарова. У дослідженні застосовувалися методи – статистичний, абстрагування, аналізу й синтезу.

Виклад основного матеріалу дослідження. До пандемії COVID-19 (з березня 2020 р.) та повномасштабного вторгнення збройних сил Російської Федерації до України 24 лютого 2022 р. заняття проводилися у звичному режимі у навчальних аудиторіях. З кожної із дисциплін відповідно до затвердженого розкладу за темами, згідно робочої програми, студентам читали лекції та проводили практичні заняття і лабораторні роботи. При пандемії COVID-19 навчальний процес перейшов на дистанційну форму навчання.

З початком російської агресії 24 лютого 2024 р., як лікар, перебував в громадській організації, де організовували комплектування індивідуальних аптечок для добровольців територіальної оборони, а ввечері з громадськими активістами добровільно розпочали патрулювання міста. 25 лютого прийшов до Територіального центру комплектування та соціальної підтримки, був взятий на облік, а вранці 26 лютого прийшов до Комунального некомерційного підприємства Миколаївської міської ради "Міська лікарня швидкої медичної допомоги" (КНП ММР "Міська лікарня швидкої медичної допомоги"), відгукнувшись на потреби у верхньому одязі для поранених військових (їх у тилові шпиталі евакуйовували у цивільному), де і залишився.

З початком повномасштабної війни частина викладачів і студентів покинула Україну, частина студентів виїхала до батьків в райони області. Попри складні обставини, місто перебувало в круговій обороні й постійно зазнавало обстрілів, автори статті залишилися у Миколаєві – навіть після того, як обстрілами були зруйновані навчальні корпуси університету, а вибуховою хвилею вибиті усі війна у помешканні проживання. Прийшлося поєднувати педагогічну роботу з лікувальною у перепрофільованому відділенні КНП ММР "Міська лікарня швидкої медичної допомоги" за умови цілодобового перебування у закладі з поступленням поранених і контужених, надання їм допомоги, оформлення відповідної медичної документації при їх виписці та евакуації сформованими колонами за межі міста у тил країни. Навіть перебуваючи в лікарні, заняття, по можливості, відбувалися згідно розкладу дистанційно. Пізніше заняття доводилося проводити під звуки сирен, оскільки для переходу до найближчого укриття поблизу місця проживання витрачалося чимало часу і там неможливо було продовжити заняття, а у студентів, які оселилися поза містом не завжди функціонував інтернет.

Координаційним центром з'ясування місця перебування студентів став деканат, який надавав інформацію про продовження навчання та можливість зв'язатися студентам і викладачам. Студенти, які залишилися в Україні та продовжили навчання, працювали, допомагали немічним мешканцям міста, волонтерили для воїнів Збройних Сил України, мешканців окупованих територій.

Осінній семестр 2022 р. розпочали з очного навчання в уцілілих аудиторіях в умовах бомбувань і по кілька разів на день сигналів тривоги, що вимагало евакуацію до укриття. Навчальний процес страждав із-за втрати часу на переміщення в укриття, погіршення показу ілюстративного матеріалу теми заняття. Деякі із занять проводилися дистанційно. Водночас й дистанційне навчання погіршувало здатність студентів сприймати навчальний матеріал і, відповідно, очікувалося зниження їхньої академічної успішності. Зрештою навчання в університеті було переведено на дистанційну форму. Завдяки досвіду проведення дистанційних навчань під час пандемії COVID-19 перехід до такої форми освітнього процесу відбувся швидко та з мінімальними незручностями. Попри зазначене, було прагнення якомога більшого спілкування зі студентами в аудиторіях. Досвід показав, що найбезпечнішим варіантом стало збиратися невеликими групами для лабораторних робіт, на модульні заліки, іспити, під час яких можна було сховатися у захищених приміщеннях (укриттях).

Проблеми з електропостачанням додатково ускладнило навчальний процес. Відключення електропостачання різних районів міста і різних районів в області та Україні за графіком, який складався у відповідності до кожного регіону, що ще більше створило проблеми для дистанційного навчання.

Цикл медико-біологічних дисциплін для студентів-бакалаврів спеціальності "Фізична культура і спорт" в Навчально-науковому гуманітарному інституті Національного університету кораблебудування викладається з 2001 року. З кожної із дисциплін розроблена "Робоча програма", відповідно до освітньо-професійної програми підготовки, що готує фахівців галузі знань 01 "Освіта/Педагогіка" спеціальності 017 "Фізична культура і спорт" першого рівня освітньої підготовки і затверджена адміністрацією інституту та університету. Робочі програми мають розділи: "Вступ", "Опис дисципліни", "Мета вивчення навчальної дисципліни", "Передумови для вивчення дисципліни", "Очікувані результати навчання", "Програма навчальної дисципліни", "Методи навчання, засоби діагностики результатів навчання та методів їх демонстрування", "Форми поточного підсумкового контролю", "Критерії оцінювання результатів навчання", "Рекомендовані джерела інформації". На першому році навчання вивчається "Анатомія людини", "Робоча програма" якої складається з трьох змістовних модулів – "Будова кісткової, суглобової, м'язової систем організму", "Будова внутрішніх органів", "Динамічна анатомія людини та рельєфна анатомія тіла людини", а також "Основи медичних знань" з трьома змістовними модулями – "Валеологія", "Перша допомога при деяких патологічних станах і заходи профілактики їх виникнення" і "Гігієна фізичного виховання та спорту". На другому році навчання вивчається "Загальна та спортивна фізіологія людини", яка розділена на два блоки – загальна фізіологія людини та спортивна фізіологія; на третьому році – "Спортивна морфологія", що складається зі змістовних модулів "Загальні основи спортивної морфології. Поняття про адаптацію", "Морфо-функціональні зміни опорно-рухового апарату спортсменів та методи їх дослідження", "Морфо-функціональні зміни внутрішніх органів спортсменів та методи їх дослідження", де розглядаються зміни будови тіла людини на тлі занять спортом і методи дослідження для з'ясування цих змін; на четвертому році студій – "Основи спортивної медицини", що складається з двох модулів "Основи спортивної медицини. Загальні уявлення про пошкоджень та основні причини захворювань опорно-рухової системи у спортсменів" та "Перед-патологічні стани і патологічні зміни з боку серцево-судинної та інших систем організму, пов'язані з нераціональними тренувальними навантаженнями", де звертається увага на попередження виникнення патології. З вибіркових курсів пропонуються для вивчення "Спортивна генетика" і "Спортивний масаж".

"Робочі програми" з усіх дисциплін доступні для студентів і розміщуються на сайті університету.

Дистанційне навчання проводилося у ZOOM, Google Classroom режимах. При складнощах з доступом до інтернету у час, передбачений розкладом занять, студент отримував інформацію із сайту університету в зручний для нього час, відкривши потрібні методичні вказівки з дисциплін, або у паперовому варіанті в університетській бібліотеці. Різні форми доступу до отримання навчальної інформації забезпечували її доступність при складнощах та різких змінах умов зв'язку, що дозволяло створити безперервний навчальний процес [3; 4; 5; 6; 7; 8].

У 2021–2022 навчальному році середній бал успішності серед студентів першокурсників становив 79,859, а з медико-біологічних дисциплін – 79,077 бали, серед яких з "Анатомії людини" – 80,454 бали і "Основ медичних знань" – 77,7 бали. У цьому ж навчальному році на другому курсі середній бал успішності склав 79,267, а зі "Загальної та спортивної фізіології" – 82,13 бали. Середній бал успішності з усіх дисциплін третього курсу склав 77,158, а зі "Спортивної морфології" – 76,887 бали. Цього ж навчального року середній бал успішності з усіх дисциплін, що вивчалися на четвертому курсі, становив 78,386, а зі "Основ спортивної медицини" – 82,037 бали.

У 2022–2023 навчальному році середній бал успішності з усіх дисциплін, що вивчалися студентами на першому курсі становив 78,471, а з медико-біологічних дисциплін – 81,726 бали, серед яких з "Анатомії людини" – 84,375 бали і "Основ медичних знань" – 89,125 бали. У цьому ж навчальному році на другому курсі середній бал успішності склав 78,331, а із "Загальної та спортивної фізіології" – 80,955 бали. Середній бал студентської успішності з усіх дисциплін третього курсу склав 76,831, а зі "Спортивної морфології" – 82,285 бали. Цього ж навчального року середній бал успішності студентів-бакалаврів з усіх дисциплін, що вивчалися на четвертому курсі, становив 74,091, а зі "Основ спортивної медицини" – 83,142 бали.

У 2023–2024 навчальному році середній бал успішності з усіх дисциплін, що вивчалися студентами на першому курсі становив 75,129, а з медико-біологічних дисциплін – 79,214 бали, серед яких з "Анатомії людини" – 78,428 бали і "Основ медичних знань" – 80,0 бали. У цьому ж навчальному році серед студентів другого курсу середній бал успішності склав 72,443, а зі "Загальної та спортивної фізіології" – 74,137 бали. Середній бал студентської успішності з усіх дисциплін третього курсу становив 79,444, а зі "Спортивної морфології" – 78,4 бали. Цього ж навчального року середній бал успішності студентів-бакалаврів з усіх дисциплін, що вивчалися на четвертому курсі, становив 75,982, а з "Основ спортивної медицини" – 73,775 бали.

Загалом середній бал успішності серед медико-біологічних дисциплін за навчальними роками показаний у табл. 1.

Таблиця 1

Середні бали студентської успішності з медико-біологічних дисциплін за навчальними роками

Дисципліни	Навчальні роки		
	2021-2022	2022-2023	2023-2024
Анатомія людини	80,454	84,375	78,428
Основи медичних знань	77,7	89,125	80,0
Загальна та спортивна фізіологія	82,13	80,955	74,137
Спортивна морфологія	76,887	82,285	78,4
Основи спортивної медицини	82,037	83,142	73,775
Загальний середній бал	79.842	83,976	76,948

Висновки:

1. Встановлено, що використання різних методів подачі інформації під час навчального процесу з медико-біологічних дисциплін спеціальності 017 "Фізична культура і спорт" дозволило зберегти достатньо високу успішність студентів. Дистанційна форма навчання в умовах війни показала, що для тих студентів, у яких ціннісними потребами є отримання знань, навіть в умовах війни знаходять можливість отримання освітньої інформації.

2. Показано, що попри обстріли, складнощі з електропостачанням війна не відбере надію на нашу перемогу, на майбутнє та віру в українську молодь, яка продовжила навчання для якомога швидкого відновлення країни. Особлива повага до студентів, які, попри війну і труднощі, залишилися в Україні та продовжили навчання, працювали, допомагали немічним мешканцям міста, волонтерили для воїнів Збройних Сил України, мешканців окупованих територій.

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1.4. The use of statodynamic exercises for the development of strength qualities of powerlifting athletes at the stage of specialized basic training
Використання статодинамічних вправ для розвитку силових якостей спортсменів з пауерліфтингу на етапі спеціалізованої базової підготовки

Нині великої популярності набули силові види спорту. Серед них чільне місце посідає пауерліфтинг (силове триборство). Цей вид спорту відзначається специфікою змагальної діяльності та характером тренувальної роботи, що має силову спрямованість. Заняття пауерліфтингом сприяє прояву максимальних силових зусиль спортсмена за рахунок розвиненої активної м’язової маси, підвищенню працездатності, зміцненню здоров’я, побудові красивої статури.

Методикою підготовки спортсменів з пауерліфтингу займалися провідні вітчизняні і зарубіжні дослідники серед яких можна виділити наступних: Жамардій В. [1], Капко І. [2], Кириченко Т. [3], Олешко В. [4], Стеценко А. [5]та ін.

Але більшість дослідників в підготовці спортсменів віддають перевагу класичній методиці підготовки з використанням повторного методу строго регламентованих вправ, які виконуються як з обтяженням так і з власною вагою тіла. Не зважаючи на поширеність даного методу і позитивні результати під час тренувань, існує суттєвий недолік застосування даної методики, а саме з часом параметри дій стають стереотипом і не дозволяють покращувати результат. Отже перед тренерами постає проблема пошуку нових засобів, методів і методик які б сприяли урізноманітненню підготовки спортсменів. Особливо гостро відчувається ця проблема на етапі спеціалізованої базової підготовки, коли спортсмени вже досягли високих результатів і необхідно шукати стимули подальшого розвитку їх потенційних можливостей.

Одним із шляхів вирішення даної проблеми, а саме підвищення силової підготовки, є використання статодинамічних вправ, що набирає все більше популярності в різних видах спорту, а особливо в силових. Метод статодинамічних вправ дозволяє внести різноманітність у динамічно повторювальні навантаження і тим самим вирішити проблему стереотипів параметрів дій та фізичних якостей.

Мета дослідження полягає в науково-теоретичному обгрунтуванні та експериментальній перевірці методики розвитку силових якостей спортсменів з пауерліфтингу на етапі спеціалізованої базової підготовки з використанням статодинамічних вправ.

Пауерліфтинг (англ. powerlifting; power – «сила» + lift – «піднимати») або силове триборство – це силовий вид спорту, сутність якого полягає у подоланні опору максимальної ваги для спортсмена. Силовим триборством називають даний вид спорту в програму змагань входять три дисципліни: присідання зі штангою, жим штанги лежачі на горизонтальній опорі та тяга штанги, що в сумі і визначають кваліфікацію спортсмена. Ці вправи в пауерліфтингу називаються «базою», так як при їх виконанні в роботу включаються практично усі м’язи [1].

Регламент виконання даних вправ перейшов з важкої атлетики. В кожній вправі є по три спроби, якщо вага не підкорюється спортсмену він вибуває зі змагань по триборству, але судді можуть дозволити спортсмену продовжити змагання і окремих вправах.

Основу усіх методик підготовки спортсменів з пауерліфтингу складають силові вправи. На сучасному рівні є багато підходів до класифікацій силових вправ.

За ступенем впливу на м’язові групи можна виділити:

- Локальні силові вправи, що характеризуються функціонуванням 20-30% м’язів;
- Регіональні силові вправи, що характеризуються функціонуванням на більше 60-70% м’язів;
- Тотальні силові вправи, що характеризуються одночасним або послідовним функціонуванням усіх груп м’язів.

В залежності від природи опору силові вправи поділяються на:

- Вправи з зовнішнім опором включають: вправи з вагою (штанга, гирі, гантелі), вправи з опором іншин предметів (резинових амортизаторів, джгутів, блоків) та с подоланням опору зовнішнього середовища (пісок, сніг, вітер);
- Вправи з подоланням ваги власного тіла;
- Ізометричні вправи сприяють одночасному напруженню максимально можливої кількості рухових одиниць м’язів і поділяються на вправи на утримання в пасивному напруженні м’язів та вправи з активним напруженням м’язів протягом певного часу ві в певній позиції [3].

В методиці розвитку силових якостей відбувається прогрес в тренуванні лише тоді, коли здійснюється максимальне м’язове напруження. Тому основне завдання силового тренування полягає в тому, щоб забезпечити в процесі виконання вправ достатньо високу ступінь м’язового напруження.

Статодинамічний режим навантаження при виконанні силових вправ останнім часом все більш активно впроваджується у тренувальний процес спортсменів з пауерліфтингу.

Характерною рисою статодинамічного підходу в силових тернуваннях вистуає послідовна комбінація у вправах двох режимів м’язової діяльності -

динамічного і ізометричного. Такий підхід також використовують і за кордоном, він має назву «часткові повторення». Зараз данна методика отримала назву «пампінг».

Практиками і теоретиками, що активно досліджували статодинамічний метод було доведено ряд його переваг, а саме:

- Позитивний вплив на внутрішні органи;
- Підвищення сили мязів, тобто розвиток їх еластичності та витривалості;
- Покращення кровообігу, активне насичення киснем крові;
- Виведення токсинів з організму;
- Загальне підвищення імунітету;
- Нарощування язової маси;
- Активне спалення калорій;
- Покращення процесу метаболізму.

На основі комплексного аналізу і порівняння статодинаміного і динамічного методів рядом науковців було висунуто припущення про те, що успіху у підготовці спортсменів з пауерліфтингу можна досягнути шляхом правильного комбінування даних методів.

Оптимальне поєднання статичного і динамічного навантаження дозволить підсилити анаболічний ефект тренувального процесу. Це пов’язано з тим, що активізується процес вироблення білків, що, в свою чергу, призводить до збільшення м’язової маси. Даний процес пояснюється тим, що при короткочасних навантаженнях ізометричного типу, крім гіпоксичних змін в м’зах, прослідковується більш інтенсивний розпад структур білка. Це активізує анаболічний м’язів процес в період відновлення після навантажень.

Основою статодинаміки є постійне напруження мязів при виконанні силової вправи. Для цього амплітуда руху обмежується середнім участком і маленькою амплітудою рухів. Тому що зазвичай у вихідному або фінальному положенні мязи мають можливість розслабитися, або перенести навантаження на суглоби.

Головним завданням при виконанні статодинамічних вправ є сприяння впливу на повільно скорочувальні волокна для удосконалення аеробних можливостей організму і, насамперед, розвитку силових якостей. Цей процес відбувається так: за рахунок зажиму капілярів відбувається кисневе голодання м’язових волокон, це активізує процес розпаду глюкози без використання кисню (анаеробний гліколіз). Він стає причиною того, що окислювальні м’язові волокна швидше закислюються молочною кислотою, чого неможливо добитися під час звичайного тренування. І при розслабленні до м’язів стрімким потоком поступає кров і гармони, сприяючи росту мускулатури.

Статодинаміка – це техніка виконання силових вправ при якій вправа виконується з постійним напруженням мязів і невеликою амплітудою, повільно, протягом 40-50 сек, що призводить до закислення мязів, відмовою повинно бути нестерпне печіння. Для того, щоб закислення мязів було найбільш максимальним необхідно враховувати певні моменти, а саме:

амплітуда рухів, швидкість виконання вправи, час навантаження, наявність «відмови»; кількість підходів.

Амплітуда повинна бути короткою, приблизно половина повної амплітуди, яку можна виконати у вправі. Працювати треба в центрі амплітуди, повністю не розтягуючи мязу і не скорочуючи його. Це необхідно робити для того, щоб обмежити пролив крові до мязів, що піддаються навантаженню. В такому варіанті виконання вправи кров не буде вимивати молочну кислоту, що накопичується, а закислення буде більш сильним.

Швидкість виконання вправи повинна бути повільною (2-3 сек розтягування і 2-3 сек. скорочення) – це головний фактор і основна відмінність статодинамічних вправ від динамічних.

Окислювальні повільні волокна скорочуються набагато повільніше, ніж швидкі і при прискореній роботі вони гірше включаються в роботу. Час виконання вправи під постійним навантаженням – 30-40 секунд. Абсолютно не важлива кількість повторів у вправі, вона індивідуальна, головне добитися відчуття печіння. Якщо час буде занадто малим - не буде відбуватися закислення, якщо занадто великим – занадто маленька робоча вага.

На початкових етапах введення статодинамічних вправ у тренування небхідно дотримуватися наступного алгоритму виконання вправ.

1. Перший підхід. Виконуєте вправу до сприйняття печіння і продовжуєте виконувати вправу ще 5 сек, а потім 30 сек відпочинок;
2. Други підхід. Виконуєте вправу до сприйняття печіння і продовжуєте виконувати вправу ще 10 сек, а потім 30 сек відпочинок;
3. Третій підхід. Виконуєте вправу до сприйняття печіння і продовжуєте виконувати вправу ще 15 сек, а потім 30 сек відпочинок.

Далі кількість підходів – 3-5 і по 2-3 серії. Відпочинок між серіями 5-7 хв., а між підходами 40-50 сек. Відпочинок повинен бути активним, щоб молочна кислота вийшла з мязів.

Основні умови правильного виконання статодинамічних вправ:

- Часткова амплітуда;
- Збереження ритму виконання вправи;
- Контроль дихання при виконанні вправи;
- Виконання вправи не повинно приводити до суттєвого збільшення тиску та росту пульсу;
- Мязи, що не беруть участь у виконанні вправи повинні бути розслабленими;
- Постійне напруження в робочих м'язах при виконанні вправи.

При виконанні статодинамічних вправ на першому етапі спортсмени найчастіше допускають такі помилки:

- Спотсмени беруть для виконання занадто велику вагу. Вага при виконанні статодинамічних вправ повинна складати 50-60% від максимально можливої ваги спортсмена;

- Занадто повільний темп не є ефективним і збільшує час при такому виконанні до відчуття печіння;
- Збільшують амплітуду як в динамічному режимі, що визває швидке стомлення і ефекту не має.

Використання статодинамічних вправ в підготовці спортсменів з пауерліфтингу має ряд переваг, а саме:

- Безпека. За рахунок того, що в цьому варіанті при виконанні вправ з невеликою вагою та малою амплітудою можна уникнути травмувань, що є характерним при роботі з великою вагою;
- Концентрація на певній групі мязівдозволяє зосередити на ній роботу;
- Статодинамічні вправи можна включати в підготовку спортсменів з більшості видів спорту, особливо в яких провідною якістю є формування сили;
- Застосовувати тренування з використанням статодинамічних вправ для спортсменів різної статі, віку та етапу підготовки;
- Оздоровчий ефект. За тосування статодинамічних вправ позитивно впливають на гормональний фон людини, що призводить до підвищення імунітету.

Слід зауважити, що статодинамічні навантаження мають і ряд недоліків. В першу чергу, подібні вправи не дозволяють м'язам повністю розслабитися, регулярне їх використання може призвести до до негативних змін в серцево-судинній системі, підвищенню артеріального тиску, а також стати пичиною відхилення від норми показників частоти серцевих скорочень.

Тому для покращення стану організму спортсмена при виконанні даних вправ необхідно додавати комплекси дихальних вправ, що сприяють розслабленню м'язів після завершення силового навантаження.

Враховуючи вищевказане, можна зробити висновок, що дана методика найменш травмонебезпечна і є ефективною при використанні в багатьох видах спорту.

Методика використання статодинамічних вправ у підготовці спортсменів з пауерліфтингу дозволяє урізноманітнити динамічно повторювальні навантаження спортсменів з метою покращення їх силових якостей.

Експериментальне дослідження проводилося протягом 2023-2024 рр. на базі спортивного клубу Дія м. Києва, де здійснювалися тренування спортсменів з пауерліфтингу.

В експериментальну та контрольну групу увійшли спортсмени віком 16-18 років, що входять до групи спеціалізованої базової підготовки. При комплектуванні груп враховувалися стан здоров'я і необхідний рівень фізичної та технічної підготовки спортсменів. Спортсмени експериментальної та контрольної групи мають кваліфікацію не менше 1 дорослого розряду і виступають в ваговій категорії 66 і 74 кг.

Заняття контрольної і експериментальної групи проходили в стандартному режимі – 3 заняття на тиждень по 1,5 години.

В експерименті взяло участь 10 спортсменів, що були поділені по 5 спортсменів в експериментальній і контрольній групі. Контрольна група займалася за традиційною методикою з використанням динамічного тренування. А експериментальна група тренувалася по змішаній методиці з використанням статодинамічних вправ разом з динамічними методиками. Це відбувалося шляхом включення статодинамічних вправ в процес тренування.

Для визначення ефективності запропонованої методики та розвитку силових якостей використовувалися контрольні вправи , що є обов'язковими у пауерліфтингу, а саме: присідання зі штангою, жим лежачі і станова тяга.

Дослідження проводилося протягом чотиримісячного макроциклу з лютого по травень 2024 року. В свою чергу він включав 4 мезоцикли. В таблиці 1 представлена програма макроциклу з використанням статодинамічних вправ.

Таблиця 1.

Програма макроциклу з використанням статодинамічних вправ

<table>
<tr><td rowspan="6">Макроцикл</td><td>Тип мезоциклу</td><td>Період</td><td>Методи</td></tr>
<tr><td>Втягуючий</td><td>Лютий 2023 р.</td><td>Метод повторних не максимальних зусиль</td></tr>
<tr><td>Базовий</td><td>Березень 2023 р.</td><td>Статодинамічний метод</td></tr>
<tr><td>Контрольно-підготовчий</td><td>Квітень 2023 р.</td><td>Метод максимальних зусиль</td></tr>
<tr><td>Передзмагальний</td><td>Травень 2023 р.</td><td>Статодинамічний метод</td></tr>
</table>

Для визначення ефективності запропонованої методики контрольні тести проводилися двічі за час дослідження: на початку і в кінці експерименті. Виконання замірів в трьох вправах дало можливість виконати аналіз динаміки розвитку силових якостей. Так як в групи входили спортсмени з різних вагових категорій, для підрахунку результатів і можливостей порівняти їх приріст ми використали коефіцієнт Вілкса. Розрахунок проводився через програму «Калькулятор Вілкса» Результати аналізу представлені в таблиці 2.

Таблиця 2.

Тезультати тестування контрольної та експериментальної групп на початку і в кінці експерименту

Вправи	Контрольна група				Експериментальна група			
	Початок x1±δ, кг	Кінець x2±δ, кг	t	P	Початок X1± δ, кг	Кінець X2±δ, кг	t	P
Жим штанги лежачі	108±3,2	119± 4,6	2,4	≤0,05	107±5,5	128±3,4	2,5	≤0,05
Станова тяга	167±8,4	178±10,2	2,6	≤0,05	170±9,3	193±8.3	2,7	≤0,05
Присідання зі штангою на плечах	138±7.7	155±6.8	2,3	≤0,05	136±9.1	165±8,3	2,4	≤0,05
Сума триборства	413	452			413	486		
Коефіцієнт Вілкса	324	355			324	382		

З таблиці 2. видно, що результати виконання контрольних тестів у експериментальної групи виросли порівняно з контрольною по усім трьом тестам.

Для унаочнення результатів побудуємо гістограму зміни коефіцієнта Вілкса експериментальної та контрольної групи на початку і в кінці експерименту, що зображено на рис 1.

За результатами проведеного дослідження, було доведено ефективність використання статодинамічних вправ на тренуваннях спортсменів з пауерліфтингу. Показники сили та силової витривалості значно покращилися в експериментальній групі порівняно з контрольною. Оцінка результатів експерименту проводилась за допомогою тестів в контрольних вправах, що є базовими і змагальними в даному виді спорту. За результатами підрахунку коефіцієнту Вілкса у всх трьох вправах ми бачимо, що результати контрольної групи зросли на 9,6% , а експериментальної на 17,9 %.

Отримані дані демонструють, що приріст результатів в експериментальної групи вищий за приріст контрольної групи. Отже, експериментальна методика використання статодинамічних впав в підготовці спортсменів з пауерліфтингу на практиці підтвердила свою ефективність.

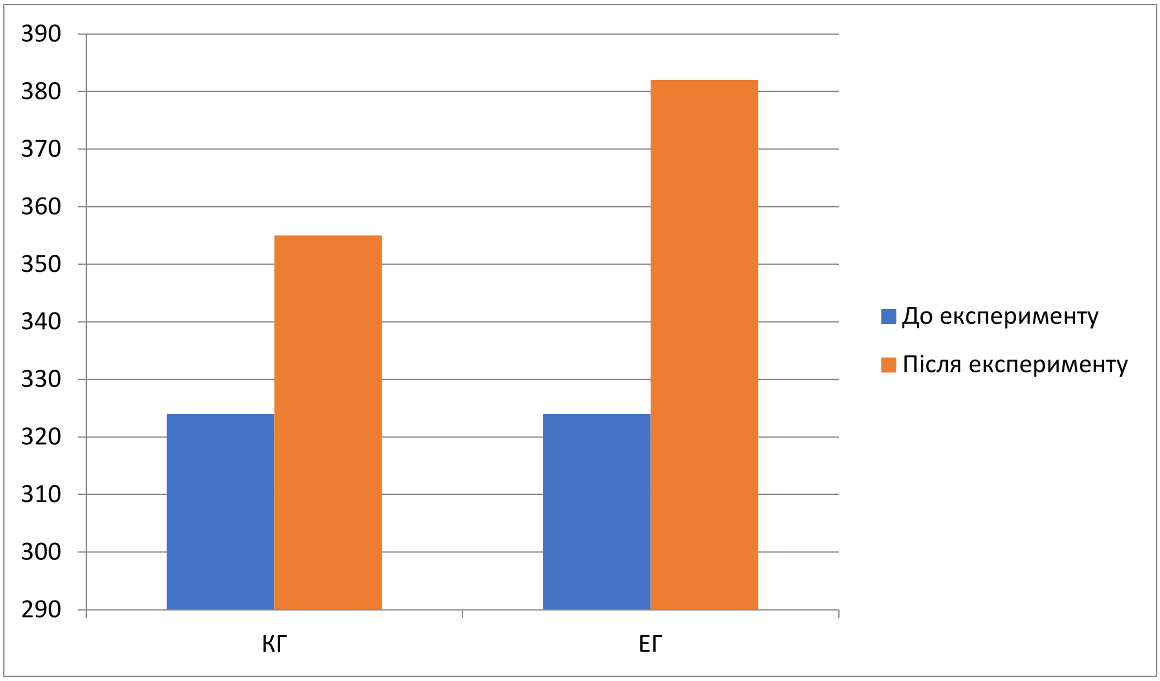

Рис 1. Динаміка зміни коефіцієнта Вілкса експериментальної та контрольної групи на початку і в кінці експерименту

Перспективами подальших досліджень є пошук нових методик розвитку силових якостей спортсменів у пауерліфтингу на етапах багаторічного удосконалення.

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Part II

CURRENT MANAGEMENT PROBLEMS: BY TYPE OF ACTIVITY

АКТУАЛЬНІ ПРОБЛЕМИ УПРАВЛІННЯ: ЗА ВИДАМИ ДІЯЛЬНОСТІ

2.1. Principles of forming a risk management system in an enterprise

Uncertainty and risk exist in all areas of every person's life. The operation of every business is always accompanied by risks, namely the constant threat of loss of financial resources, deviations from planned income, etc.[1]

Today, the concept of "risk" is actively used in many industries, but scientists have not come to a common view to define this concept. Therefore, it should be considered from different aspects (Table 1).

Table 1. Aspects of the concept of "risk"

Aspects	Definition of the concept
Risk as danger or threat	Negative events that lead to harm to humans and enterprises are considered, and risk is understood as the possibility of an event occurring with negative consequences, that is, the possibility of the perceived danger being realized
Risk as opportunity	It is based on the concept of the existence of a relationship between risk and profitability. The higher the risk, the higher the potential return. This concept of risk is a closer concept to chance, and risk management means the use of techniques for maximizing income while limiting or minimizing costs
Risk as uncertainty	Similarity to a concept as a probable distribution of possible outcomes (positive and negative). Within the framework of this concept, risk is a measure of discrepancy between different results of decisions, which are assessed due to their usefulness, harmfulness and effectiveness according to the criteria of compliance with selected benchmarks. This concept is used in the theory of decision making under uncertainty

Source: Compiled by the author based on[2]

[1]Hillson D., Murray-Webster R., (2017). Understanding and Managing Risk Attitude. Aldershot: Gower Publishing.

[2]Cossette P., Pronovost A., (2019). Risk Management and Performance in the Public Sector. Public Administration Review, 79(4), 520-531.

Thus, according to the above aspects, risk is considered from the side of danger or threat that can harm human life and the enterprise, from the side of opportunity, that is, the risk can bring profit, and from the side of uncertainty, which means the uncertainty of possible result[3]s.

Risk is an extremely complex and multifaceted phenomenon not only in economics, but also in any other area of life. As an analysis of modern economic literature on risk shows, there is no consensus among scientists regarding the definition of the concept of "risk". Therefore, in order to more fully disclose the concept of "risk," one should consider its interpretation by different researchers.

Thus, generalizing the above definitions, we can conclude that risk is the probability of a certain unforeseen situation occurring in an uncertain environment of any action, which can affect a decrease in profit or its shortfall. When any risk occurs, the presence of such elements as the object and subject of risks, their functions and the principles of their management is mandatory (Table 2).

Table 2. Main elements of risk

Elements of risk	Definition
Risk subject	legal entity performing risk control functions
Object of risk	this is what the subject's action is aimed at when making a risky decision (project, finance, system)
Risk functions	1) Innovative 2) Regulatory 3) Protective 4) Analytical
Principles of risk management	1) Loyal attitude to risks 2) Forecasting 3) Reservation 4) Insurance 5) Minimize costs and maximize income

Source: Compiled by the author based on[4]

Thus, when a risk occurs, its subject is always present - the person performing the functions of risk control, and the object - what the subject's activity is aimed at. Also, any risk has its own functions. The innovative function is to stimulate the search

[3] Smith J., 2018. Understanding the Essence of Risk Management in Modern Enterprises. Journal of Business Risk Management, vol. 20, no. 2, pp. 45-61.

[4]Vaughan E. J., Vaughan T. A., (2021). The Handbook of Risk Management: Implementing a Post-Crisis Corporate Culture. New York: McGraw-Hill Education.

for unconventional solutions to solve the problem. Regulatory – in imparting dynamism to the management process[5]. The protective function is present when regular risks arise; in this case, the entrepreneur gets ahead of them and literally protects the business from risks. And the analytical function of risk is to select the most optimal one among possible solutions to the problem.[6]. There are also risk management principles. The first principle – a loyal attitude to risks – consists of the perception of risks as an inevitable result of any business activity. The forecasting principle requires management to predict the emergence of risks in order to anticipate and prepare for possible consequences. According to the following principle of reserving, certain reserve funds should be created that can be used in the event of unpredictable situations[7]. The principle of insurance is to attract certain insurance companies in order to compensate for possible costs when risks occur. And in accordance with the principle of minimizing costs and maximizing profits, it is necessary to rationally use available resources and stimulate increased income through the reasonable implementation of projects[8].

At the next stage, we will consider risk classification - one of the stages of their analysis and identification, which helps to choose the right reasons and methods for managing a specific risk. After determining the type of risk and place in the classification, it is much easier for the risk subject to choose an effective and appropriate risk management model.

The problem of classifying risks that arise in an enterprise lies in their diversity. Organizations face risks both in their current operations and in the long term. There are certain groups of risks that affect all types of business activities, but at the same time, there are also specific risks that affect only enterprises operating in certain industries (Fig. 1).

Thus, according to Fig. 1, risks in an enterprise are divided into internal and external. Internal risks can arise directly at the enterprise itself and depend on its internal factors, for example: organizational, production, personnel, management and control. External risks are risks that are beyond the control of the company, that is, the enterprise cannot influence them, but can only provide for them: political, economic, socio-psychological and scientific-technical.

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[5] Wach K., Stawicka E., (2016). The process of risk management in the enterprise. Warsaw: Wolters Kluwer.
[6]Kozminski A. K., (2013). Risk management in an enterprise. Warsaw: PWN Scientific Publishers.
[7] Kowalski J., (2018). Analysis of the essence of risk in business management. Business Risk Management, vol. 10, no. 3, pp. 30-45.
[8] Szymanska E., (2022). The Role of Internal Audit in the Process of Risk Management in Enterprises. Internal Audit Review, vol. 7, no. 3, pp. 25-40

Figure 1. Classification of risks at the enterprise

Source: Compiled by the author based on[9][10].

Political risk is the danger of changes in the political environment that may negatively affect the activities of the enterprise. This may include various forms of political instability such as wars, uprisings, terrorist attacks, demonstrations, changes in power, political corruption, legislative and regulatory changes, economic sanctions, etc. Because political risk is unpredictable and often uncertain, companies and organizations can take measures to reduce risk, such as diversifying activities, using insurance policies, creating crisis plans, etc.[11].

Economic risk is the risk of damage associated with economic processes and phenomena, such as changes in market conditions, currency risks, changes in government policy, changes in interest rates, financial crises, etc. Economic risk can

[9]URL: https://eprints.kname.edu.ua/48617/1/2017%20print.%20209%20L%20notes%20lectures%20RM_Borovik%20M.V.pdf, accessed 21/12/2023.
[10]Jedrzejewski Ł., (2019). Aspects of risk management in the enterprise. Katowice: Publishing House of the University of Economics.
[11]Kamlyk M.I., (2005). Economic security of business activities: Economic and legal aspect, Kiev.

affect the financial condition of companies, organizations and other business entities, as well as the economy as a whole[12].

Market risk is an existing or possible risk for finance and capital, the cause of which is the instability of the value of securities, products, foreign exchange rates for trading portfolio instruments. This risk affects market making, purchase and sale transactions, decision-making on equity and debt securities[13].

Socio-psychological risk is the risk of losses as a result of socio-psychological processes that can influence people's behavior and their perception of the world. This may include risks related to people's health and safety, their behavior and beliefs about the world, which may influence consumer and other decisions.

Scientific and technical risk is the risk associated with scientific and technical processes that can lead to negative consequences for people, the environment and business. These may include risks associated with research and development of new technologies, production and use of products that may be hazardous to people or the environment.

Organizational risks are risks associated with the internal organization of an enterprise that may affect its activities and performance. These may include risks related to the organization's structure, leadership, decision-making processes, finances, information security and other factors.

Operational risk is the risk associated with damage due to non-compliance with the sequence of formation of professional activities at the enterprise (failure to comply with rules and regulations, violation of the requirements for the application of management schemes), unprofessional behavior of members of the enterprise or external influence. Occupational risk is a risk arising from the production process that can affect product quality, production processes and worker health. For example, risks associated with the technical condition of equipment, the working environment, health and safety, shortages of materials and components, problems with quality and product quality control[14].

Managerial risk is the risk associated with the likelihood of a manager's failure to fulfill obligations aimed at protecting the organization from unwanted intentional or accidental circumstances that harm its activities. Risks when monitoring the labor process are associated with inadequate examination of working conditions, the presence of deviations from labor legislation, labor safety standards, labor protection

[12]Borkowski S., Wozniak M., (2017). Risk management in the enterprise. Kraków: University of Economics Publishing House.
[13]Lam J., (2014). Enterprise Risk Management: From Incentives to Controls. Hoboken, NJ: John Wiley & Sons.
[14]Hopkin P., (2018). Fundamentals of Risk Management: Understanding, Evaluating and Implementing Effective Risk Management. London: Kogan Page.

norms and rules, decisions of policy-making bodies, as well as verification of the fulfillment of labor protection responsibilities by services and departments[15].

Operational risks have the greatest impact on the activities of the enterprise, so they need to be considered in more detail. The main reasons for such risks are shortcomings in the organizational system and management of the interaction of their elements (identification of those responsible, distribution of responsibilities), hostile actions of company members against its interests, threatening the existence of the organization. Operational risks are divided into different types (Table 3).

Table 3. Types of operational risks

Type of operational risk	Definition
Personnel risk	represents the risk of costs arising due to unprofessional or illegal activities of company members
Process risk	This is the risk of costs arising from shortcomings in organizational processes such as calculations, accounting, reporting, pricing, etc.
Systems risk	is the cost risk associated with deficiencies in the use of technology, software and hardware

Source: Compiled by the author based on[16]

Thus, operational risks include such types as personnel risk associated with company employees; process risk associated with deficiencies in operational processes; and the risk of systems arising from improper use of technology, equipment, etc. A special type of activity aimed at reducing the impact of risk on the activities of an organization, enterprise, or firm is risk management.

There are general approaches to risk management. Depending on the timeliness of decision-making related to forecasting and minimizing costs, three approaches can be distinguished: active, adaptive and conservative (Table 4).

[15] Salomon R. M., (2016). Enterprise Risk Management: A Framework for Success. Strategic Finance, 97(11), 27-33.

[16]URL: http://repository.kpi.kharkov.ua/bitstream/KhPI-Press/39143/1/Book_2018_Moroz_Ryzyk_menedzhment.pdf, accessed 21/12/2023.

Table 4. Approaches to risk management and their content

Risk Management Approach	Contents of the approach
Active approach	Refers to the manager's maximum use of risk controls to minimize their consequences. With this approach, all business transactions are carried out after taking measures to prevent possible financial losses
Adaptive approach	It is based on taking into account the current business conditions in the management process, namely: risk management is carried out during business operations. At the same time, it is impossible to prevent all damage in the event of a risk event, but only part of the losses can be avoided
Conservative approach	It assumes that the control influence on financial risks begins after the occurrence of a risk event, when the enterprise has already suffered a loss. In this case, the goal of management is to localize the damage within the framework of any one financial transaction or one division

Source: Compiled by the author based on[17]

Table 5. Key elements of risk management

Name	Definition
Control objects	In external and internal environments. The first includes the activities of partners, contractors, suppliers, consumers and clients, as well as political, economic, social processes in macro- and transnational environments. Others include financial and business operations, technologies, processes, production resources, information and communications.
Subjects of management	Employees, officials, departments, consulting enterprises who are given responsibilities and powers to monitor, identify, identify and study risks, their impact, as well as develop measures to prevent and overcome their impact on the efficiency of the financial and economic activities of the enterprise as a whole
Controls	A set of principles, procedures, methods for preventing unfavorable events in the operational, financial and investment activities of an enterprise at risk of financial and economic activity

Source: Compiled by the author based on[18]

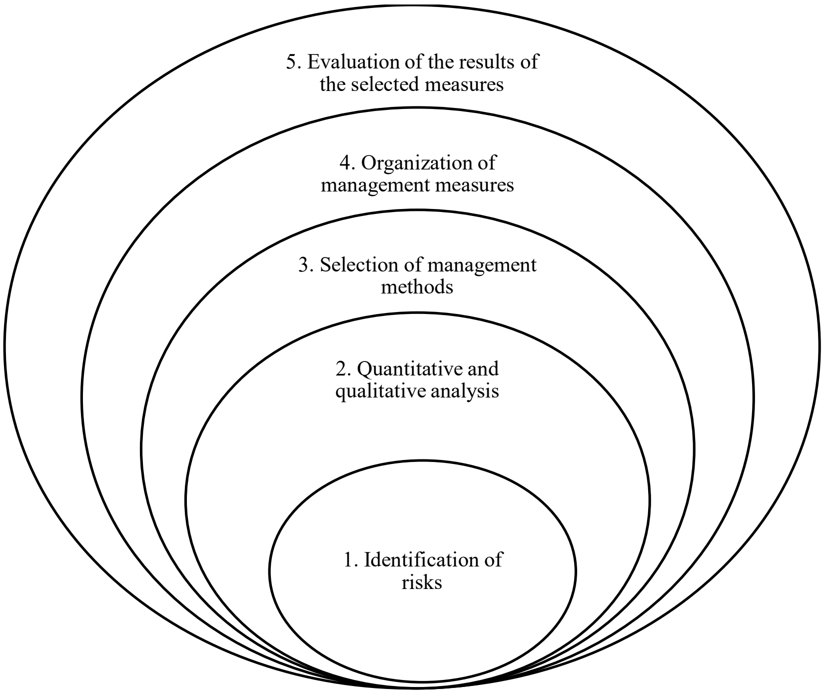
[17]URL: https://eprints.kname.edu.ua/48617/1/2017%20print.%20209%20L%20notes %20lectures%20RM_Borovik%20M.V.pdf, accessed 21/12/2023.
[18]URL: http://dspace.opu.ua/jspui/bitstream/123456789/3975/1/Bashynska_stat_27_91-94.pdf, accessed 21/12/2023.

Thus, the active approach assumes that the manager effectively and continuously uses risk management techniques to reduce their impact on the company's activities[19]. An adaptive approach means taking into account all business conditions when managing risks. And the last, conservative approach is based on the fact that risk management begins after the organization has already suffered losses as a result of the risk being realized.

Risk management exists as an independent functional subsystem in the enterprise. Its main elements are objects, subjects, means and management indicators (Table 5).

So, the main task of the subject of management is to reduce, anticipate and compensate for the negative consequences of risks in the enterprise using indicators and risk management tools. The enterprise has a general step-by-step risk management system (Fig. 2).

Figure 2. Enterprise risk management system



Source: Compiled by the author based on[20]

[19] Tomczak M., Żuradzki, A. (2018). Enterprise risk management: Instruments and techniques. Gdansk: Publishing House of the University of Gdansk.
[20]URL: http://dspace.oneu.edu.ua/jspui/bitstream/123456789/5356/1/System%20managing%20risks%20enterprise.pdf, accessed 12/21/2023.

According to Fig. 2, the risk management system contains five main stages, namely:

1) identification of risks;
2) qualitative and quantitative analysis;
3) choice of management methods;
4) organization of management measures;
5) assessment of the results of applying the selected measures.

The first stage, "Risk Identification," is the starting point for the entire risk management system. It involves identifying problematic situations[21]. The implementation of the second stage – quantitative and qualitative risk analysis – helps to reduce the negative impact of risk factors. It involves identifying potential risks (causes and consequences) when making any management decision. This stage is the basis of the next stage.

The need for the third stage - choosing management methods - is due to the fact that the choice of the right method of risk management will determine how much this risk affects the company's activities. That is why at the preliminary stage it is necessary to qualitatively analyze the risks and choose a method that will help minimize the losses of the enterprise.

The next stage is the organization of risk management measures based on the management methods that we chose in the previous paragraph. Risk managers make decisions that will result in the least losses.

The final stage is evaluating the results. The main goal of this stage is to analyze the consequences of the implemented risk management measures and adjust the previous stages depending on the results obtained[22]. Typically this step is ignored if the results are positive. However, this trend indicates a lack of post-risk monitoring at the enterprise, which leads to a weakening of attention to the influence of risk factors[23].

Thus, risks are a significant part of any business. That is why it is important for managers to know them and be able to manage them. This is what risk management is intended for as an element of a comprehensive risk management system.

One of the most important factors for the successful operation of an enterprise is the use of effective risk management. Risk management is very important for

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[21] Crouhy M., Galai D., Mark R., (2014). The Essentials of Risk Management. New York: McGraw-Hill Education.
[22] Kędzierska A., (2017). Risk management in the enterprise. Torun: Adam Marszałek Publishing House.
[23] Wach K., Stawicka E., (2016). The process of risk management in the enterprise. Warsaw: Wolters Kluwer.

decision-making, forecasting market conditions, implementing credit policy, and conducting production and sales activities.

Risk management is a branch of management that includes a set of methods, techniques and measures that make it possible to identify, evaluate and manage risks that may arise in the activities of an organization in order to minimize the impact of these risks on its financial results, reputation, and business activity. and other aspects[24]. Risk management involves managing the consequences of risk events and managing the sources of risks, as well as the development and implementation of solutions aimed at minimizing risks in the organization's activities.

The purpose of this system is to guarantee the sustainability of the enterprise and shape its adaptability to uncertainty, conflicts and changes in the environment. Features of risk management include:

1) A system that establishes a connection between decision makers and the performers who combine them;

2) Management, within the framework of which decisions related to management are made and implemented;

3) The main idea of a risk management system is to reduce the impact of sudden events on the company's activities.

In addition, risk management activities are directly related to certain risk management laws. Law is an inflexible, significant, necessary, repeating relationship between certain phenomena in society and nature[25].

Risk management laws are divided into three main groups: general, specific and special. Basic laws include[26]:

1) Management effectiveness;

2) Correspondence between the content and structure of direct and feedback links in the management system;

3) The relationship between the social essence of management and the form of activity;

4) Continuity of the management system.

In addition to laws, one of the main components of risk management is its strategy. Risk management strategy is the ability to manage risks in an uncertain

[24] Cieślik, A., Zielińska, K., (2015). Risk management in the enterprise: Selected aspects. Warsaw: CeDeWu Publishing House.

[25]Sliwinski M., Bartoszewicz A., (2018). Risk management in the enterprise. Poznan: Adam Mickiewicz University Scientific Publishing House.

[26]Kalinowski P., Szczepanski P., (2015). Risk management in the enterprise. Kraków: Publishing House Impuls.

environment and situation, which is based on risk forecasting and methods for reducing the investigative impact[27].

Strategy includes rules that are used to select methods for selecting possible solutions and making decisions. The following risk management strategies are distinguished:[28]:

- risk taking, which consists of making a conscious decision that the risk will arise and confidence that the enterprise will be able to cope with its consequences or benefit from the risk;
- risk avoidance, when an organization decides to avoid a risk by stopping activities that may give rise to the risk, or by changing the conditions that give rise to the risk;
- risk anticipation, which consists of early identification of possible risks and planning measures to prevent them or minimize consequences;
- risk reduction, aimed at reducing risks by applying measures that reduce the likelihood of risk events occurring or their impact;
- increasing the level of risk, which involves a deliberate increase in risk by the enterprise in order to achieve a certain goal, for example, increasing profits. This strategy is only applicable if the organization has sufficient resources to cope with the consequences of the risk and ensure the profitability of such activities.

In order to properly apply risk management strategies, it is important to correctly identify and analyze them. In Fig. Figure 3 shows a diagram of the logical process of risk analysis when making management decisions.

According to Fig. 3, risk analysis should be carried out in the following sequence: risk identification (goal of the decision, source of risk, risk object), risk assessment (probability and consequences of risk) and risk management (manifestations of risk and development of possible solutions). The risk identification stage consists of identifying possible sources of risk and the purpose of preparing a solution by studying the situation and the risk object.

The next stage in the analysis process - risk assessment - includes the likelihood and consequences of risks through a comparison of the real and accepted level of risk in the enterprise. And the last stage of the logical process is risk management - analysis of the main manifestations of risk and development of a solution through possible ways to manage risks and control changes in the situation and parameters, and, if necessary, clarify the solution.

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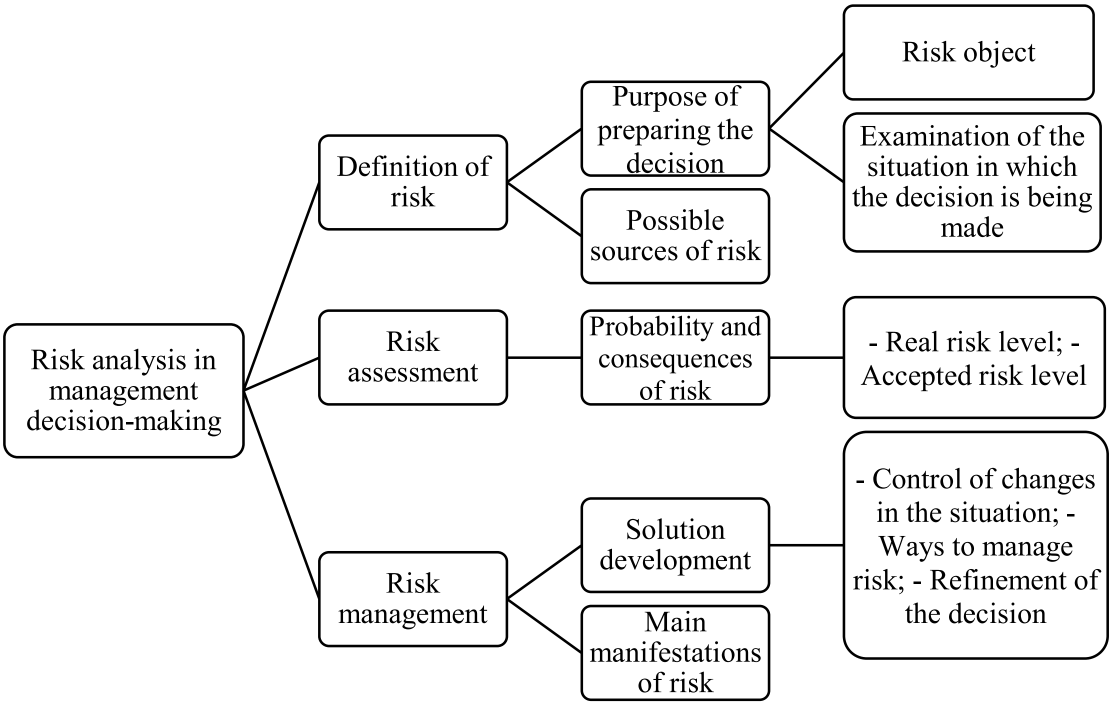
[27]Klimczak, K., Lisiecka, M., (2019). Enterprise risk management: Theoretical and practical perspectives. Wroclaw: Publishing House of the University of Economics in Wroclaw.
[28]Lewandowski T., Prorokowski A., (2016). Risk management in the enterprise: Theory and practice. Poznań: Publishing House of the Academy of Economics in Poznań.

Figure 3. Logical process of risk analysis when making management decisions



Source: Compiled by the author based on[29]

The most important part of enterprise management is the correct formation of a risk management system. Next, we will consider in more detail which management approach is used to create a high-quality and effective risk management system.

The formation of any system, including a risk management system, largely depends on management. For management to be effective, it must be based on scientific approaches, such as logical, systemic, integration, situational, reproductive-evolutionary, complex. All of these approaches can be used in developing an overall

[29]URL: http://lib.kart.edu.ua/bitstream/123456789/2224/1/NP.pdf, accessed 21/12/2023.

risk management system. However, it is the systematic approach that is fundamental in the formation of the methodological basis of the risk management system at the enterprise[30].

In general, a systematic approach to risk management consists of managing an enterprise as an integral system in which each management action in one part of the system affects the rest of its parts. That is, this means that comprehensive management of all risks in an enterprise is a single whole[31].

Using a systematic approach to risk management allows you to analyze risk objects of varying nature and complexity from a single point of view, identify the most important features of the functioning of the risk management system and take into account the most significant factors influencing its development. The undoubted advantage of the systematic approach is the focus on insufficiently structured risks and the search for the optimal solution to them. These are the risks that appear at the level of complex systems[32].

The essence of a systematic approach to risk management comes down to: identifying risks and their prioritization; maximizing the result, that is, achieving the set goals through a comparative analysis of possible ways and methods of solving risks and making choices; quantitative assessment of risks and means of solving them, taking into account a comprehensive assessment of all probable and intended results of activity[33]. Let us briefly formulate the key stages of systemic risk management at the enterprise (Fig. 4).

So, in Fig. Figure 4 shows that each stage follows from the previous one. It all begins with the stage of determining the position of the enterprise in the industry and region, its mission, that is, finding out what place the enterprise occupies in the market and what mission it assigns to itself.

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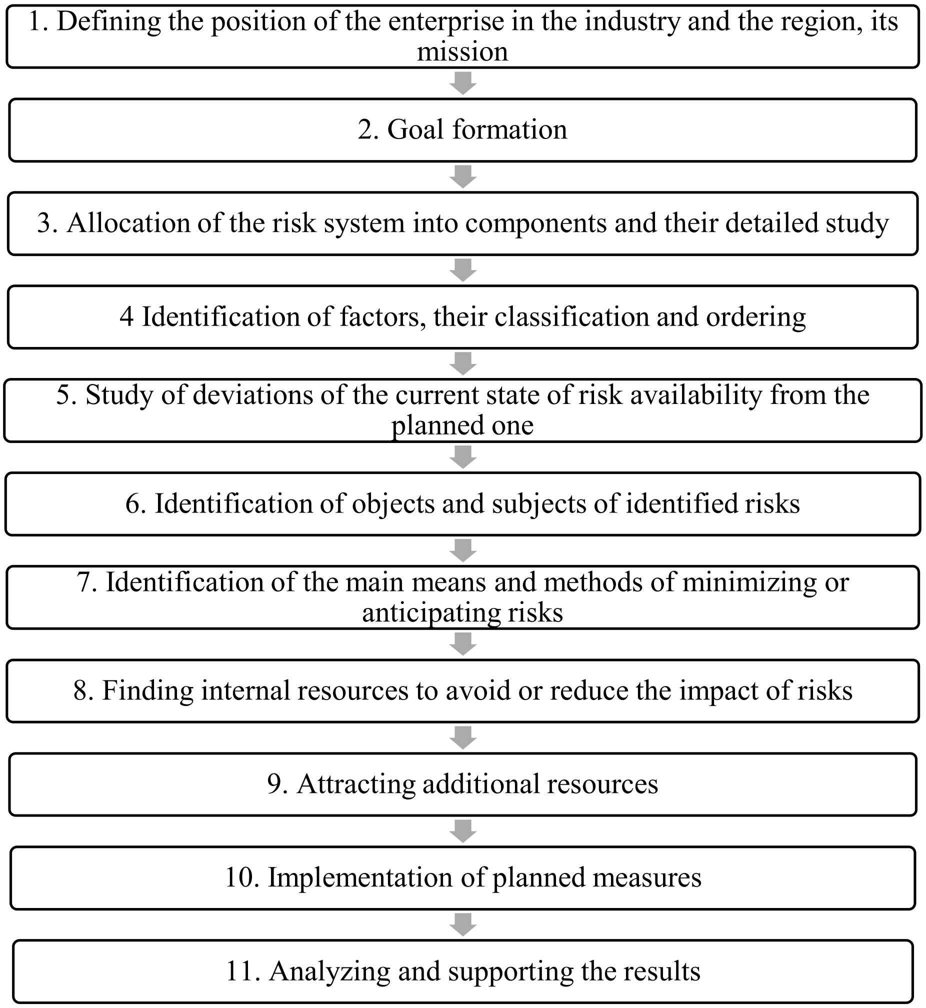
[30]Piotrowski, R., & Nowak, R. (2017). Operational risk management in the enterprise. Warsaw: C.H. Beck Publishing House.
[31]Michalak, B., Twardowska, M., (2018). Risk management in the enterprise. Kraków: Wydawnictwo Akademii Górniczo-Hutniczej.
[32]Wach, K., & Stawicka, E. (2017). Risk management in the enterprise. Warsaw: C.H. Beck Publishing House.
[33]URL: http://www.economy.nayka.com.ua/?op=1&z=1079, accessed 12/21/2023.

Figure 4. Key stages of systemic risk management at the enterprise



Source: compiled by the author based on[34]

Next, the goal of the risk management system that needs to be achieved is formed. The next stage involves dividing the risk system into components and studying them in detail, that is, identifying the components of the risk system and their detailed analysis. At the fourth stage, factors are identified - the determination of

[34]Efimova O., (2007). A systematic approach is the basis for managing the activities of enterprises, Personnel (2), 67–72.

factors that may cause risks and their distribution into categories[35]. This is followed by a study of deviations of the current state of the presence of risks from the planned one using analysis and comparison of current data on the presence of risks with the planned state.

The next step is to identify objects that may become victims of risks and subjects that may perform actions that will lead to risks. At the seventh stage, means and methods are determined to reduce the impact of risks on the enterprise or forestall their occurrenc[36]e. Next, there is a search for internal resources necessary to avoid or reduce the impact of risks, including an assessment of available internal resources that can be used to manage risks, such as personnel, financial resources, technical means, etc.

The next stage involves attracting additional resources - if existing internal resources are not enough to manage risks, the enterprise can attract additional resources, such as external consultants, security experts, additional financial resources, et[37]c. At the tenth stage, the implementation of planned measures occurs, that is, the implementation of planned methods and tools for risk management, which may include updating procedures and security policies, training personnel, installing protective equipment, updating software, etc. And at the last stage - analysis and support of results - the enterprise monitors and analyzes the effectiveness of the measures introduced and corrects problems that may arise in the future to ensure sustainable risk management in the enterprise.

In a constantly changing external environment, the survival of an enterprise largely depends on its ability to respond quickly to changes. Therefore, steps 5-11 are used regularly to anticipate the emergence of risks.

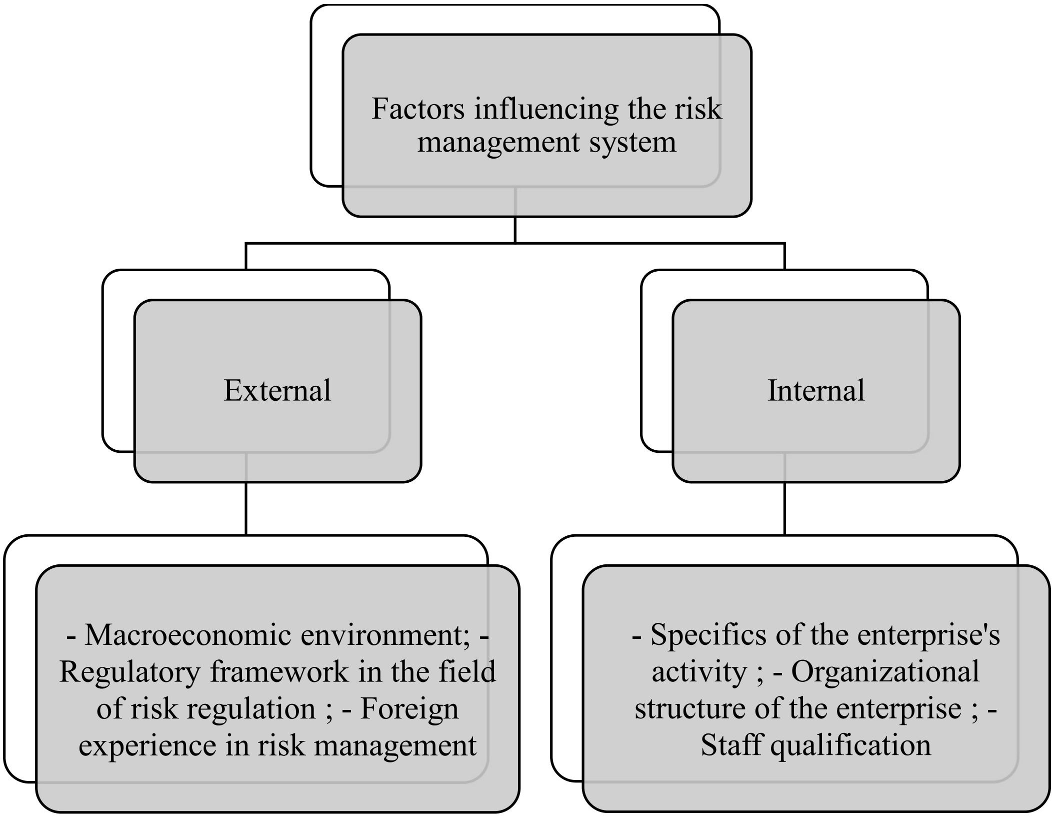
When analyzing the effectiveness of an enterprise's risk management system, a systematic approach should be used as the main methodological tool. This is an integrated approach that focuses not only on the enterprise under study, but also on its environment. The key concept of the systems approach is the concept of “system”, which is a set of elements that are in interaction, relationships, connections and, thus, a holistic formation. We can say that systematicity is a new feature of risk management, which is formed thanks to connections in the system that transmit the properties of each element of the system to all other elements. These connections are called integral or systemic. The effectiveness of a systematic approach in the

[35] Nowak A., (2019). Types of risk in manufacturing companies: a review of research. Risk Management Review, vol. 5, no. 2, pp. 80-95.
[36] Kaczmarek A., (2023). Influence of external factors on the enterprise risk management process: an empirical study in the Polish market. Economic Studies, vol. 40, no. 2, pp. 60-75.
[37] Nowicka M., (2023). Effectiveness of risk monitoring systems in industrial enterprises." Industrial Engineering Review, vol. 8, no. 1, pp. 120-135.

formation of risk management provisions is based on the effective cooperation of parts of the system.

It should be noted that the use of a systematic approach in the formation of a risk management system consists in identifying external and internal factors of risk occurrence (Fig. 5).

Figure 5. External and internal factors influencing the risk management system



Source: Compiled by the author based on[38]

Factors influencing the risk management system are divided into external and internal, each of which has its own characteristic features. External factors cover those aspects that are beyond the control of the enterprise, namely: the macroeconomic environment, including economic, political and social factors, the regulatory framework in the field of risk regulation, including regulations, methodologies,

[38]URL: https://dspace.nuft.edu.ua/jspui/bitstream/123456789/8143/1/uprovad.pdf, accessed 21/12/2023.

recommendations and standards, as well as foreign experience in risk management[39]. These external factors can affect the enterprise's activities and its risks and cannot be fully controlled by the enterprise. Internal factors, on the other hand, depend on the enterprise itself, its specific activities and organizational structure, personnel qualifications and other internal aspects. They can be controlled and resolved within the competence and capabilities of the enterprise. Internal factors may include, for example, ineffective process management, insufficient personnel qualifications, problems with the organizational structure, and insufficient resources.

Dynamism should be highlighted as a characteristic feature of external factors, which means rapid changes in the environment that affect the functioning of the enterprise. Therefore, the main task is to create an adaptive risk management system that would not resist changes in the external environment, but would change in accordance with them using a systematic approach.

So, the formation of a risk management system using a systematic approach allows you to comprehensively solve problems at the enterprise; focuses on achieving priority goals and objectives; ensures optimization of the use of organizational resources; makes it possible to coordinate the work of organizational units; combines the main directions of the enterprise’s economic activity - plans for the development of financial relations, marketing plans, social development, etc.

2.2. Foundations of enterprise management in crisis conditions

The enterprise management system is not the same material object as fixed production assets, cash, and financial investments. It can be studied by analyzing the results of the activities of the individuals who form the enterprise. These results can be divided into three components:

a) the state and trends in changes in the functional characteristics of the enterprise or initial parameters (revenue, assets, profit, etc.);

b) the state and trends in changes in the structural characteristics of the enterprise (operating model, management system, etc.);

c) results of activities for the development of the enterprise (management philosophy, implementation of strategic goals, personnel development, etc.)[40].

[39] Wojciechowska M., (2024). Legal aspects of enterprise risk management." Law and Business, vol. 22, no. 3, pp. 40-55.

[40]Dzhur O.E., Shulyakova A.S., Innovative aspects of improving the management system of organizations in modern minds, Bulletin of Dnipropetrovsk University 2016 (6), 55-67.

The quality of the management system is reflected in the behavior of the company as a system, in the effectiveness of its activities and in the level of efficiency. In the event of a crisis in an enterprise, even in an unfavorable economic situation, the reasons should be sought in the management system. It is important to realize that results are achieved not only through the resources available to the company, but also through the systemic construction and organization of management. The effectiveness of the control system depends to a small extent on material factors[41]. Although large companies can attract experienced managers and qualified specialists, it is important to understand that even with highly qualified management personnel, expensive information systems and modern telecommunications systems, a good result is achieved only with the correct configuration of the entire management system, including all its components and management business processes.

Understanding enterprise management is based on the definition of this process as establishing, regulating and stimulating self-regulatory behavior of individuals and their groups that make up the enterprise as a whole.[42]. The purpose of the management system is to assess the state of the company and develop, as well as implement management activities. In a broader context, a management system is necessary to perform management functions in various departments, business processes and projects[43].

The main functions of the control system include:

1. Creating conditions for self-regulation of individuals (Fig. 1).

2. Determination of the main idea of the activity (Fig. 2):

3. Setting goals for the entire enterprise, its individual divisions, as well as for each business process or project includes the following steps:

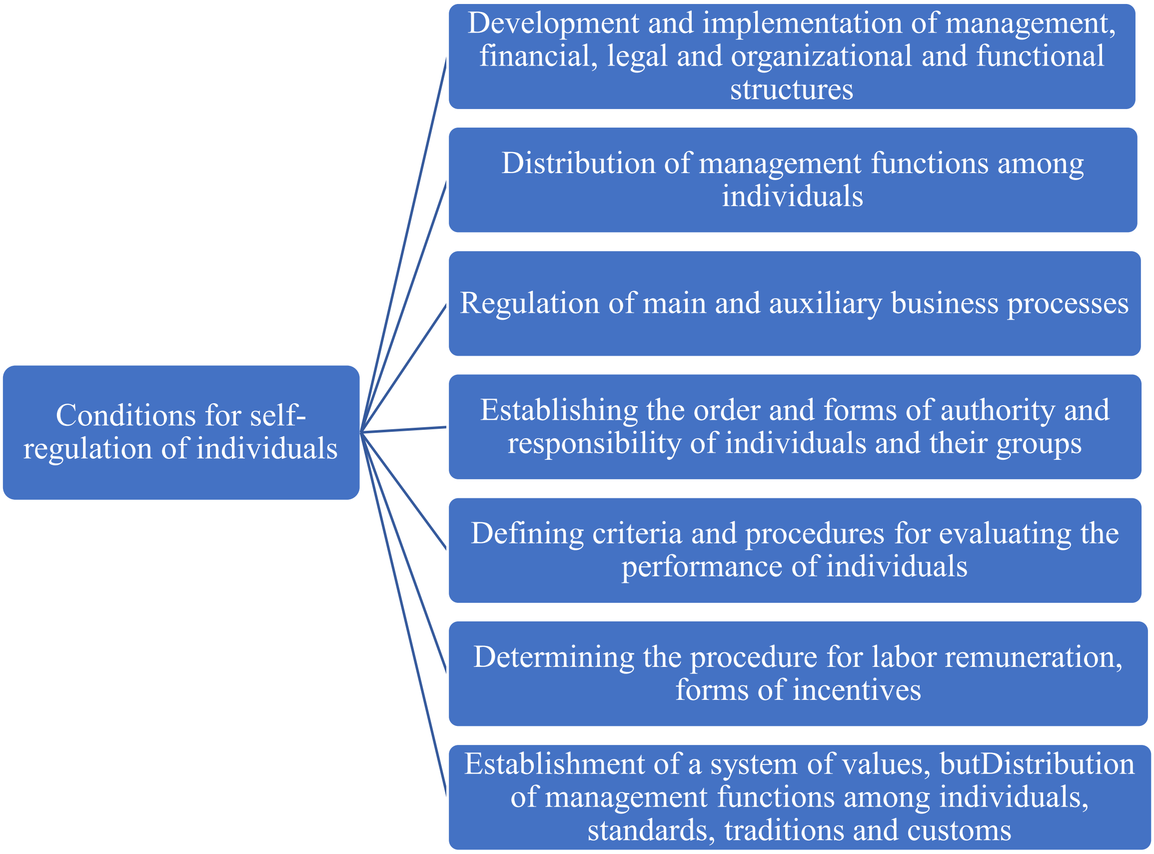
- drawing up a mission and formulating a vision of the future;
- establishing a common goal, strategic goals and objectives;
- development of a system of long-term and short-term goals and objectives for departments, business processes, projects or individual employees;
- determination of criteria for assessing the achievement of set goals and objectives.

[41] Skalik J., Change as a condition for success. Transformations of management methods and practices, Wydawnictwo AE Wrocław, Wrocław 2005.

[42] Kurpayanidi K. I., Questions of classification of institutionalconditions, determining the structure of business management in Uzbekistan. ISJTheoretical & Applied Science 2018, 9(65), 1-8.

[43] Sudol S., Enterprise, PWE, Warsaw 2006.

Figure 1. Conditions for self-regulation of individuals



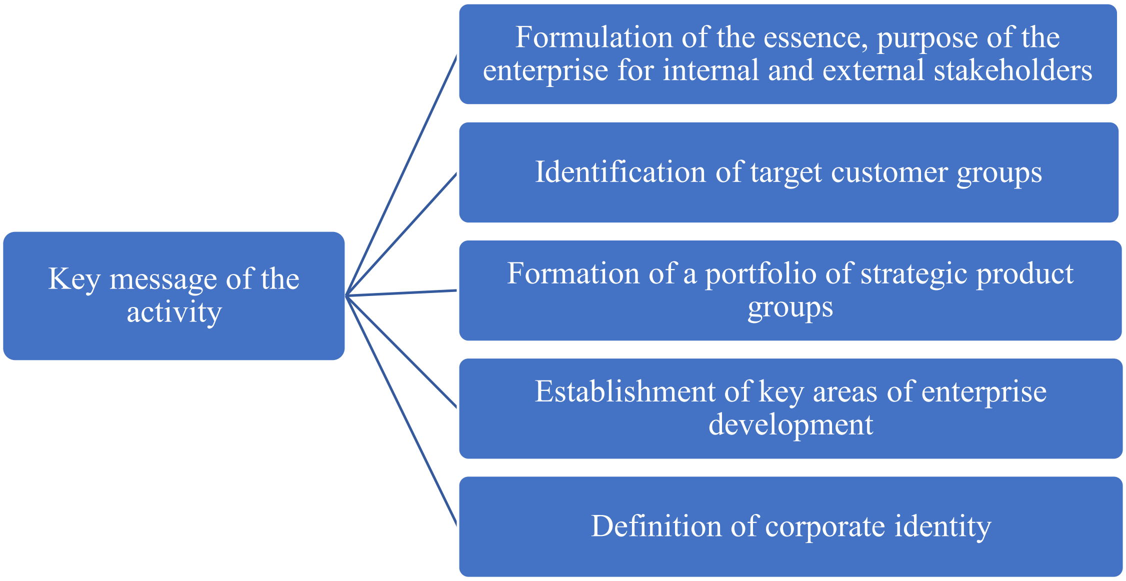
Source: Compiled by the author based on[44]

4. Creation of a system for planning the implementation of goals and objectives:

- strategic planning;
- operational planning;
- planning and project management;
- investment design;
- operational scheduling;

[44]Babchinska O.I., Branitska K.V., Upgrading the enterprise management system in current minds. Management of the 21st century: current models, strategies, technologies Previously published in VTEI KNTEU, Vinnytsia 2017.

Figure 2. Key idea of the activity



Source: Compiled by the author based on[45]

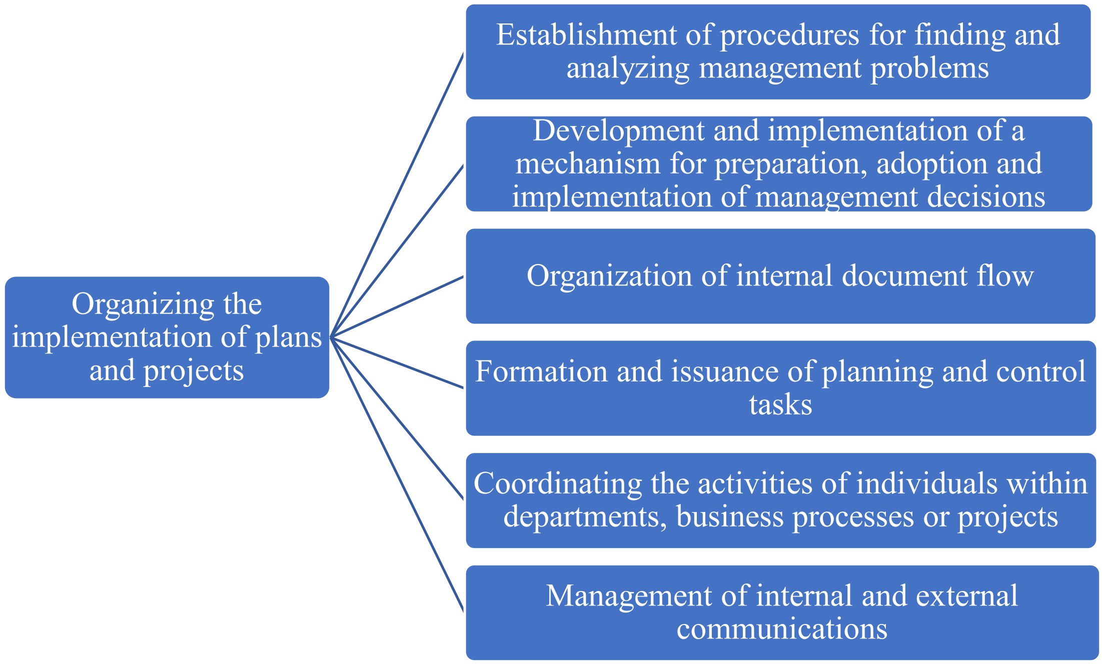
5. Organization of implementation of projects and plans (Fig. 3):

6. Establishing feedback:

- assessment of the implementation of long-term and short-term goals and objectives, plans and projects;
- control over the timing and quality of implementation of planned control tasks, production accounting;
- management accounting and management reporting;
- organization and implementation of internal control, internal audit;
- implementation of corporate information systems;
- assessment of the quality of systems, processes, products[46].

[45]Babchinska O.I., Branitska K.V., Upgrading the enterprise management system in current minds. Management of the 21st century: current models, strategies, technologies Previously published in VTEI KNTEU, Vinnytsia 2017.
[46]Kish L.M., Strategic management, as the main part of enterprise management, Black Sea Economic Studies 2019 (38(1)), 107-113.

Figure 3. Organization of implementation of plans and projects



Source: Compiled by the author based on[47]

So, a management system is a set of valid and binding formal rules and procedures that determine[48]. The evolution of business models requires the development of an algorithm for forming a management system, including the following elements[49]:

a) object of management (value chain);

b) a subject of management influencing the object of management with the help of such tools as goals, management decisions, strategy, management processes, regulations, organizational management structures, risks, indicators.

Building the architecture of a management system at an enterprise involves performing the following actions[50]:

- identification of projects;
- design of the control object;

[47]Ibidem.

[48]Savchuk D., Formation of an organizational and economic mechanism for managing industrial enterprises, Business Inform 2018 (7), 4-5.

[49] Zieliński J.S., Intelligent systems in management, PWN Scientific Publishers, Warsaw 2000.

[50] David F., Strategic management: A competitive advantage approach, concepts and cases. Pearson–Prentice Hall 2016.

- setting goals aimed at meeting customer needs and increasing business value;
- determination of indicators to measure the level of achievement of goals;
- determination of units of measurement of indicators;
- calculation of current indicator values;
- determination of planned values of indicators;
- formation of activities aimed at achieving the goals;
- identification and assessment of risks aimed at achieving set goals;
- development of measures to minimize risks;
- determination of the top-level business process model;
- decomposition of business processes;
- determination of the labor intensity of process implementation;
- building an organizational management structure;
- development of activity regulations.

We will model the enterprise management system based on the technologies of the process-project approach. First, it is necessary to determine the relationship between the company's owners and hired managers. The company's owners build relationships with the hired manager and determine areas of responsibility. For example, the owners are responsible for the strategic management of the company, while the manager is considered responsible for current operational issues[51]. The CEO is responsible for implementing risk measures in the yellow zone (green zone is low probability of occurrence, yellow level is medium probability, and red level is high), but he will not take responsibility if the risk moves to the red zone. In this case, the decision on the necessary measures will be made by the owners.

Informing business owners about the state of the company's activities should be done from at least two sources. The first source is reports provided by hired managers. They must contain the value of management system indicators and risk status. The reliability of these reports must be confirmed by information from the company database (second source), which is displayed on the business owners' dashboard. Such information is accumulated using modern technical means, depending on what information the owners need. Owners should receive such information directly from the company’s information system, bypassing processing by managers, since otherwise it will not always be possible to see reliable data[52].

The company's management influences the object of management through management decisions through management processes, the effectiveness of which

[51] Skrzypek E., Knowledge management as a modern requirement, "Problemy Jakości" 2014, no. 2.
[52]Gerasimenko L.I., Features of enterprise management and assessment of its value, Current problems of economics 2014 (12(46)), 24-28.

depends on their labor intensity and cost, as well as the result obtained. All processes in the company must be regulated so that each employee understands how a particular process is implemented and what results should be obtained as a result.

Corresponding enablement processes are required to carry out core business processes. They do not directly create value for the client, but without them the implementation of basic business processes is impossible. The implementation of business processes should be aimed at achieving the set goals. Indicators, as well as activities aimed at achieving them, form the company's strategy. These activities are actually company processes and projects[53].

When developing a strategy, it is necessary to take into account the risks of implementing measures to achieve goals, as well as determine the actions necessary in the event of adverse events. Goal setting is carried out in accordance with the SMART principle, which remains the most understandable and logical formulation tool that provides specification of goals. For each goal, one or more indicators can be selected to measure achievement of the goal. Accordingly, you need to select a unit of measurement for indicators and determine current and planned values. The financial outlook must be consistent with the company's balance sheet and income statement.

Customer perspective indicators should have logical connections with financial indicators. In the future, the goals of modernizing the business processes implemented in the company should be presented. For example, the goal of "improving production processes through the introduction of innovative technologies" presupposes the existence of a business process "production in the company"[54].

In the course of training and development, goals related to increasing the level of qualifications of personnel, their differentiation, building an effective motivation system, as well as regulation, automation, robotization of activities and the introduction of innovative technologies are indicated. Measures aimed at achieving goals are those projects and business processes that the company implements to achieve its goals. The implementation of such projects and processes is associated with various risks, such as risks of implementing value chains, managerial, financial, legal, political, tax, personnel, etc.

These risks may be in the green, yellow or red zones, depending on their level of impact. For each zone, it is necessary to create certain measures aimed at

[53]Przybylska N., The importance of relational capital in building the innovativeness of enterprises, "Entrepreneurship and Management" 2014, vol. XV, issue 11, Management - new perspectives in the era of demographic changes.

[54]Ansoff, I., Kipley, D., Lewis, A., Helm-Stevens, R., & Ansoff, R. (2018). Implanting strategic management. Springer.

minimizing risks. Identification of risks, as well as the development of measures aimed at minimizing risks, will increase the financial stability of the company, as well as avoid situations where radical changes to the business model may be required, which in some cases can lead to bankruptcy[55].

The modern world is quite complex, non-linear and extremely changing, and this leads to the fact that internal processes and events that seem insignificant can cause unforeseen consequences in the system. The impact of both internal and external factors on the evolution of the system can be different, and they can lead to a crisis. Crisis phenomena are an integral part of any system and can manifest themselves with different frequency in different spheres of human activity. There is a broad classification of crises, which is characterized by various factors.

The term "crisis" comes from the Greek word "krisis" (point of return), denoting a sharp deterioration in the economic condition of a country. This is manifested in a significant reduction in production, disruption of production relations, bankruptcy of enterprises, increased unemployment and, ultimately, a decrease in the standard of living and well-being of the population. A crisis, as a rule, means a sharp aggravation of contradictions in a socio-economic system, creating threats to its existence and normal functioning, loss of competitiveness and, in extreme cases, the danger of bankruptcy[56].

Having examined scientific approaches to the interpretation of the essence of the crisis, the following conclusions can be drawn:

1. The term "crisis" primarily means "a failure in economic development, a complete or partial imbalance between individual components of the economic system, manifested in increased socio-economic contradictions."

2. Secondly, the crisis state of the economic system does not arise against the conditions of its development and functioning, but precisely as a result of the influence of these conditions affecting the system from the inside and outside. It is internal and external factors that disrupt the normal provision of resources to an enterprise, causing crisis processes in its structure and taking the system out of a pre-planned path of movement.

3. The third aspect is that despite the degree of difficulty, crises play a positive role in the economic system. On the one hand, they serve as a means of weakening and eliminating outdated elements of the dominant system, which has exhausted its potential, and on the other hand, they create conditions for the approval of elements

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[55]Sankowska, A.,The impact of trust on business management. An intra-organizational perspective. Warsaw: Difin 2011, 84.

[56]Majchrzak J., Change management in the enterprise. Poznań: Publishing House of the University of Economics 2002, 14.

of the new system, representing the future cycle, and restore order in the organization. Thus, the economic system is both subject to crises and develops with their participation.

4. Fourthly, any economic system is a set of all economic processes occurring in society, based on the existing economic relations in it. It can be argued that the crisis of the economic system is, in essence, a crisis of economic relations[57].

The nature of crises remains one of the most controversial and insufficiently studied issues. The greatest damage is caused by crises that occur randomly without warning, and theorists actually argue that their occurrence is inevitable. Currently, it is extremely important to have up-to-date information about crisis phenomena in the economy. It is necessary to understand what benefits can be derived from the current situation and what decisions should be made in order to adequately and timely respond to changes in politics, economics and society.

When a crisis occurs, the primary question becomes the need to identify factors that will make it possible to anticipate crises and find options to overcome their negative consequences. Developed countries pay special attention to studying crises and developing anti-crisis measures.

The main challenge currently lies in the difficulty of predicting the emergence of a crisis. Mathematical modeling for the purpose of predicting the occurrence of crises largely depends on the initial parameters, so analysis of the main causes of their occurrence is important. The causes of the crisis themselves can also be divided into external and internal. External ones are associated with the processes of macroeconomic indicators, as well as indicators operating outside the country's economy. Internal reasons include microeconomic indicators.

The following are the causes of crises:[58]

1. Objective – related to the cyclical needs of modernization and restructuring of economic systems.
2. Subjective – reflect errors in management.
3. Natural – caused by climate, earthquakes, etc.
4. External – related to trends in macroeconomic development.
5. Internal – related to intra-organizational problems.
6. Random – the result of random phenomena and processes.
7. Regular - regularly repeating, stable and predictable.

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[57]Shatailo O.A.,Local characteristics of the crisis management system, Business Inform 2019 (5), 217.

[58]Bagdare S., Jain R., Measurement of the experience of retail clients, „International Journal of Retail & Distribution Management" 2013, vol. 41 no. 10.

In modern conditions, the main task of enterprise management is to identify the main signs of a crisis and systematize them for a reliable assessment of the situation, timely prediction of the approaching crisis, assessment of possible negative consequences, and development of a program for overcoming the crisis. It should be borne in mind that the likelihood of a crisis is always present, since in any system there are unpredictable factors that reduce the reliability of crisis forecasting. It is important to note that the crisis has a double impact: it can not only negatively impact the development of the economic system, but can also serve as an impetus for a qualitative transition to the next, higher level of development.

A crisis always arises due to a discrepancy between financial and economic indicators and environmental conditions. The cause of the crisis are events or phenomena that give rise to crisis factors. There are four stages of a company's crisis[59]:

1. At the first stage of the crisis, which often remains hidden, there is a decrease in the marginal efficiency of capital, a deterioration in business activity, and a drop in profitability and profit volume. Solving these problems as part of anti-crisis measures may include revising the enterprise's strategy and carrying out its restructuring.

2. The second stage of the crisis – production becomes unprofitable. This problem is being solved due to voluntary restructuring of the enterprise.

3. The third stage means the practical absence of own and reserve funds at the enterprise. This has a negative impact on the prospects for its development. The program for stabilizing the financial and economic situation means taking emergency measures to find funds to restore a favorable financial situation. If such prompt measures are not taken, a liquidity crisis and bankruptcy occurs.

4. The fourth stage is a period of acute financial insolvency. The enterprise is deprived of the opportunity to invest funds, even in conditions of reduced production, and to satisfy financial obligations. There is a real threat of suspension or complete cessation of production[60].

Identifying specific events that can trigger a crisis is challenging and involves the interaction of many economic, political and psychological factors. Any of the external or internal factors can initiate a crisis, which emphasizes the constant threat of its occurrence. Thus, it is necessary to actively anticipate and predict crises.

Signs of a crisis - an imbalance of an economic entity - are characterized by specific features:

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[59]Yurinet O.V., The essence and importance of urgent tools for anti-crisis management of enterprises, Economic journal Odessa polytechnic university 2021 (1(15)), 92-100.

[60]Yurinet O.V., The essence and importance of urgent tools for anti-crisis management of enterprises, Economic journal Odessa polytechnic university 2021 (1(15)), 92-100.

- are defined as a turning point in a developing system;
- create a situation where urgency of action matters;
- threaten prices and values;
- their consequences are difficult for achieving success;
- consist of events that create new conditions for achieving success;
- introduce uncertainty into the assessment of the situation and into the development of necessary alternatives to overcome the crisis;
- reduce control over events and their influence;
- reduce reaction time to a minimum, causing stress and fear in participants;
- the information available to crisis participants is usually insufficient;
- cause lack of time;
- change the relationship between participants;
- usually increase emotional stress[61].

We also note that crises, depending on certain classification criteria, have different types:[62]

1. By coverage: general, local.
2. On the issue: microcrises, macrocrisis.
3. According to the structure of relations: economic, social, organizational, psychological, technological.
4. For reasons: natural, social, environmental.
5. By the nature of occurrence: expected, unexpected.
6. By the nature of the manifestation: obvious, latent.
7. By time: protracted, temporary.
8. According to controllability: controllable, uncontrollable.

Most scientists raise the question: what signs should be taken into account to reliably predict a crisis? The developed forecasting system will be able to clearly identify these indicators, including the direction of action and areas of the economy that will be affected. Creating a model that can timely identify the initial stage of a crisis will help mitigate its consequences. In the context of crisis management, management strategy plays a critical role. Particular attention in the crisis management strategy is paid to key aspects of overcoming the crisis.

The principle of crisis forecasting as a type of research, analytical, cognitive activity includes[63]:

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[61]Voronkova T.I., Anti-crisis management system for enterprises, Scientific and Technical Information 2015 (3(65)), 17 – 25.

[62]Włosiński K.W., Szerenos M.A., High-technology clusters in Mazovia - research results, "Organization and Management" 2006 no. 3.

[63] Tabaszewska E., Methodology of implementing a knowledge management system, Management of Enterprise, No. 1, 2008.

- the principle of integrity - the identification of a forecasting object as an integral formation, that is, its delimitation from other phenomena, from the environment using the definition and assessment of distinct properties;

- the principle of compatibility of elements of the whole - an enterprise can exist as a whole when its elements are compatible with each other. The system-forming element for the socio-economic system is man. His relationships with other people for various reasons (property, tools, information, social status, wages, etc.) characterize connections in the socio-economic system and its integrity;

- the principle of the functional-structural construction of the whole - the need to see not only the elements and connections of the system, but also the functional content of each of the elements, as well as the identification of dysfunctions that do not correspond to the functions of the whole and thereby violate the stability of the system, necessary for the stability of its functioning;

- development principle;

- the principle of multifunctionality (functional compatibility) – functions connected according to a certain characteristic to obtain a special effect;

- the principle of iterativeness is a process that provides for a certain sequence of operations themselves and the use of methods for assessing results (preliminary, intermediate and final), which characterizes the iterative structure of the crisis forecasting process;

- the principle of probabilistic assessments - means the widespread use of statistical analysis methods, probability calculation techniques for assessing cause-and-effect relationships, in other words, it represents the object in a deterministic form;

- the principle of variation – follows from the principle of probability; the combination of probability gives different options for displaying and understanding reality and is focused on identifying possible options for reflecting the real state of affairs with subsequent analysis of their options;

- the principle of systematicity - data from system parameters can only be useful when they themselves are taken into account and used systematically, that is, in interdependence and connection with each other[64].

The consequences of crises can be as follows:[65]

- system update;

- improvement of the system;

[64]Voronkova T.I., Anti-crisis management system for enterprises, Scientific and Technical Information 2015 (3(65)), 17 – 25.

[65]Kogut U. I., Gorbal N. I., Anti-crisis management of enterprise expenses in the minds of international economic activity, Scientific Notes 2017 (2), 197–206.

- destruction of the system;
- the emergence of a new crisis;
- exacerbation of the crisis;
- sudden changes;
- easing the crisis;
- soft output of the system;
- short-term changes;
- qualitative changes;
- inevitable changes;
- quantitative changes;
- reverse changes.

Thus, the occurrence of a crisis can have both a negative and a positive impact, depending on the competence and abilities of the enterprise's management. The quality of the response to a given situation largely depends on the type of crisis and on the ability of management to adequately assess the degree of danger and potential consequences.

2.3. Principles of enterprise management in crisis conditions

Crises in the world economy have always attracted the attention of practitioners and scientists to the problems of strategic management[66]. Despite the obvious complexity of managing large hierarchical structures, one of the critical problems is the growing uncertainty regarding responsibility for the division of power within a group of strategic managers, and therefore there is a need to form a functional distribution of strategic management in a crisis[67].

Crisis situations occur due to the aggravation of misunderstandings caused by the interaction of microeconomic systems both among themselves and with the external macroeconomic environment[68]. In conditions of financial and political instability of a market economy, crisis situations are an integral attribute of the functioning of a corporation. Under such disruptive circumstances, corporations must

[66] Bundy, J., Pfarrer, M. D., Short, C. E., & Coombs, W. T. (2017). Crises and Crisis Management: Integration, Interpretation, and Research Development. Journal of Management, 43(6), 1661-1692.

[67] Weiner, D. (2006). Managing corporate reputation in the court of public opinion. Ivy Business Journal, 2, 6-18.

[68] Walas-Trębacz, J., & Ziarko, J. (2011). Basics of crisis management. Part 2, Crisis management in the enterprise. Kraków: AFM Publishing House.

adjust and adapt to conditions imposed by external factors; Internally, top management must agree on a plan for anti-crisis corporate activities[69].

The first indicator of a crisis is a clear trend towards an increase in current expenses and a simultaneous reduction in business volume, including a decrease in the company's revenues and profits. In such conditions, companies very often develop unbalanced relationships between income and the cost of resources, that is, between money received and money spent, between net worth and loan capital created as a result of the crisis[70]. Further aggravation is characterized by a deterioration in the quantitative and qualitative indicators of the corporation, which, accordingly, leads to a gradual loss of net assets and the emergence of a financial deficit to pay off all liabilities[71].

A crisis at the micro level can be interpreted as:

- loss of solvency and competitiveness of the company, accompanied by a deviation of actual indicators from planned ones;
- the emergence of contradictions that threaten the stability and viability of business in the environment;
- limited influence of management on the company’s activities, which includes difficult predictability of consequences and poses a threat to further development[72].

A broad understanding of crisis management includes prevention (signal detection, preparation and precautions), application of necessary methods in a state of crisis (limiting losses, restoring the initial state) and the recovery period (forming conclusions for the future, implementing change).[73]. In a narrow sense, crisis management involves the use of actions precisely at the moment of crisis, however, it does not include preventive actions aimed at preventing or preparing for a crisis[74]. This type of management aims to combat a clear threat and limit potential negative consequences.[75].

The meaning of "crisis management" is very close to the widely used "crisis management". Crisis management focuses on the company's actions taken both before

[69] Zbierowski, P. (2012). Positive orientation of high-performance organizations. Warsaw: Wolters Kluwer Oficyna.
[70] Wieczerzyńska, B. (2009). Crisis in the enterprise. Warsaw: CeDeWu Wydawnictwo Fachowe.
[71]Fried, J. (2012). Who really drove the economy into the ditch. Algora Publishing.
[72]Boin, A., Hart, P. 't, Stern, E., & Sundelius, B. (2005). The Politics of Crisis Management: Public Leadership under Pressure. Cambridge University Press.
[73]Rydzak, W. (2011). Reputation-information activity of an organization in crisis situations and the determinants of their choice. Poznan University of Economics.
[74]Coombs, V. T. (2011). Flow crisis communications: Planning, management and response. Purdue University in the Community and Problem Management.
[75]Caponigro, J. (2000). Crisis. Radnik.

the crisis and during and after it ends. In this process, the danger of a crisis is predicted, its symptoms are analyzed and actions are taken to limit the negative consequences of the crisis.[76]. The essence of crisis management or management is to prevent, prevent the onset of a crisis. Therefore, as a rule, the emphasis should be placed precisely on the first stage - crisis prevention, because it is at this phase that the first signals that appeared even before the crisis are determined[77].

The system of premature identification of hazards inside and outside the enterprise allows you to quickly and effectively respond to changes, both external and internal[78]. The early forecasting system allows[79]:

- provide specific early warnings about the situation, which allows you to qualitatively predict events that may occur inside and outside the organization;
- recognize signs of danger;
- adjust activities, while being able to minimize the danger to workers and business;
- create a competitive advantage.

The early forecasting system is not separated from the overall company management system during a crisis, because it is an integral part of management. Such a system may well be an element of systems such as a quality management system or a control system. The preliminary forecasting system can be included in various management and control tools, because there is no universal model of the system, so it can be included in the balanced scorecard, SWOT analysis of scenario analysis and others. Rather, the system needs to be adapted to the specific organization, checking whether existing systems, tools and methods meet the requirements of the crisis management idea.

To overcome existing and avoid possible problems, the following types of anti-crisis strategies can be distinguished:[80].

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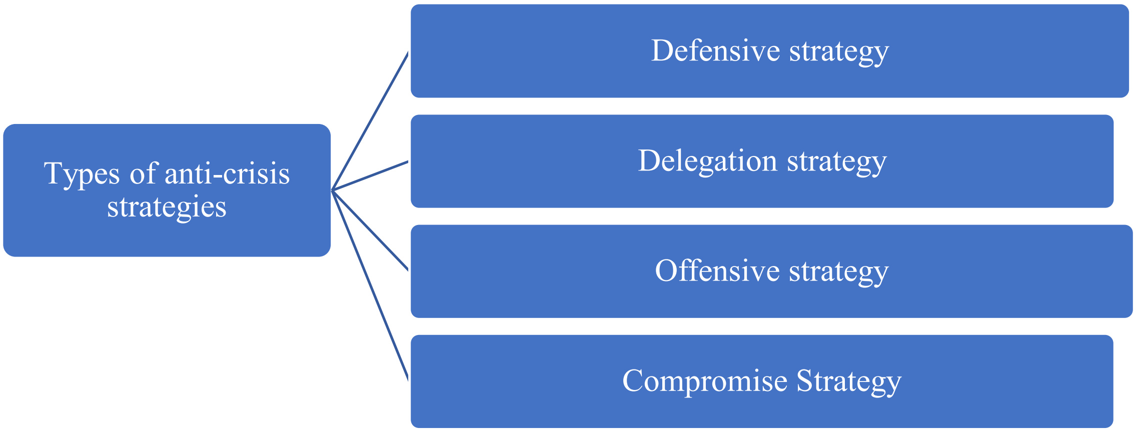
[76]Krakiewicz, K. (2019). Anti-crisis management of organizations. Poznan University of Economics.
[77] Gryz, J., & Kitler, W. (Eds.). (2007). Crisis response system. Toruń: Adam Marszałek Publishing House.
[78]Ligonenko, L. (2001). Anti-crisis management of enterprise: Theoretical and methodological approaches and practical tools: Monograph. Kiev National Trade and Economic University.
[79]Kolisnyk, M. K., Ilchuk, P. G., & Vibliy, P. I. (2007). Financial rehabilitation and anti-crisis management of enterprises: Head of. Condor..
[80]Kowalski, J. (2018). Anti-crisis management in enterprises. Warsaw: PWN Scientific Publishing House.

Figure 1. Types of anti-crisis strategies



Source: Compiled by the author based on[81]

1. Defensive strategy - consists of significantly reducing costs, closing unprofitable production and maintaining promising areas of activity (a similar strategy was chosen by PepsiCo Ukraine during the escalation of the war in Ukraine since March 2022).

2. Delegation strategy – provides for the transfer of the right to solve enterprise problems to third parties, and is used in situations where management is not able to resolve the problem on its own.

3. Offensive strategy - consists of the active implementation of anti-crisis actions and is accompanied by the introduction of technologies, marketing activities and expansion of the market segment. When choosing such strategies, it is important to maintain round-the-clock control over the situation, because the success of such a strategy involves stimulating the growth of the company (the strategy was chosen by the Ukrainian marketplace for Ukrainian brands "Vse Svoi", when during the crisis of 2014 the company began active activities aimed at supporting domestic manufacturers , thus stimulating its own development in crisis market conditions).

4. Compromise strategy - provides for the organization of complementary market participants to conduct mutually coordinated economic activities to reduce costs and increase income.

A successful anti-crisis strategy should be built on a coherent model of four functional strategies: marketing, production, personnel and financial strategies (Fig. 2)[82].

[81]Ibidem

[82]Nowak, A. (2016). Crisis management: Theory and practice. Kraków: Jagiellonian University Publishing House.

Figure 2. Four functional strategies of an anti-crisis strategy

Source: Compiled by the author based on[83]

According to the stage at which the business is located, it is possible to identify certain types anti-crisis strategies that will be the most effective in each case (Fig. 3).

Figure 3. Strategies at the stages of crisis development

Source: Compiled by the author based on[84]

[83]Ibidem

[84]Shkonda, V., & Kalyanov, A. (2014). Strategies for anti-crisis management of current businesses. Sciences of MAUP, 4, 167-175.

Therefore, we can conclude that in a crisis, development strategy comes first in crisis management - only under such conditions is it possible to overcome the negative consequences in the financial position of the enterprise and only in this way can the problem of preventing bankruptcy be solved[85].

In the theory of crisis management, there is another approach, focused on creating the company's long-term resilience to the crisis.[86]. The goal of this approach is to search for and form key factors that determine a company's high resistance to a crisis. To achieve such stability or resilience of a company to a crisis, it is necessary to diversify the company's activities in order to minimize risks, increase the company's flexibility both in economic terms (the company's response to uncertainty associated with changes in demand) and in organizational terms (response speed and employee comfort). Under such conditions, the factors that shape crisis resilience include the following components (Fig. 4).

Figure 4. 6 factors in the formation of crisis resilience

Source: Compiled by the author based on[87]

[85] Zieliński, P. (2017). "Types of crisis management and their effectiveness." Organization Review, 65(3), 56-68.
[86]Romanovska, M. (2010). Strategic developments in enterprise. College of Financial Management.
[87]Romanovska, M. (2010). Strategic developments in enterprise. College of Financial Management.

In crisis management, an anti-crisis strategy is the tool that primarily helps to overcome the crisis, with minimal losses for the company. Anti-crisis strategy includes the stages of strategic management (analysis of the external environment, defining the mission and goals of the enterprise) or is considered as strategic management as a whole, that is, as the “art of top management”, leading the organization to strategic goals: increasing the professionalism and creativity of employees, ensuring relationships with contractors, clients and the media space, updating the organization and its products, as well as implementing current plans.

The problem of choosing a strategy for anti-crisis management of an enterprise is theoretical and methodological, because it can be divided into five marketing strategies aimed at improving the activities of the enterprise:

1. Strategy for returning the enterprise to its previous market state;
2. Market development strategy, that is, a strategy for expanding the goods market;
3. Product development strategy;
4. Diversification strategy;
5. Exit strategy – liquidation of the legal entity.

In the modern economy, an anti-crisis strategy is responsible for ensuring the long-term and effective functioning of an enterprise in a competitive environment. This strategy is also a means of managing change and is responsible for finding alternative solutions in a crisis.

The negative consequences of war point to the urgent need to develop more innovative approaches to address instability, conflict and violence. It is increasingly clear that traditional security and development measures, including peacekeepers and humanitarian assistance, are insufficient to help societies recover and build resilience in the face of complex challenges. New solutions must use public-private partnerships and the active role of the business sector.

There are real opportunities for international and local private business in some of the world's hot spots. Experience from countries such as Afghanistan, Bangladesh, Burkina Faso, Democratic Republic of Congo, Nigeria and Uganda suggests that there are positive examples of large, medium and small enterprises influencing change in war-torn communities. Companies there are not only getting a return on their investment, they are striving to build stronger communities[88].

The firms operate in several sectors - oil and gas, mining, agriculture, consumer and industrial goods, and financial services. The difficulty of working in conflict regions also lies in the moral issue - it is important not only to make a profit, but also to provide support for the region and use resources responsibly.

[88]URL: https://www.weforum.org/, accessed 05/01/2023.

According to a report by the World Economic Forum, several main features of companies and businesses developing during war can be identified:[89].

Investment and business development requires support from the government and institutions. However, businesses must support this system and not try to circumvent it. The systematic nature of the economic system should be even more stable than before the war, and functioning within the system should not have internecine quarrels and disputes. Flexibility and a high level of coordination between government and business must be ensured. This guarantees a secure and relatively stable environment for business and, accordingly, payment of taxes and investment in local markets for the state.

Businesses must understand the need to support transparent and efficient management of natural resources and capital arising from their extraction, sale or use. The worst thing a company can do for a country in conflict is to illegally profit from the natural resources of the country or the situation that is happening around it. There are initiatives that have proposed ways to solve this problem and recommended reforms for government and business to use natural resources to support the economy. Such initiatives include the Philips Conflict Free Tin Initiative[90]. It defines the term conflict minerals to include four minerals - tungsten, tantalum, tin and gold - mined in the eastern region of Congo that are considered conflict minerals. The company's goal is to minimize the trade of minerals from mines that directly or indirectly finance or benefit armed groups. At the same time, the company is committed to responsible sourcing of minerals from conflict-affected and high-risk regions to support local communities and economic development of the region.

Continuing the theme of the need for close government-company collaboration, it is important to note that businesses often have a better understanding of how to maximize financial inclusion for vulnerable people, access global value chains for SMEs, create jobs and apprenticeships for young people, and also improve the quality of service delivery to vulnerable regions. Despite this, companies must be very aware of the local context, tolerate a high threshold of risk and maintain high ethical standards while complying with national and international laws. Indeed, companies must be careful not to inadvertently reproduce instability. Many private companies have valuable skills and portfolios of experience that can support governments wracked by instability and conflict.

So, for high-quality economic growth it is necessary to create public-private partnerships. This can provide both government support and business flexibility. At

[89]URL: https://www.weforum.org/, accessed 05/01/2023.
[90]Ibidem

the same time, there are significant risks of bureaucracy and complexity of processes, accordingly, governments need to maintain ease of doing business and transparency and simplification of procedures. Local civil society groups are vital to ensuring transparency and building inclusive partnerships. Donor organizations are essential to provide the necessary political and financial guarantees to build business confidence in high-risk environments. In recent years, a mature conversation has been developing between these organizations, including through the formulation of new Sustainable Development Goals.

It is important that local businesses are part of the solution. The local private sector is the engine of economic activity and growth. At least 70% of all jobs are created by small and medium-sized enterprises, and many of them are extremely resilient in fragile, conflict-ridden and violent environments[91].

There are many entry points for business in environments of instability, conflict and violence. Digital connectivity, the sharing economy, easy money transfers, access to Big Data and new social networks are reducing costs and risks for businesses in many parts of the world.

It is important that international organizations can also better identify and encourage creative and practical strategies and tools to responsibly and sustainably develop economies in fragile environments and increase their resilience to instability and violence[92]. Enterprises developing during the war can be divided into several main types[93]:

1. Enterprises engaged in equipment for war (the same ones that worked in the military sector before or were repurposed). Some enterprises are now receiving huge orders from the state to meet the needs of the Armed Forces of Ukraine; accordingly, their main problems are concentrated in the very rapid scaling of all internal processes, production, attracting human resources and ensuring safe logistics. At the same time, they face challenges regarding the confidentiality of the direction of their work, as well as quickly attracting resources in the required quantity.

2. Enterprises that had to move their production, employees and all processes to another place, that is, do a relocation. For IT companies mainly, as well as those engaged in the provision of services or small production, the obvious solution to continue operations was to change the location of employees and change the location of production. Of course, such changes are expensive and take a lot of time, but for

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[91]URL: https://business.diia.gov.ua/wartime, accessed 05/01/2023.
[92]URL: https://www3.weforum.org/docs/WEF_Responsible_Private_Sector.pd, accessed 05/01/2023.
[93]URL: https://business.diia.gov.ua/wartime, accessed 05/01/2023.

many companies this has truly become the only option for survival. The main problem of such companies is the logistics of production, fixed assets and property in a safe place, uniting workers, supporting them and rebuilding them in a new way, searching for new markets and changing supply chains.

3. Enterprises that remain in vulnerable regions and continue to operate in difficult conditions, occupation, under the threat of shelling and other dangers. If for companies providing services or companies with small or flexible production that does not depend on the location and is subject to transportation, it is possible to transfer their processes to another city or even country, then for companies whose production directly depends on the location, relocation impossible. These include farms, factories in the metallurgical and engineering industries, timber processing enterprises and others. Owners of such enterprises are forced to make a choice between continuing to operate in hazardous conditions or completely closing down and going bankrupt. Those who choose to continue working face incredible risks and direct threats to life, and the main problems for them are providing conditions for workers, flexible risk management and developing communication scenarios with invaders in the event of occupation. In addition, an ethical question is also raised, because on the one hand, the enterprise can continue to both provide the community (jobs, local taxes, food or clothing), and directly or indirectly help the occupiers.

4. New businesses created in relatively safe territory to support the economy, meet shortages for certain products, for a social reason to support the community, or simply for the purpose of making a profit. Many are losing their jobs, and many entrepreneurs are losing their businesses. However, the need of people for a means of subsistence, as well as to support the economy, forces the resumption of the work process. Such companies face not only the challenge of finding resources, distribution channels, new employees and financing, but also war risks, future relocation requirements and instability[94].

All these enterprises share such characteristics as flexibility and speed of decision-making, high-quality risk management and clear construction of supply chains. An important characteristic of the process of restoration and operation of enterprises operating in war conditions is also social sentiment, both within the company and in the region where they operate. People do the work, and the success of their work depends on how united they are and how willing they are to take risks for common goals.

The first thing that is taken into account when assessing the impact of war is, of course, human losses. In addition, war also has serious economic costs - damage to

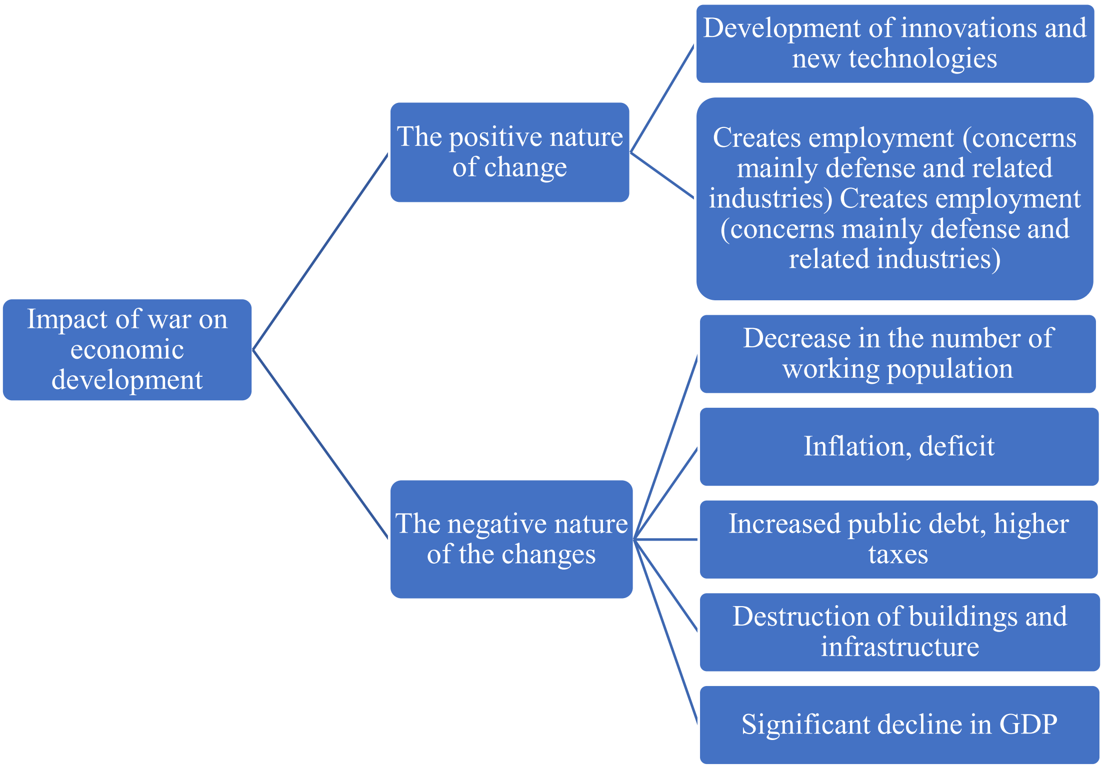
[94]URL: https://business.diia.gov.ua/wartime, accessed 05/01/2023.

infrastructure, a decline in the working population, inflation, deficits, uncertainty, rising debt and disruption of normal economic activity.

From some perspectives, war can be beneficial due to the creation of demand, employment, innovation, and profits for business (especially when the war occurs in other countries). However, when we talk about the "economic benefits" of war, we must recognize the "broken window fallacy" - when we spend money on war, it creates demand, but it is also a huge opportunity cost - instead of building bombs and rebuilding destroyed cities, we could use this money to improve education or healthcare. For example, some estimates put the opportunity cost of the war in Iraq at $860 billion at the end of 2009.[95].

Figure 5 describes the impact of war on economic development.

Figure 5. Economic impact of war



Source: Compiled by the author based on[96]

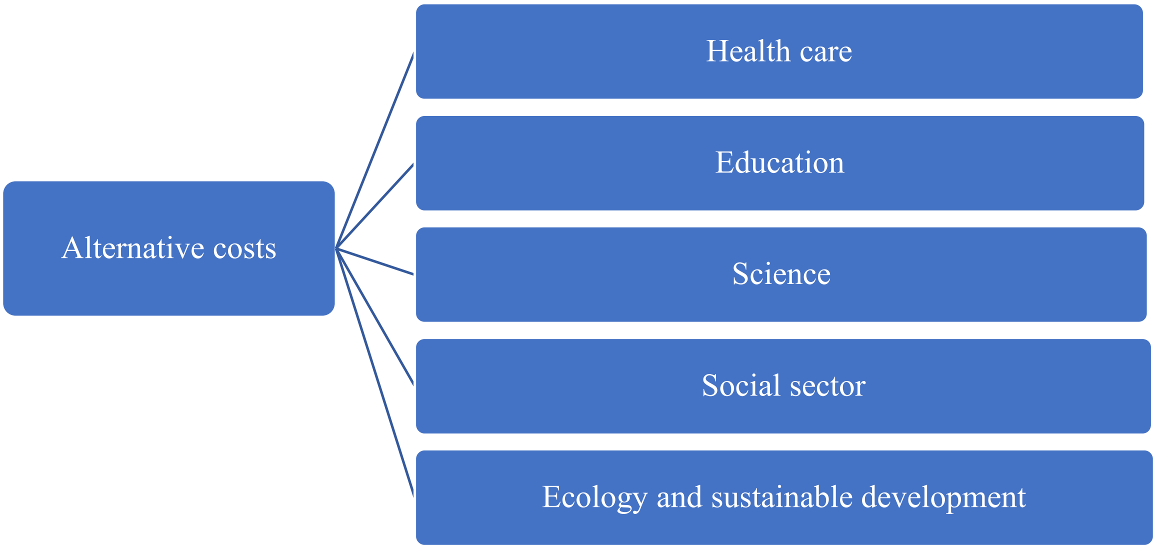
[95]Glanz, J. (2009). The economic cost of war. The New York Times.

[96]Ibidem

The negative manifestations of war and its economic impact should also include alternative costs for sectors that could have been developed with funds spent on the war. Figure 6 identifies the main sectors that will receive less due to the redirection of funds to the war.

For all enterprises, work becomes risky every day, and previous methods and methods of decision-making often become almost meaningless, because management must be carried out in conditions of daily changes, the threat of occupation and danger to life. According to a survey conducted by the expert-analytical center of the resource for employers grc.ua[97], half of the remaining companies are not able to predict their activities and the market even in the short term.

Figure 6. Sectors that could become alternative expenditure items



Source: Compiled by the author based on[98]

Many companies generally intend to resume their work only after the end of the war or continue at less than full capacity and with significantly reduced staff. 20% of the companies that suspended work plan to resume their activities within two months, another 10% want to do this in six months. More than half of the companies surveyed expect that business will be restored to the level of income and turnover that

[97]URL: https://grc.ua/, accessed 05/01/2023.
[98]URL: https://business.diia.gov.ua/wartime, accessed 05/01/2023.

existed before the start of the war, however, the majority are still either not ready to make high-quality forecasts or do not have the opportunity to recover in general[99].

Many enterprises are damaged, and for future assessment of the impact of war on their ability to operate, it is necessary to outline the range of factors that may influence changes in the situation. Ivanov S. considers the following circumstances to be such factors:[100]:

- damage to warehouses, production workshops, electrical networks, gas and oil pipelines, water systems and other infrastructure supporting the activities of enterprises;
- problems with the supply of raw materials or resources for production or sales, lack of demand, closure or dysfunction of the markets in which the enterprise traded;
- destruction of the enterprise itself, its head office, production premises, key buildings or structures;
- damage to infrastructure at the regional level, destruction of railway, road, river or sea communications, bridges, pipelines;
- seizure, mining, appropriation, evacuation, disposal, conservation, theft of an enterprise;
- loss of human resources, forced evacuation of the population, relocation of workers to other regions or even abroad;
- forced suspension of the work of enterprises, goods or services or the production process itself poses a threat of a man-made disaster if interfered with or damaged;
- lack of alternative income, significant costs for resuming work, providing for workers, changing the location of the enterprise, losses;
- failure to receive state support and subsidies, government orders, registration of public-private partnerships (if any could be implemented);
- loss of gas and oil producing territories and the infrastructure necessary for this;
- loss of territories of the agro-industrial complex, agricultural fields, lands, pastures, forests;
- loss of equipment and movable property of the company.

[99]Ivanov, S. (2015). Influx of violent conflict (war, military actions) on the productivity of enterprise: Monograph. Makov.
[100]Ibidem

2.4. Development of innovative it clusters in the context of turbulence

The development of IT innovation clusters in the face of turbulence is extremely important, as the current economic and social environment is characterized by high uncertainty, rapid technological change, geopolitical challenges, globalization and digitalization.

Turbulence creates both challenges and opportunities for innovation, especially in the IT sector, which plays a key role in the transformation of economies and societies. Turbulent conditions stimulate the development of new technologies and solutions. Innovation clusters in the IT sector allow for more efficient integration of the latest technologies (artificial intelligence, blockchain, big data) into global economic processes [1; 3; 6; 8].

Turbulence, pandemics, war, economic crises, or political instability require the creation of flexible structures that can quickly adapt to changes. Innovation clusters bring together companies, universities, startups, and other stakeholders to facilitate the rapid exchange of knowledge and resources.

In a world where competition for talent and investment is becoming increasingly fierce, the development of clusters allows individual regions or countries to create "magnets" for specialists, ensuring the growth of the local IT ecosystem even in difficult conditions. IT clusters contribute to economic diversification, which is important for regions with unstable traditional industries. Innovative cooperation reduces dependence on individual industries and increases resilience to external shocks [2; 4; 10; 13].

Turbulent conditions often stimulate the reorientation of capital to innovative areas. IT clusters act as a platform for interaction between investors and businesses, ensuring the inflow of financial resources. In the context of the digital transformation of the global economy, developed IT clusters help countries remain competitive in the international arena. Turbulence creates a need for new social solutions. IT clusters can initiate the development of innovations for healthcare, education, crisis management, and other important areas.

The development of innovative IT clusters in the context of turbulence is a relevant and necessary task that allows the economy to adapt to new challenges, creating conditions for sustainable development, attracting talent and capital, and increasing global competitiveness. Innovation clusters are geographically concentrated groups of interconnected companies, universities, research centers, startups, investors, and government agencies that collaborate to drive innovation and economic growth. In the IT sector, such clusters often become the main drivers for technology development, the creation of new products and services, and the formation of the digital economy. In this case, turbulence means instability and unpredictability in the socio-economic, political, or technological environment, which can be caused by wars, economic crises, technological breakthroughs, changes in regulatory conditions, or global pandemics [5; 7; 9].

Such conditions create both threats and opportunities for the development of innovation clusters. The impact of turbulence on the development of IT clusters is shown in the following (Table 1):

Table 1

Impact of turbulence on the development of IT clusters

Factor	Significance.
Changes in demand for technology	Growth of cybersecurity due to geopolitical risks
Outflow or inflow of talent	Migration of specialists due to instability
Access to funding	Reduction of investments or their redistribution

Source: [1-11].

Adaptation of clusters to the conditions of instability contributes to the creation of flexible management strategies, strengthening of international cooperation and integration of new business models, such as remote work and outsourcing. At the same time, the role of the state is manifested in the formation of incentives to support clusters (grants, benefits, regulatory relief) and protection of national interests in the field of technology.

Innovative trends in IT clustering include the introduction of artificial intelligence, blockchain, metaverse, and the development of ecosystems for the integration of startups and corporations [11; 12; 15].

The practical value of developing innovation clusters in turbulent conditions will allow creating sustainable models of cooperation that will help minimize risks and strengthen the position of the IT industry at the national and international levels. The development of innovation clusters in the IT sector under conditions of turbulence depends on many factors that can be divided into external and internal (Tables 2, 3) [2-7; 11; 13;14; 15].

Table 2

External factors influencing the development of innovation clusters in the IT sector under conditions of turbulence

Factors	Description
Economic	Financial stability - economic crises, inflation, or currency fluctuations can affect access to capital. Investment climate - the level of investor confidence in the region and the availability of venture capital. The level of development of the digital economy - the growing demand for IT products and services stimulates innovation.
Political	Political stability - conflicts or changes in government can limit long-term planning. Government support - availability of cluster incentive programs, preferential taxation, and subsidies. International relations - sanctions, access to global markets, partnerships with other countries.
Technological	Level of digital infrastructure - access to high-speed Internet, data centers, cloud services. Technological trends - active development of AI, blockchain, IoT, and other technologies promotes the development of specialized clusters.
Social	Migration processes - outflow or inflow of skilled workers due to turbulence. Culture of innovation - support for startups, mentoring, and collaboration between business and education. Demand for digital solutions - the need for innovative IT products due to changes in the way society lives.
Environmental	Energy stability - the impact of power outages on cluster operations. The use of environmentally friendly technologies - the trend towards green IT solutions.

Source: [2-15].

Table 3

Internal factors influencing the development of innovation clusters in the IT sector in turbulent conditions

Factors	Description
Organizational	Quality of cluster management - availability of competent managers, effective management structure. Interaction of participants - the level of cooperation between companies, universities and government agencies. Strategic adaptability - the ability to quickly change strategy in response to challenges.
Intellectual	Qualification level of employees - availability of highly qualified IT specialists. Training and development - continuous education, professional development courses.
Innovative potential	R&D volume - investments in research and development activities. Risk appetite - the ability of companies and clusters to implement new solutions.
Financial	Availability of funding - internal reserves, grants, or venture capital investments. Resource efficiency - the ability to optimize costs.
Infrastructural	Cluster localization - access to offices, coworking spaces, incubators, and accelerators. Digitalization of processes - automation of work and use of modern platforms.

Source: [2-15].

There is a loss of qualified personnel due to migration and a decline in investment due to economic instability [1-5].

The development of innovation clusters in such conditions requires a balance between adaptability and strategy, as well as cooperation between cluster members to mitigate risks and find new opportunities.

For the development of innovation clusters in the IT sector, turbulence can act as a catalyst or a barrier. In the first case, there is an increase in demand for IT products due to crisis conditions (e.g., automation, cybersecurity, remote work) and acceleration of technology adoption due to the need for adaptation. On the other hand,

The development of innovation clusters in the IT sector in the face of turbulence has significant potential to strengthen the economy, support business and ensure stability, the benefits of which are shown in Fig. 1 [6-12].

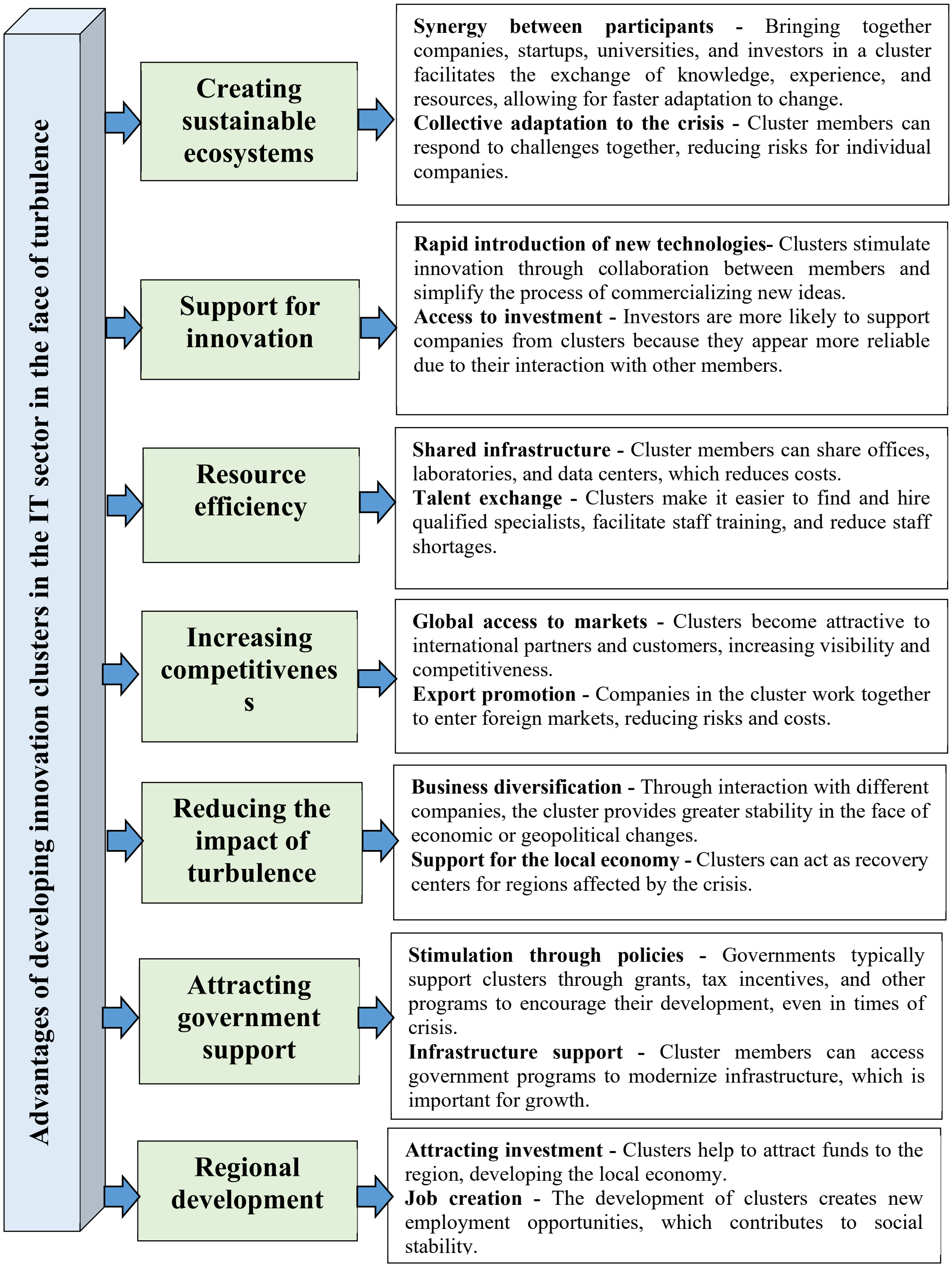


Fig. 1. Key benefits of developing innovation clusters in the IT sector in turbulent times

Source: [6-12].

Therefore, IT innovation clusters ensure both economic and social sustainability, minimizing the negative effects of turbulence and providing a platform for growth.

Along with the benefits of developing innovation clusters in the IT sector in the face of turbulence, there are also certain obstacles.

Turbulence caused by geopolitical, economic, or social factors that affect the speed of adaptation, access to resources, and global competition (Table 4).

Table 4

Challenges and opportunities for the development of innovation clusters in the IT sector in the face of turbulence

Challenges of turbulence	Development opportunities in the face of turbulence
Decline in investment activity In an unstable environment, investors are more cautious about investing, especially in startups and high-risk projects.	**Localization of innovations** Clusters can focus on developing products that solve local problems, particularly in times of crisis (cybersecurity, distance education, medtech, etc.).
Emigration of personnel IT professionals may move to more stable regions, creating a shortage of qualified personnel.	**Globalization of talent** Thanks to remote work, turbulence can increase the exchange of specialists between countries, attracting new ideas and experience.
Risks to infrastructure Instability can affect access to physical and digital resources, such as data centers or cloud services.	**Government support** In unstable environments, governments can stimulate innovation through grants, tax breaks, or the creation of technology parks.
Unpredictable markets Constant changes in legislation, currency fluctuations, or sanctions can create barriers to the operation of IT clusters.	**Fast adaptation** Turbulence fosters the development of startups that can respond quickly to market changes.
	Market diversification IT clusters can expand their presence in global markets, reducing dependence on one country or region.

Source: [8-14].

In order to effectively develop innovative clusters in the IT sector in the face of turbulence, it is necessary to use strategies for the further development of IT clusters:

1. Creation of a collaborative ecosystem - a partnership between universities, business and government to share experiences and develop innovations.
2. Digitalization of processes - using AI, big data, and blockchain to manage the cluster.
3. Startup acceleration - investing in startup development programs to create innovative products.
4. Human resources development - investing in the training of IT specialists through retraining and advanced training programs.
5. Flexibility and adaptability - developing strategies to respond quickly to market and environmental changes.

Successful examples of cluster adaptation include Ukraine, where during the war Ukrainian IT clusters focused on developing solutions for the defense industry and cybersecurity. Israel - despite constant threats, Israeli innovation clusters remain leaders in technological progress, focusing on startups and research.

Thus, turbulence can become a catalyst for innovation if risks are properly managed and focus is on key areas. The development of IT clusters requires flexibility, rapid adaptation and integration with global markets.

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2.5. Principles of work motivation in agricultural enterprises

Labor has always been a source of spiritual and material values, so the problem of motivating people to work has never lost its relevance[101]. Attempts were made to increase the motivation of work activity already in the first stages of the emergence of social production. Later, from different positions and under different names, scientists began to study what is today called the problem of motivation, i.e. various aspects of encouragement, stimulation, and activation of labor. Methods of motivation have always been associated with a specific level of production development, needs, culture, existing social conditions, and religion. At the same time, for a long time, humanity has been trying to change employee behavior, guided not by scientific approaches, but by the "trial and error" method[102].

An important feature of the society is the priority of attention to personnel - the main element of production, economic growth and competitiveness. The experience of developed countries of the world proves that not a single management task in any field of activity can be completed without the interest of the employee who performs it[103]. Knowledge of corporate personnel motivation is an institution for creating the best incentives for employees. In any case, the activities of employees are aimed at achieving significant social benefits from the company, but at the same time, the activities of the company are based on the contributions of employees.

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[101] Oksentyuk, A. (2012). Foreign and scientific evidence on personnel management. Galician Economic Newsletter, 2012(1(34)), 66-72.

[102] Medvedeva, L. N., Kozenko, Y. K., Komarova, P. O. (2016). Environment Quality Management in Green Cities. European Research Studies Journal, 19(2), 34-45.

[103] Kobersy, I. S., Khasiyeva, L. G., Yakhina, V. D., Ignatyeva, O. V., Goloshchapova, L. V., Shkurkin, D. V., Sadykova, L. R. (2016). Approaches to Implementation of Motivation as the Complex Conditions of Increase of Efficiency of Social and Labor Relations: International Experience. International Review of Management and Marketing, 6(S1), 208-217.

Numerous works of domestic and foreign authors are devoted to the problems of determining the economic essence of the concept of "motivation". There are many definitions of this concept, the main ones are given in Table 1.

Thus, Abraham Maslow notes that any behavior is polydeterministic, that is, it has complex motivation. In general, the core of motivation can be expressed as follows: motivation is a type of management activity that provides a motivational process for activities aimed at achieving individual or organizational goals[104]. Understanding motivational content is a key indicator of the professional skills of a good leader. Every person has desires, needs and values that need to be satisfied to gain meaning in human life.

Table 1. Some definitions of the economic essence of the concept of "motivation"

Author	Definition
Deci & Ryan	"Motivation is the process by which goal-directed activities are initiated and sustained."
Maslow	"Motivation is the drive to satisfy needs, starting with basic physiological needs and moving towards self-actualization."
Herzberg	"Motivation is the result of a combination of factors that can lead to job satisfaction or dissatisfaction."
Vroom	"Motivation is a function of an individual's expectation that a certain level of effort will lead to a desired outcome."

Source: Compiled by the author based on a synthesis of scientific literature

The French philosopher Helvetius argued that, when comparing things, there may be reasons to focus on motivation to work; the reasons why the project is compiled in accordance with the definition of the internal nature of the work and the natural nature, taking into account the personal qualities of the performer[105]. Motivation can be needs and interests, inclinations and emotions, attitudes and ideals. However, the main motivation for workers in all types of activities is necessity. Needs - reflect specific circumstances in a person's mind, dissatisfaction, feelings of inadequacy, differences between internal states and external circumstances.

[104] Havlíček, K., Thalassinos I. E., Berezkinova, L. (2013). Innovation Management and Controlling in SMEs. European Research Studies Journal, 16(4), 57-70. Special Issue on SMEs.
[105] Hitka, M., Lorincová, S., Gejdoś, M., Klarić, K., Weberová, D. (2019). Management approach to motivation of white-collar employees in forest enterprises. BioResources, 14(3), 5488-5505.

When studying the problems of personnel motivation, it should be remembered that the needs of employees vary depending on the level of culture and education[106]:

- employees value themselves more than ever before, and they want to have a certain weight that is not easy to resist;
- employees do not want to be the same as they were before, they do not want to act again and again, they want to learn and feel responsible - this requires more freedom in your time;
- employees prefer companies that make them feel like colleagues or employees rather than subordinates, because they use intuitive and unpredictable functions and want to be in control.

Labor productivity is the most important indicator of labor efficiency and is expressed as the ratio of products (services) to the corresponding direct labor costs. Labor intensity is the level of labor intensity in the production process[107]. These indicators reflect the cost of physical and mental effort required by workers to complete tasks. Work quality is a series of characteristics of the work team process, depending on the ability and willingness of the employee (team) to perform tasks in accordance with predetermined requirements.

In today's world, satisfying the various needs and demands of employees is achieved in various ways to motivate productivity. It can be divided into three groups:

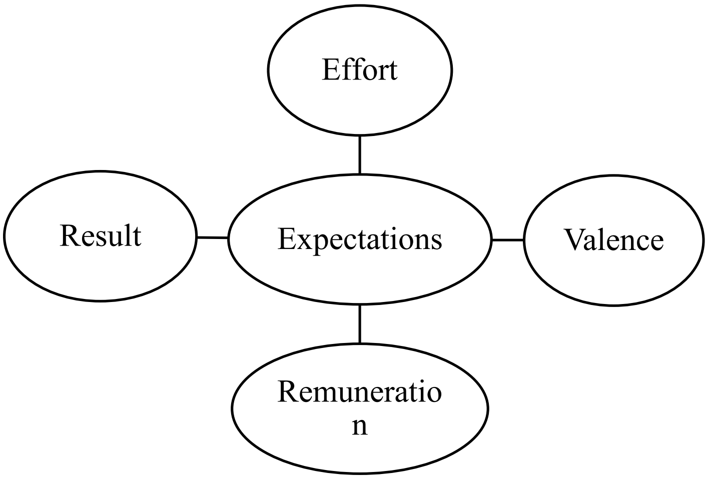
- economic (direct) - work in real time, hourly wages, rationalization bonuses, profit distribution, tuition fees, payments, etc.;
- economic (indirect) - food, additional work experience, use of housing, transport, etc.;
- non-monetary - labor, flexible work hours, protection, quality improvement programs, career advancement, participation at the highest level in decision making, etc.

When doing any action, you must strive for specific results, and then receive a reward. The latter reacts or does not respond to human desires (valence) (Fig. 1).

[106] Johar, E. R., Nor, No. M., Hassan, R., Musa, R. (2019). Examining the Effect of Motivation on the Influence of Human Resource Practices and Normative Commitment among SMEs in Selangor. Asia-Pacific Management Accounting Journal, 14(1), 179-199.

[107] Kamasheva, A. V., Valeev, E. R., Yagudin, R. K., Maksimova, K. R. (2015). Usage of gamification theory for increase motivation of employees. Mediterranean Journal of Social Sciences, 6(1), 77–80.

Figure 1. Structure of the labor motivation mechanism



Source: Compiled by the author based on[108]

Effort, results, reward, and valence are the corresponding expectations. In this case, the more the actual reward matches the expected value, the higher the degree of valence. In other words, every employee should know that his efforts increase results, better results increase rewards, and this increase (value) can be expected. Material motives are especially important now due to low wage rates. Low wages gradually reduce motivation, quality of work and productivity. According to another classification, all motivation methods can be of a material or non-material nature (Table 2).

Table 2. Material and non-material methods of stimulating labor

Financial incentives	Non-material incentives
Basic salary (tariff part)	Regular feedback
Performance bonuses	Involving employees in management processes
Additional payments	Competitions to identify the best employees
Allowances	Career advancement up the career ladder
Participation of employees in the profits of the enterprise	Corporate events, holidays, etc.

[108] Fedulova, L. (2002). Trends in the development of management in the 21st century. Personnel, 2002(12), 50-54.

Undoubtedly, corporate management must be able to combine various motivational methods to achieve success, and not just focus on key factors. This is confirmed by the research presented in the work of K. Gurova. Sociologists use questionnaires to determine the importance of work for workers with various incentives. Depending on the importance, the motivation method is distributed as follows (Table 3). All these incentives at the enterprise are implemented through the construction of a motivation system, which A. Kolot interprets as a tool for stimulating the desired behavior of employees.

As you know, salary for modern employees is as important as the prospect of career growth. The chances of existence and growth of social packages play an important role. A system that motivates corporate employees must include several stages[109].

Table 3. Attitudes of employees towards various methods of motivation

Stimulus	Degree of importance, %
Salary increase	19.3
Career prospects	17.9
Cash bonuses	8.6
Social package	8.6
Training and advanced training at the expense of the company	12.2
Free meals during working hours	5.
Opportunity to receive additional income	6.7
Holding corporate events	8.
Strict system of fines	6.4
Providing temporary housing	3.1
Total	1

Source: Compiled by the author based on research

A well-developed employee motivation system is essential for fostering high performance and sustaining a competitive edge in the market. The process begins

[109] Firescu, V., Popescu, J. (2015). The Costs of Quality: An Important Decision Tool. International Journal of Economics and Business Administration, 3(4), 44-52.

with creating effective material and moral incentives that align with the company's quality objectives. This involves offering benefits and bonuses that are meaningful enough to engage employees and inspire them to meet quality standards. To ensure a successful implementation, the system should integrate several key considerations. Firstly, the allocation of wages must be aligned with the company's economic goals, meaning that higher wages should correspond with the achievement of these goals. Additionally, there should be a direct link between the quality and productivity of each employee's work and their compensation. It's crucial that wages are sufficient to meet employees' basic needs, establishing a minimum standard of living. Furthermore, there should be a connection between the results of employees' labor and both economic rewards and moral recognition. Several factors contribute to effective motivation. These include understanding individual personalities and self-esteem, developing a system of leadership to identify and support emerging leaders, applying teamwork principles to enhance collaboration, and implementing a system to evaluate work quality in consultation with management. As the company progresses, the focus should shift towards refining the motivational system to enhance competitiveness. This involves encouraging employees to engage in creative and innovative activities, which can help the company maintain and improve its market position. Ultimately, a comprehensive motivation system should reflect a philosophy of quality and integrate core values and attitudes towards continuous improvement. This system must be dynamic and adaptable to ensure the company remains competitive. Key requirements include ensuring that compensation is based on an objective assessment of performance, is predictable and timely, and aligns with each employee's contributions, experience, and qualifications. Rewards should be significant and meaningful to employees, and the rules for determining compensation must be transparent and perceived as fair. By following these principles, organizations can develop a motivation system that not only supports high-quality work but also promotes a positive and productive work environment.

As practice shows, failure to comply with these requirements can lead to team instability. This has a much greater impact on the productivity of corporate personnel than the absence of a mechanism for determining compensation for performance.

There are three approaches to choosing a corporate motivation strategy[110]:

- incentive and punishment: people work for remuneration;
- motivation through work: more interesting and varied work is performed with better quality and with greater pleasure;

[110] Ngima, W. M., Kyongo, J. (2013). Contribution of Motivational Management to Employee Performance. International Journal of Humanities and Social Science, 3(14).

- systematic communication with the manager: the motivational strategy is based on an analysis of the situation and the style of interaction used with other people.

The effectiveness of managers depends on the ability to motivate employees and their ability to predict the consequences of verbal and nonverbal behavior, anticipate possible calculations of potential behavior and help coordinate their activities. The following maxim clearly proves its importance: "To know is to foresee; to foresee in order to act successfully." The outcome of predictive ability is stress, which is reflected in the ability to reduce negative emotions, control mood, control oneself, and not reflect negative internal situations.

Leaders must review a series of activities, provide feedback, and then organize, coordinate, and mobilize appropriate teams or members to perform effectively[111]. This is facilitated by the management of teams and groups, on the one hand, and the management of skills designed to manage oneself, on the other hand. As a leading organization, concentration and punctuality should be an example to follow.

One of the motivation methods that is widely used in the practice of foreign and domestic enterprises is flexible work schedules. In government agencies in the county of Oxfordshire (UK), in the early 199s, a new form of labor organization was introduced as an experiment, which provided workers with a significant degree of freedom - the opportunity to work both in the workplace and at home, depending on the specific responsibilities of the employee and the agreement between him and his leader.

One of the effective methods of motivation is also the creation of self-government groups. An example is the experience of the American company Digital Economy, where such groups were formed in the general accounting department, which is part of one of the five centers for managing the financial activities of the enterprise[112]. Groups independently resolve issues of labor planning, holding meetings, and coordinating with other departments. Undoubtedly, the developments of Maslow and Herzberg are more suitable for use in modern enterprises than the theories of Taylor, who linked motivation mainly with the level of wages and labor productivity.

Now workers need to be stimulated in other ways: demands are met by providing high wages and a comfortable workplace. Basic needs can be met through training and personality development of corporate employees.

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[111] Tsyganenko, G. V., Litvinchuk, B. O. (2019). Providing motivation to the personnel of rural enterprises. Dynamics of the development of modern science, 2019(1), 78-81.
[112] Timosh, I. M. (2001). Economy of Practice: Chief Companion. Aston, Ternopil.

There are reasons why the main strategic guidelines for increasing the effectiveness of methods used for motivation are:

- improving incentive structures and wage reform;
- social security for employees, which is based on investments in development;
- involving potential social partnerships and increasing collective bargaining and wages;
- assessment of the effectiveness of staff motivation mechanisms.

The process of introducing a progressive form of motivation in a company is to ensure high productivity based on systematic planning of successful motivational activities, research of positive results and management of motivational personnel. This should slow down the development of new methods.

The implementation of the proposed measures can be carried out with one or a group of experts studying labor productivity issues based on the motivation and support of employee management boards and in the market environment. It is possible to respond quickly to changes, so the more the manager sets up the staff motivation system, the more employees will become more aggressive in achieving results designed to meet the needs of the company. So, modern enterprises need new mechanisms and tools that create powerful incentives for productive, high-quality work and the realization of human potential. Consequently, further work in this direction allows personnel behavior to be linked to the effectiveness of corporate operations.

Motivational factors in human resource management systems play an important role in determining the level of required employment. The factors that motivate people to work in an organization are various internal and external factors and events. Motivation in an organization should be based on the need to satisfy the needs that arise during the life process. They form the basis for the formation of an employee's personal motivation to act in the behavioral process[113]. All workers should receive compensation proportional to their work: this is payment for the physical and mental effort expended on the work process necessary to obtain the results of intellectual or material labor[114]. The level of compensation in the minds of workers should carry out specific actions that meet their needs, namely, labor motivation. Management decisions do not produce the expected results until the staff has sufficient motivation to make them and the desire to achieve them.

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[113] Krykun, V. M. (2006). Personnel management in agricultural enterprises: textbook. Kharkiv: Kharkiv National Agrarian University.

[114] Cowley, E., Smith, S. (2014). Motivation and mission in the public sector: evidence from the World Values Survey. Theory and Decision, 76(2), 241–263.

From a psychological point of view, the issue of personal motivation is one of the sources of determining personal well-being. To satisfy the needs of life, an employee needs motivation as a motivating factor to act so that he can achieve more. Company management wants employees to work at their best, but in order to work effectively, people need to be given an environment that meets their salary needs. In these situations, people formulate their goals and act purposefully. These statements show that a person's actions in certain situations are aimed at achieving specific goals, which are the basis of motivation. A similar point of view is shared by P.S. Makoveev, according to him, the basis of personal activity is a consciously formulated goal, and the basis of one's own purpose is in the sphere of human motivation.

According to V.V. Zinavchuk, the term "motivation" comes from the Latin word "Motio" - "movement", and literally means what drives, encourages action mainly from within. The definition shows that motivation has an internal origin, which is formed on the basis of the specific needs and interests of the individual in carrying out activities. We believe that we must agree with this statement because it is true.

An element of motivation as a psychological state of an individual is stimulation, which is formed in a certain environment, that is, in accordance with the influence of needs and interests, the need to create a system that has a hierarchical structure, strict interconnection and dependence[115]. According to A. Maslow's hierarchical theory of desire, needs are divided into lower (primary) and upper (secondary) order. Higher needs arise only when lower needs are satisfied.

M. Ivanov has a similar opinion regarding hierarchical needs. According to him, the motive and needs of people can be represented in the form of a hierarchy that determines the direction of a particular person's activity. But there is a difference. In other words, motives can also be written as hierarchies. Maslow simply talks about the hierarchy of desires. But, from our point of view, both opinions are correct, but the fact that they should form motivation for action cannot be denied. The nature, characteristics or motivation of action in a particular situation depend on the level of need. We can say that motivation arises when there is a need to satisfy these needs.

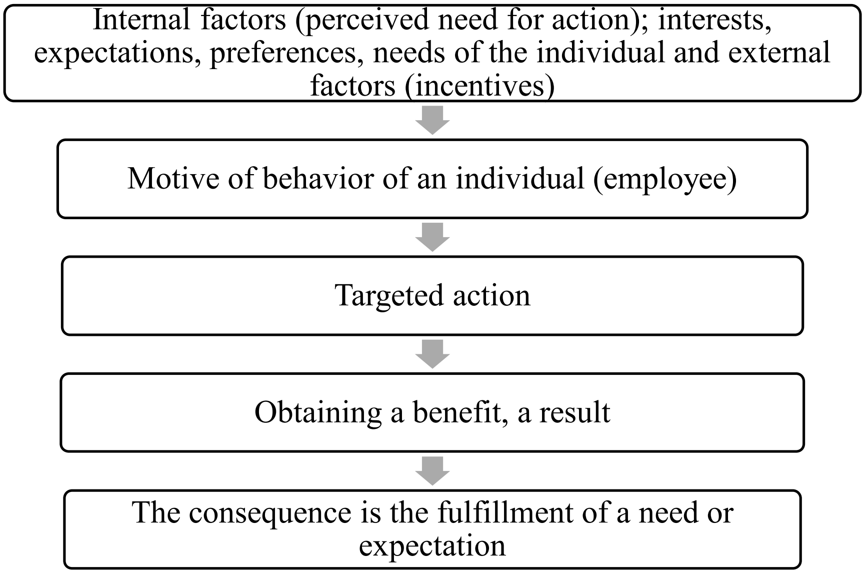
So, motivation is formed under the influence of external and internal factors - needs, interests and motives. Incentives are external factors that influence the personnel of an organization to increase efficiency in achieving specific goals. Stimuli can be personal desired events. Motives are a factor that directs a person to a certain action, which is formed in the mind. Motive and incentive in the same direction, but in different categories. This leads to the idea that motives - that is, desires and incentives

[115] Lysenko, O. V. (2014). Motivation of personnel in the agro-industrial complex: theoretical and applied aspects. Economic Annals-XXI, 2014(1-2), 65-68.

- are the ability to meet. Incentives are the components (lever) of the motivational mechanism.

Motivation is understood as a category of such aspects as administrative functions, the task of which is to form among staff a certain level of need for personal and internal work. Motivation can also be characterized as a “level of necessity” formed in the consciousness of an individual to carry out actions that will lead to the satisfaction of needs and thereby achieving one’s own goals and the goals of the organization. In our opinion, motivation is an internal or external urge to act to satisfy needs. Organizational charts encourage people in an organization to intensify their work activities (Fig. 2).

Figure 2. General model of personnel motivation in management



Source: Compiled by the author based on[116]

This scheme is based on generalized research on issues of individual motivation in organizations. The administrative attitude towards personnel is replaced by employees who work and are motivated and vice versa. Namely, praise, respect and recognition of advantages automatically become motivation, but only if the employee is ready to compensate for his work. Among the motivating factors are delegation of authority, promotion, participation in profit distribution.

[116] Ponomarenko, O. V. (2008). Personnel management in the context of modernization of agricultural production. Scientific Bulletin of Polissia, 2008(3), 127-130.

In modern literature, two similar concepts are widespread - “work motivation” and “motivation of work activity”, but they are not completely identical. Scientists argue that “work motivation” has a broader meaning than “work motivation.” Labor motives are considered effective labor motives, and labor motives include motives of preparation for labor processes, labor motives and production motives[117]. We can agree with this opinion, but motivation to work also includes motivation for special education, motivation to choose a profession, motivation to find a suitable job, motivation to work and motivation to work in a particular company. It is worth adding that labor motivation is of a social nature, formed under the influence of society as a system, where the element is the individual, and the labor motivation is the management function (manager) of the business entity.

The process of motivating individual work is carried out with the help of internal and external “incentives” for employees. Intrinsic motives reflect the conscious attitude of employees towards the work they perform, their meaning and needs. Extrinsic incentives are the means by which management influences employees and are typically the benefits they need to satisfy their specific needs. Motivation is true only if the employee knows the necessary actions to mediate the receipt of rewards.

The company's motivation mechanism is designed to influence the needs and interests of employees, act in the process of performing specialized tasks, and contribute to the formation of levels of labor motivation and the development of abilities. Corporate motivational mechanisms should help address work processes, components and staff alienation with critical consequences[118]. Overcoming alienation has a positive effect on the level of labor motivation and, as a result, positively on the results of the enterprise. In this regard, employees recognize the need and importance of organizational results in their work and provide better results. Workers must feel that they are equally involved in the production process along with other components. However, the motivational mechanism of a particular company is shaped by the distribution of workers and managed properties, as well as the characteristics of general labor organizations and production processes.

In our opinion, the motivation mechanism can be considered as one of the tools of the human resource management system, aimed at implementing management functions related to motivated management. It is designed to integrate various incentives to have an effective influence on these workers.

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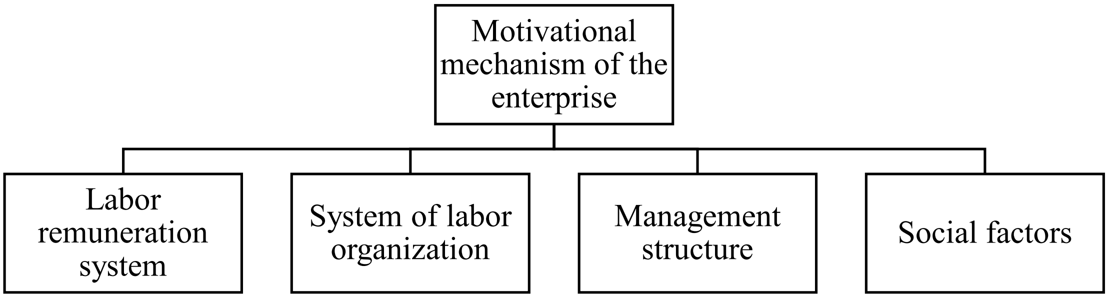
[117] Chen, J. S., Wang, W. (2015). Foreign labours in Arctic destinations: seasonal workers' motivations and job skills. Current Issues in Tourism, 18(4), 350–360.
[118] Osabiya, B. J. (2015). The effect of employees' motivation on organizational performance. Journal of Public Administration and Policy Research, 7(4), 62-75.

Among the components of the motivational mechanism are wages, the attitude of employees towards the organization's property and the participation of personnel in management and profit. Gorbacheva I.V. shares the same opinion. – "for employees of all types of organizations, except voluntary ones, the most important personal incentive to participate is wages".

The motivational mechanism that can be used in the human resource management system of a particular company has a direct impact on the staff. The motivation mechanisms of each company have their own characteristics, but, in our opinion, the main components are the reward system, the trade union system, management structure and social factors (Fig. 3).

Figure 3. Structure of the enterprise's motivational mechanism



Source: Compiled by the author based on analyzed

The influence of employee motivation is one of the main means by which organizations can effectively act as active players. Gorbacheva I.V. argues that organizations can fail, and the reasons why they fail often reflect important motivational needs of participants when faced with obstacles created by the organization's decision-making system. In our opinion, in a production technology environment such as fierce competition, decision-making systems to satisfy the motivational needs of organizational members have a significant impact on "effective capabilities."

In addition to the important needs that employees try to satisfy while working in the organization, there are less important things that they cannot realize (the need for status, awareness, reputation of the work provided, etc.). The degree of realization of unrealistic needs depends on whether the employee personally evaluates the vision of the world, the environment and his internal position. Also, the level of education, the formation of a structured environment and the formation of life principles, as well as the characteristics of work in an organization have a great influence on the level of realization of unrealistic needs. When hiring, company leaders must consider their needs and identify a placement that will add value to these people. That is, it is necessary to ensure a harmonious balance of real and unrealistic needs.

According to I.V. Gorbachev, a stable presence depends on the ability to provide appropriate incentives for its employees or receive donations necessary to carry out the tasks of this organization. Of course, monetary reward is an important point. However, the willingness to work and the enthusiasm with which employees do so may depend on how comfortable the employees are and the physical and social environment of the organization..

The main task of the motivational mechanism is to form the necessary level of labor motivation. The effect of motivational mechanisms is expressed by stimulating the employee with the influence of the motivation of the employee's behavior on these elements. It is incentives that can encourage staff to work productively. As V.M. Danyuk put it, "labor stimulation is a set of forms of material, moral and social influence on the interests of the employee." In our opinion, labor stimulation is, first of all, a process that has a material, moral and social impact on the interests of workers in order to form the desired motives.

It should also be emphasized the motivation for maintaining the workforce (social importance and usefulness, status motivation), the general perception of activity, material motivation, motivation for the intensity of activity. The motive is triggered when people enjoy various benefits and perform certain work practices to satisfy the needs and interests of a particular person. Only motivational mechanisms that capture all these motives can produce positive results[119]. The incentive for the effective functioning of only those objects and actions that are known to most people today can satisfy their needs and expectations. Formed incentives in the minds of employees who need stability to work effectively without a community or economic agent with as many products as they need motivate them to work. These incentives are motivated only when employees are able to take specific actions and are willing to act.

The incentive is the salary, the level at which it should correspond to the efforts made and change in proportion to changes in these efforts in the process of performing the work. This issue mainly concerns employees who do not have a share of the company's capital. If there is such a share, then the incentive potentially increases. Employees must first know the purpose of their activities, which motivates them to be more effective.

In modern conditions, motivational mechanisms, including the use of brute impulse methods, are ineffective; they do not force employees to work effectively and

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[119] Barmuta, K., Borisova, A., Glyzina, M. (2015). Mediterranean Journal of Social Sciences, 6(3S4), 91-96.

results are not their goal. As Gorbachev I.V. put it, “in order to encourage personnel to perform their duties with full zeal and devotion, one must treat them favorably”. The opinions of modern domestic and foreign business owners are the most effective motivation.

So, the need to use stimulating factors of personnel influence in the motivational system depends on the level of education and cultural development. This reflects the strength of internal motivation to work. This means that workers can enjoy their work and will not need additional incentives. To effectively motivate staff, business owners must ensure that they develop a typical attitude towards work, especially one that is results-oriented. Staff motivation helps to embrace your organization and employees while giving the right results.

Motivation and the final result of work are not necessarily directly related. A worker may be “billed” for a result, but the potential of his work does not allow him to achieve this. Thus, the motivation system under certain circumstances can influence workers differently.

Employee motivation models must take into account the specific details of the industry or company and the market trends that are involved in a particular enterprise. Due to the complexity of the system of labor relations and the intellectual level of development of personnel, as key participants in these relations in modern organizational management, motivational problems arise. The increasing role of motivation is becoming a priority management function, mainly due to the growth of production factors.

In the process of studying the fundamentals of the theory of labor motivation, generalizing experience and rethinking the basic principles of scientific management related to motivational problems, we believe that labor motivation is the main functions of management, the determinants of management, and a variety of factors[120]. The motivation required at the stage of organizational development is the degree of necessity to achieve this goal.

The motivation of individuals (employees) to work effectively is characterized by a focus on achieving a specific goal, which indicates the need to act to achieve this goal. Therefore, the task of human resource management is to determine the basic goals of all personnel of the organization and specific employees, and to ensure that these goals are consistent with the goals of the organization[121]. The process of motivation is very complex because it depends on the characteristics of each employee, and a person is not completely predictable.

[120] Jones, K., Tobin, D. (2018). Current Opinion in Environmental Sustainability, 35, 69-74.
[121] Hokroh, M. (2014). A touch on employees motivation. International Journal of Human Resource Studies, 4(1), 1-9.

2.6. Organization of employee motivation at the enterprise in conditions of economic turbulence

Organizacja motywacji pracowników w przedsiębiorstwie w warunkach zawirowań gospodarczych

Według klasyków teorii ekonomii cykl gospodarczy dzieli się na cztery fazy: kryzys, depresja, ożywienie i ożywienie (szczyt). Tak wygląda klasyczny cykl gospodarczy, którego czas trwania jest różnie szacowany przez badaczy i według czasu trwania eksperci dzielą cykle na małe, średnie i duże[122]. Niezależnie od czasu trwania cyklu koniunkturalnego, największą uwagę zawsze przyciąga faza kryzysu, ponieważ wysiłki rządu z reguły mają na celu zmniejszenie głębokości kryzysu i czasu trwania kryzysu oraz depresji. Na kryzys należy patrzeć z dwóch perspektyw. Po pierwsze, jest to zniszczenie zwykłego porządku gospodarczego, co nieuchronnie prowadzi do zaostrzenia takich negatywnych zjawisk, jak bezrobocie, inflacja, stagnacja itp. Po drugie, jest to okres, w którym następuje punkt zwrotny w systemie gospodarczym społeczeństwa i pojawiają się nowe możliwości dalszego pomyślnego rozwoju. To właśnie te cechy odróżniają kryzys od zwykłej recesji w gospodarce[123].

Do końca XX wieku. – początek XXI wieku. Istnieją inne przyczyny rozwoju zjawisk kryzysowych, co wymaga opracowania nowych podejść do polityki fiskalnej w celu ich regulacji. Po pierwsze, wynika to z osiągnięcia przez poszczególne kraje znaczących przełomów innowacyjnych, co podnosi poziom konkurencyjności ich gospodarek. Po drugie, rozwój zjawisk kryzysowych nie ma charakteru globalnego, co wiąże się z globalizacją przepływu kapitału finansowego. Rozwój gospodarki światowej w ciągu ostatnich dwudziestu lat wskazuje, że czas trwania każdej fazy cyklu znacznie się skrócił; Zjawisko to nazywane jest turbulencją rynkową. Termin „turbulencje rynkowe" wprowadzili do obiegu gospodarczego F. Kotler i J.A. Caslione[124]. Wyjaśniają to zjawisko z perspektywy zasad turbulencji w przyrodzie, gdzie turbulencje charakteryzują się agresywnym, niespokojnym zachowaniem. Oznacza to, że charakterystycznymi cechami turbulencji w przyrodzie są agresywność, nieprzewidywalność i chaos.

Obecnie termin „turbulencja" jest szeroko stosowany w różnych dziedzinach, a mianowicie: w naukach przyrodniczych (turbulencje kwantowe, chemiczne, optyczne, falowe), medycynie (turbulencje rytmu serca) i życiu społecznym

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[122] Janasz, W., & Kozioł, K. (2007). Determinanty działalności innowacyjnej przedsiębiorstw. Warszawa: PWE.
[123] Kowalczyk, J. (2010). Doskonalenie zarządzania organizacją. Problemy Jakości, (3), 12-19.
[124] Котлер, Ф., & Касліоне, Дж. А. (2009). Хаотика: управління та маркетинг в епоху турбулентності. Київ: Хім джест, ПЛАСКЕ.

(turbulentny świat, burzliwe społeczeństwo)[125]. Jednak znaczenie zawirowań gospodarczych we współczesnych dziełach nie jest w pełni ujawnione. Przeanalizujmy dotychczasowe interpretacje pojęcia „turbulencji gospodarczych" (tabela 1).

Tabela 1. Podejścia naukowców do definiowania pojęcia „turbulencji gospodarczych"

Autor	Interpretacja zawirowań gospodarczych
GP Zhuravleva, N.V. Manochina	Turbulencja rozumiana jest jako bardzo złożona trajektoria gospodarki narodowej, a także pojedynczego przedsiębiorstwa w „wirie" różnorodnych zmian. Uważa się, że turbulencje charakteryzują się maksymalnym poziomem niestabilności światowego systemu gospodarczego, czemu towarzyszy wysokie ryzyko w różnych obszarach i może spowodować zniszczenie istniejących konfiguracji z przyszłym utworzeniem nowych.
F. Kotlera, JA Caslion	Rozpatrują turbulencje w kontekście rynku, przenosząc na ten obiekt oznaki naturalnych turbulencji. Powszechnie przyjmuje się, że charakterystycznymi cechami turbulencji są agresywność, nieprzewidywalność i chaos
V.P. Oniszczenko	Rozumie turbulencję jako samoistne występowanie procesów tworzących nowe struktury przestrzenne w otwartych układach niestacjonarnych, które mają charakter ekonomiczny. Uważa, że poprzedza to zmiany pogody gospodarczej (koniunkcja)
CM. Shkarlett, M.V. Pałka	Uważa się, że turbulencja to nieprzewidywalne, chaotyczne i zmienne warunki, które zagrażają stabilności funkcjonujących w nich systemów, prowadzą do powstania wysokiego poziomu entropii w obrębie powyższych systemów oraz uniemożliwiają przewidzenie i przewidzenie ich dalszego zachowania

Źródło: opracowanie własne na podstawie studiów literatury naukowej

Turbulencje w biznesie definiuje się także jako nieprzewidywalne i szybkie zmiany w otoczeniu wewnętrznym i zewnętrznym organizacji, które wpływają na jej działalność. A ta nieprzewidywalność pogłębia się wraz z rozwojem procesów globalizacyjnych. Na tej podstawie turbulencje w gospodarce można zdefiniować jako gwałtowne, nieprzewidywalne, kontrastowe zmiany, na które trudno wpłynąć za

[125] Lichtarski, J. (2001). Nauka o przedsiębiorstwie. Wrocław: Wyd. AE we Wrocławiu.

pomocą regulacji rządowych.

Znajome cechy normalnej gospodarki, opisane na podstawie empirycznych doświadczeń w podręcznikach teorii ekonomii, nie są analogiczne do współczesnej gospodarki, którą F. Kotler i J. A. Caslione nazywają „ekonomią nowej normalności”[126]. Różnice nie dotyczą listy cech, ale ich przejawów dla gospodarki tradycyjnej (normalnej) i gospodarki nowej normalności (turbulentnej) (Tabela 2).

Tabela 2. Gospodarka normalna a nowa normalna gospodarka

Podpisać	Normalna ekonomia	Ekonomia nowej normalności
Cykle gospodarcze	Rzekomy	NIE
Wzrost/gwałtowny wzrost	Zdecydowany (średnio 5-7 lat)	Nieprzewidywalny, zmienny
Recesje/kryzysy	Ustalony (średnio 10 miesięcy)	Nieprzewidywalny, zmienny
Możliwy wpływ czynników	Niski	Wysoki
Ogólna struktura inwestycji	Rozszerzający się, szeroki	Ostrożny, ukierunkowany
Stosunek do ryzyka rynkowego	Przyjęcie	Unikać
Stan konsumentów	Zaufanie	Niepewność
Preferencje klienta	Zrównoważony, rozwijający się	Lęki, pragnienie bezpieczeństwa

Źródło: opracowanie własne na podstawie[127]

W związku z powyższym w obecnej sytuacji gospodarczej możemy spodziewać się wielkich wstrząsów i wielu bolesnych upadków, które spowodują wzrost poziomu ogólnego ryzyka i niepewności dla przedsiębiorstw. Zwiększonych zawirowań w gospodarce jest dziś nieuniknione, można się jedynie do nich przystosować, ale w tym celu konieczne jest szczegółowe zbadanie czynników, które działają jak katalizatory turbulentnych procesów. Do takich czynników należą:

- postęp techniczny, rewolucja informacyjna, innowacja;
- długoterminowy wzrost gospodarczy i hiperkonkurencyjność;
- rozwój rynków pieniężnych, pojawienie się nowych instrumentów monetarnych, zaangażowanie rynków pieniężnych w procesy globalizacji.

Rozwój gospodarki w XX wieku można określić jako innowacyjny, gdyż to

[126] Котлер, Ф., & Каслıоне, Дж. А. (2009). Хаотика: управління та маркетинг в епоху турбулентності. Київ: Хім джест, ПЛАСКЕ.
[127] Лівошко, Т. В. (2013). Складові системи мотивації праці персоналу на підприємстві. Київ.

właśnie w tym okresie nastąpiła znaczna liczba odkryć i wynalazków. Taki stan rzeczy powoduje pewne zmiany w charakterze cyklu gospodarczego i to w drugiej połowie XX wieku. – na początku XXI wieku[128]. Rozwój zjawisk kryzysowych w coraz większym stopniu powiązany jest ze zmianami w strukturach technologicznych. Eksperci wyznający ten punkt widzenia kryzysy gospodarcze kojarzą z koniecznością radykalnej aktualizacji bazy technologicznej i odpowiedniego dostosowania szeregu innowacji finansowych[129].

Kryzys wynika z nawarstwiania się sprzeczności strukturalnych w procesie kształtowania się reprodukcyjnego konturu nowej struktury technologicznej, gdy poprzednia struktura ma w istocie na celu reprodukcję rozszerzoną, a jej dominacja obiektywnie zaczyna zakłócać rozwój nowej struktury technologicznej. nowa struktura technologiczna. I dopiero gdy przełamany zostanie powstrzymujący sprzeciw wobec starej struktury (tj. zakończy się rewolucja technologiczna), uformuje się kluczowy czynnik nowej struktury, rozpocznie się faza jej rozbudowy i nadejdzie nowa fala wzrostu gospodarczego[130].

Za podstawową przyczynę kryzysu można zatem uznać proces zmiany struktur technologicznych, co nadaje mu charakter strukturalny[131]. Strukturalny charakter kryzysu gospodarczego wymaga zastosowania specjalnych dźwigni fiskalnych w celu jego złagodzenia, ponieważ środki przywracające i utrzymujące płynność systemu bankowego oraz ożywiające rynek akcji nie będą wystarczające.

Niewątpliwą zaletą kryzysu wymiany struktur technologicznych jest to, że może on stać się swego rodzaju odskocznią dla krajów rozwijających się, co wynika z braku znaczących akumulacji sprzętu i technologii struktury technologicznej, której cykl życia dobiega końca. Aby wykorzystać szanse, jakie niesie ze sobą trampolina i wdrożyć innowacyjny przełom, kraj musi zbudować i wdrożyć odpowiednią strategię, która w wymiarze czasowym pozwoli mu wejść w nową falę wzrostu gospodarczego, opartą na głębokiej modernizacji wiodących gałęzi przemysłu i kształtowanie się produkcji, która określa strukturę rdzenia nowego porządku technologicznego.

Należy zauważyć, że technologie podstawowe i wiodące szóstego porządku technologicznego są zasadniczo nowe, a wśród wiodących gałęzi przemysłu znajdują

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[128] Low, J., & Cohen Kalafut, P. (2004). Niematerialna wartość firmy. Ukryte źródła przewagi konkurencyjnej. Kraków: Oficyna Ekonomiczna.
[129] Niedzielski, P., & Rychlik, K. (2006). Innowacje i Kreatywność. Szczecin: Uniwersytet Szczeciński.
[130] Nonaka, I., & Takeuchi, H. (2000). Kreowanie wiedzy w organizacji. Warszawa: Poltext.
[131] Yujing, G., Cheng, Y., & Kung-Cheng, H. (2021). The effect of managerial ability on corporate social responsibility and firm value in the energy industry. Corporate Social Responsibility and Environmental Management, 28(2), 581–594.

się te, które należą do piątego porządku technologicznego, które wymagają głębokiej modernizacji, którą można stymulować za pomocą dźwigni polityki fiskalnej . Jednocześnie należy wziąć pod uwagę, że skrócenie czasu trwania struktury technologicznej prowadzi do skrócenia okresu pomiędzy kolejnymi kryzysami, co wywołuje turbulencje w systemie gospodarczym. Jeżeli następny kryzys uznamy za logiczną kontynuację łańcucha kryzysów, które w przeszłości powtarzały się z pewną częstotliwością, to naturę niestabilności gospodarczej należy analizować nie z punktu widzenia mechanicznego powtarzania się, ale z uwzględnieniem ewolucyjne zmiany w ich podstawowych cechach. Szereg warunków wstępnych ma kluczowe znaczenie dla ostatniego światowego kryzysu gospodarczego[132]. Najważniejszym z nich jest długoterminowy wzrost gospodarczy gospodarki światowej na tle narastających nierównowag w funkcjonowaniu światowego systemu finansowego. W ciągu ostatnich 20 lat kraje rozwinięte systematycznie zmniejszały tempo wzrostu gospodarczego, podczas gdy kraje rozwijające się wręcz przeciwnie, zwiększały dynamikę rozwoju gospodarczego. W ciągu ostatnich sześciu lat światowy PKB wzrósł o ponad jedną trzecią, a motorem tego wzrostu były w dużej mierze rozwijające się.

Wzrost taki nastąpił jednak na tle pogłębiających się nierównowag w systemie finansowym, w szczególności w zakresie oszczędności i oszczędności, a także zagranicznych transakcji gospodarczych. Ponadto nierównowagi objawiają się stałym spadkiem poziomu akumulacji w krajach rozwiniętych i wzrostem w krajach rozwijających się. Efektem tych nierównowag było zjawisko globalnej asymetrii, które Ferguson nazwał Chimeryką (od nazw dwóch krajów – Chin i Ameryki). Istota zjawiska Chimeryki polega na zmianie samego modelu globalizacji, kiedy źródłem wzrostu stały się nie kraje centrum gospodarczego, ale peryferie (kraje rozwijające się). Ponadto kraje te stały się nowymi centrami oszczędnościowymi. Tym samym pojawiły się konsekwencje długotrwałego wzrostu gospodarczego i zwiększonej konkurencji globalnej, które stały się źródłem trwałych wstrząsów dla gospodarki światowej.

Zjawiska kryzysowe końca XX – początku XXI wieku. związane także z globalizacją międzynarodowych rynków finansowych, rozprzestrzenianiem się kapitału spekulacyjnego itp. I tak już w 2005 roku amerykański profesor ekonomii i pracownik MFW Nourel Roubini wskazał na trendy spekulacyjne na amerykańskim rynku nieruchomości i przewidział obecne negatywne tendencje[133]. Czołowi eksperci

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[132] Węgrzyn, G. (2020). Structural Changes in the Manufacturing Sector as an Effect of Implementing the Concept of Industry 4.0. Prace Komisji Geografii Przemysłu Polskiego Towarzystwa Geograficznego, 34(4), 114–125.

[133] Sala, K. (2019). Wpływ przemysłu na sytuację społeczno-gospodarczą i środowisko przyrodnicze gminy Kleszczów. Prace Komisji Geografii Przemysłu Polskiego Towarzystwa Geograficznego, 33(1), 143–152.

i analitycy nie mówili jednak o takiej skali, gdyż świat nie doświadczył jeszcze tego typu kataklizmów gospodarczych. Kryzys ten bowiem opiera się na zasadniczo innych przesłankach niż poprzednie, a jego konsekwencje doprowadzą do zmiany ustalonych zasad funkcjonowania światowego systemu finansowego. Motywacja i stymulacja personelu w przedsiębiorstwie jest czynnikiem decydującym o skutecznym zarządzaniu personelem[134]. Wybitni ekonomiści naszych czasów definiują fakt, że „...ludzie są na pierwszym miejscu; jeśli nie będzie odpowiedniej kadry, to inne czynniki produkcji niewiele pomogą w osiągnięciu celu", „kiedy mamy już kadrę złożoną z wyszkolonych, inteligentnych i energicznych ludzi, kolejnym krokiem jest pobudzenie ich kreatywności".

Rozprzestrzenianie się elementów gospodarki rynkowej na Ukrainie determinuje związek między wynikami pracy pracowników a efektywnością działalności gospodarczej przedsiębiorstw, dzięki czemu w literaturze naukowej utrzymuje się stałe zainteresowanie motywacją i zachętami[135]. Zagadnienie to jest dość istotne dla przedsiębiorstw, w których występuje niejednorodna struktura personelu i znaczny wpływ procesu technologicznego, który wymaga wykwalifikowanych i doświadczonych pracowników. Dlatego badanie kształtowania się systemu motywacji i stymulacji pracowników krajowych przedsiębiorstw jest problemem aktualnym i niezwykle potrzebnym.

Analizując prace naukowców, można stwierdzić, że generalnie motywy i zachęty są pojęciem węższym niż motywacja i motywacja do pracy[136]. Ponadto należy zauważyć, że motywacja i stymulacja mają ten sam cel – poprawa wyników pracy, a różnica polega na formach ich stosowania, w zależności od wybranych cech klasyfikacyjnych.

Jednocześnie analiza treści współczesnych koncepcji zarządzania podkreślająca rolę motywacji (tab. 3) pozwala dojść do wniosku, że współczesne koncepcje charakteryzują się naturalną istotą przejawów motywacji: rozważane przepisy uwzględniają znaczenie roli motywacji zarówno w zarządzaniu dwoma procesami jednocześnie (przedsiębiorstwem i personelem), jak i w rozwoju przedsiębiorstw, regulacji relacji między ludźmi, rozwoju zasobów ludzkich oraz podnoszeniu poziomu ich wykształcenia i kwalifikacji, i tworzenie potencjału pracy.

[134] Pierścionek, Z. (2007). Strategie konkurencji i rozwoju przedsiębiorstwa. Wydawnictwo Naukowe PWN.
[135] Колодійчук, В. (2010). Сутність поняття мотивації. Науковий вісник НЛТУ України, 2010(20.4), 226-232.
[136] Довбня, С. Б., & Письменна, О. О. (2019). Кадрова стратегія: теоретичні основи та методичний інструментарій її формування. Дніпро: Ліра.

Tabela 3. Analiza treści współczesnych koncepcji zarządzania, w której podkreślono rolę motywacji

Koncepcja zarządzania	Identyfikacja roli motywacji w zależności od treści pojęcia
Nowoczesna koncepcja zarządzania personelem	Podstawą koncepcji zarządzania personelem organizacji jest obecnie rosnąca rola osobowości pracownika i znajomość jego postaw motywacyjnych, które należy wykorzystać do rozwiązywania problemów stojących przed organizacją
Klasyczna teoria relacji międzyludzkich (E. Mayo, R. Lickart, R. Blake)	Jednostki starają się być użyteczne i znaczące, pragną zintegrować się we wspólnej sprawie: uznania za jednostki; potrzeby te stanowią podstawę motywacji do pracy; większość ludzi jest zmotywowana do samodzielnej i twórczej pracy
Koncepcja zarządzania zasobami ludzkimi	Do najważniejszych zasad zarządzania zasobami ludzkimi, obok dwóch innych, należą: system motywacji i wynagrodzeń musi być sprawiedliwy wobec pracowników, konkurencyjny w stosunku do innych firm i zarządzalny; wynagrodzenie powinno opierać się na wynikach indywidualnej pracy i efektywności organizacji; rozwój, szkolenie, relokacja i doskonalenie pracowników odbywa się zgodnie z wynikami ich pracy, kwalifikacjami, zdolnościami, zainteresowaniami i potrzebami organizacji
Koncepcja zarządzania potencjałem pracy („człowiek ekonomiczny")	Głównym czynnikiem motywującym pracownika we współczesnych warunkach jest zgodność wynagrodzenia materialnego i pracy zawartej w wynikach jego działalności zawodowej; Systematyczne zarządzanie potencjałem pracy powinno uwzględniać zachęty materialne jako podstawowy czynnik motywujący do efektywnej pracy
Koncepcja pracy z personelem w procesie rozwoju organizacji	W procesie rozwoju organizacji wykorzystanie zasobów pracy wiąże się z zastosowaniem rozsądnego podejścia do ustalania wynagrodzeń - jako głównej dźwigni motywacyjnej; główną dźwignią zarządzania personelem jest motywacja
Nowoczesna koncepcja zarządzania organizacją (podejście organiczne)	Zgodnie z podejściem organicznym, w zarządzaniu organizacją pojawia się szczególne zainteresowanie ludźmi - usprawniane są funkcje personalne i procedura oceniania pracowników, poszukuje się metod motywacyjnych adekwatnych do otoczenia (poziomu rozwoju społeczeństwa)

Źródło: opracowanie własne na podstawie[137]

[137] Долішній, І. М. (2010). Мотивація персоналу як об'єкт управління на підприємстві. Науковий вісник НЛТУ України, 2010(20), 211-216.

Zarządzanie motywacją pracowników w przedsiębiorstwie we współczesnych warunkach biznesowych opiera się na zastosowaniu podejścia systemowego[138]. Proces ten umożliwia uwzględnienie zmian nie tylko w otoczeniu wewnętrznym i zewnętrznym przedsiębiorstwa, związanych z procesami makroekonomicznymi na rynku pracy, działalnością producentów i konsumentów produktów, ale także wpływem szeregu innych czynników środowiskowych czynniki.

Logiczne byłoby uzasadnienie naukowego poglądu, że proces zarządzania motywacją pracowników powinien być dostosowany do środowiska logistycznego, które dzieli się na zewnętrzne (makrootoczenie) i wewnętrzne (mikrootoczenie). Pierwsza obejmuje czynniki polityczne, prawne, ekonomiczne, techniczne, technologiczne, społeczne i środowiskowe, a druga obejmuje takie czynniki, jak produkcja, marketing, finanse, zasoby ludzkie i najwyższe kierownictwo.

Aby skutecznie zarządzać motywacją należy[139]:

- jasno zrozumieć model głównego procesu motywacyjnego: potrzeba - cel - działanie - doświadczenie - oczekiwanie;
- zna czynniki wpływające na motywację;
- znać zespół potrzeb inicjujących ruch w stronę osiągnięcia celu oraz warunki, w jakich te potrzeby mogą być zaspokojone;
- zdać sobie sprawę, że motywacja jest sposobem na satysfakcję, a jej rosnąca dawka może prowadzić do samozadowolenia i inercji.

Aktywnie działać możesz tylko wtedy, gdy masz pewność, że wybrana taktyka zapewni osiągnięcie zamierzonego celu. W tym kontekście zwraca się uwagę na wyniki badań współczesnych ekonomistów, którzy kompleksowo definiują rolę motywacji zarówno w systemie zarządzania przedsiębiorstwem, jak i w systemie zarządzania personelem, co przekonuje o słuszności zaproponowanego paradygmatu zarządzania przedsiębiorstwem opartego na rozwoju systemu motywacji personelu w zakresie priorytetowego traktowania podsystemu zarządzania personelem, wraz z innymi, w systemie zarządzania przedsiębiorstwem.

[138] Harasim, W. (2013). Zarządzanie zasobami ludzkimi i kapitałem ludzkim. Zeszyty Naukowe Wyższej Szkoły Promocji, 3, 8–43.

[139] Климчук, А. О. (2018). *Управління підприємством в системі оцінки, мотивації та стимулювання персоналу: монографія*. Хмельницький: ХНУ.

Tabela 4. Uogólnienie rodzajów motywacji

Pewien rodzaj	Charakterystyka gatunku
Wewnętrzny	Gatunek został zidentyfikowany, ale nie podano jego cech charakterystycznych
	Kształtowanie wśród pracowników świadomego zaangażowania w końcowe rezultaty przedsiębiorstwa (osiągnięcie celu – Autor), zwiększenie zainteresowania zwiększaniem wydajności pracy, nastawienie na rozwój inicjatywy twórczej i przedsiębiorczości, zachęcanie do samorozwoju, podnoszenie kompetencji zawodowych, rozwój kariery
Zewnętrzny	Motywacje zgodne z obowiązującą w przedsiębiorstwie procedurą przyznawania premii, wewnętrznym regulaminem pracy, zarządzeniami i wytycznymi kierownictwa, zasadami postępowania itp.
	Ukierunkowanie pracowników na realizację celów i założeń innowacyjnego rozwoju przedsiębiorstwa, stworzenie atmosfery wsparcia dla strategicznych zmian w zarządzaniu produkcją, reengineering procesów biznesowych, nastawienie na zwiększenie zainteresowania personelu podnoszeniem wizerunku i konkurencyjności przedsiębiorstwa przedsiębiorstwa na rynku krajowym i światowym
Materialny (lub materialny interes)	Wdrażane poprzez systemy płatności pracy, wypłatę dywidend, akcji, otrzymywanie części dochodów z majątku osobistego
	Zapewnienie obiektywnej oceny, wypłaty i premii za wyniki pracy, stosowanie nietradycyjnych form i metod zachęcania do wysokich osiągnięć w pracy, stymulowanie rozwoju inicjatywy twórczej, systemowe podwyżki wynagrodzeń i regularna wypłata dywidend
Morał	Wdrożony w systemie oceny merytorycznej (zaangażowanie w firmę, chęć współpracy)
Administracyjny	Polega na dyscyplinie pracy, odpowiedzialności pracownika za wypełnianie swoich obowiązków
Związane z warunkami pracy	Koncentracja na poprawie jakości życia zawodowego, efektywnym wykorzystaniu potencjału pracy, intelektualizacji pracy, wykorzystaniu nowoczesnych technologii informatycznych, aktywnym wprowadzaniu zautomatyzowanych stanowisk pracy, technicznym ponownym wyposażeniu produkcji, wprowadzaniu ekskluzywnych technologii do procesów biznesowych

Społeczno-psychologiczne	Podniesienie prestiżu wysokiej jakości i sumiennej pracy, powszechne stosowanie zachęt niematerialnych w systemie motywacyjnym, rozwój kultury korporacyjnej, zapewnienie gwarancji socjalnych, rozwój i doskonalenie infrastruktury społecznej, osiągnięcie organicznego połączenia innowacyjnego rozwoju przedsiębiorstwa oraz humanizacja produkcji i pracy

Źródło: opracowanie własne na podstawie[140]

Biorąc pod uwagę istniejące podejścia do definicji i charakterystyki rodzajów motywacji, staje się jasne, że w tej formie nie można ich stosować ani z naukowego punktu widzenia do potwierdzenia proponowanego paradygmatu, ani z praktycznego punktu widzenia - do ich wykorzystania w jakimkolwiek celu przedsiębiorstwa[141]. Choć więc stwierdzenie, że do oddziaływania na personel wykorzystuje się różne rodzaje motywacji, jest w pełni uzasadnione, zidentyfikowany problem naukowy wskazuje, że klasyfikację typów i ich charakterystyk należy doprecyzować w oparciu o te zaprezentowane w tabeli 4.

Wydajność personelu w dużej mierze zależy od klimatu psychologicznego w zespole roboczym i stylu zarządzania stosowanego przez menedżera. Organizacją motywacji w przedsiębiorstwie zajmują się menedżerowie liniowi i pracownicy zarządzania personelem.

Zatem w wyniku analizy można wyciągnąć następujące wnioski[142]:

- motywacja personelu odgrywa ważną rolę w zarządzaniu przedsiębiorstwem, gdyż każdy pracownik ma swoje potrzeby i zainteresowania i pragnie, aby wcześniej czy później zostały one przynajmniej w pewnym stopniu zaspokojone;

- jedną z najważniejszych metod motywacji są płace, gdyż większość ludzi pracuje właśnie na zaspokojenie swoich potrzeb materialnych;

- oprócz wynagrodzenia dużą rolę w motywowaniu pracowników odgrywają: perspektywy kariery, postawa kierownicza, klimat społeczno-psychologiczny w zespole, zaawansowane szkolenia, świadczenia socjalne;

- kierownictwo organizacji musi uwzględniać poziom wykształcenia i kwalifikacji pracownika, co wpływa na metody stymulowania go do bardziej

[140] Мельник, А. О. (2018). Аналіз сучасних мотиваційних підходів до управління персоналом. Бізнес-навігатор, 2018(4), 94–98.

[141] Mazur, M. (2013). Motywowanie pracowników jako istotny element zarządzania organizacją. Nauki Społeczne, 2(8), 156–180.

[142] Huk, K. (2013). Wzrost znaczenia człowieka w gospodarce opartej na wiedzy – od zarządzania zasobami ludzkimi do zarządzania kapitałem ludzkim. Nierówności Społeczne a Wzrost Gospodarczy, 35, 215–225.

produktywnej pracy;

- we współczesnych warunkach biznesowych wskazane jest uwzględnienie wpływu czynników ryzyka i czynników psychologicznych na działania pracownika, skuteczność jego procesu zarządzania w celu uzyskania zaplanowanych wyników.

Istotę opracowania metodyki określania siły motywacji ekonomiczno-społecznej pracownika i zespołu pracowników odzwierciedla następujący algorytm[143]:

1) metodą ekspercką zidentyfikować i sformułować listę motywów, które mogą potencjalnie wpływać na aktywizację aktywności zawodowej personelu;

2) podzielić motywy na dwie grupy: ekonomiczną i społeczną;

3) uwypuklić „rdzeń motywacyjny" dominujących ekonomicznych i społecznych motywów pracy dla dalszej analizy efektywności ekonomiczno-społecznej motywacji;

4) wykorzystując jakościowe modele czynnikowo-kryteryjne ocenić stopień ich zadowolenia i poziom motywacji pracowników.

Metodologia opracowana przez naukowców pozwala określić siłę motywacji ekonomicznej i społecznej pracowników, co pozwala w pewnym stopniu ocenić skuteczność środków motywacyjnych, niewykorzystane rezerwy na zwiększenie aktywności zawodowej personelu, niezbędne środki społeczno- dźwignie ekonomiczne i kierunek zwiększania wpływu zewnętrznego na zachowania pracowników, aby osiągnąć oczekiwane rezultaty w konkretnej sytuacji. Ogólny wskaźnik efektywności motywacji można obliczyć za pomocą wskaźnika wydajności pracy. O skuteczności motywacji decydują ogólne rezultaty końcowe: wysoka wydajność pracy, wysoka wydajność, wysoka jakość produktów (robót, usług).

Ocena efektywności sposobów motywowania pracowników wymaga badań cech ilościowych i jakościowych. Wskaźniki ilościowe obejmują: fundusz płac, całkowite koszty personelu, straty spowodowane wadami itp.; jakościowy – satysfakcja z pracy, stopień swobody w podejmowaniu decyzji oraz świadomość pracowników na temat działań przedsiębiorstwa[144]. Aby uzyskać wskaźniki jakościowe, wykorzystuje się zwykle wyniki badań socjometrycznych i socjologicznych.

Badanie efektywności metod motywacji pracy opiera się na opracowanych systemach wskaźników charakteryzujących złożony i systemowy wpływ na przedmiot zarządzania. W tym względzie wskazane jest pogrupowanie wskaźników

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[143] Olak, A. (2011). Zasoby ludzkie i wiedza jako determinanty w zarządzaniu nowoczesną organizacją. Nierówności Społeczne a Wzrost Gospodarczy, 23, 172–179.

[144] Баксалова, О. М. (2009). Формування ефективної системи мотивації праці на підприємстві. Вісник Хмельницького національного університету, 2009(6), 194–197.

efektywności metod motywacji pracy na podstawie jednorodności: ekonomiczne wskaźniki pracy, wskaźniki przepływu personelu, klimat społeczny i psychologiczny, organizacja pracy, poziom kwalifikacji edukacyjnych, działalność społeczno-gospodarcza i innowacyjna przedsiębiorstw personel, który wpływa na wszystkie wskaźniki wyników ekonomicznych przedsiębiorstwa, na przykład ekonomiczne wskaźniki pracy wpływają na dochody przedsiębiorstwa, ilość produktów zbywalnych, wydatki przedsiębiorstwa, wydatki na 1 UAH. produkty zbywalne, zysk, rentowność itp. Wskaźniki poziomu wykształcenia i kwalifikacji personelu wpływają na takie wskaźniki ekonomiczne przedsiębiorstwa, jak liczba opracowanych innowacyjnych rodzajów produktów, wydatki przedsiębiorstwa, wielkość produktów komercyjnych, produktywność kapitału, produktywność materiałów, wydajność pracy.

Jednym z głównych wskaźników wydajności przy ocenie metod motywacji personelu jest efekt działań przedsiębiorstwa. Rozwój potencjału pracy zespołu przedsiębiorstwa lub pojedynczego pracownika oraz ich interakcja w wyniku wdrożenia metod motywacji pracy jest warunkiem uzyskania dodatkowych efektów z działalności gospodarczej. Aby osiągnąć cele ekonomiczne i społeczne przedsiębiorstwa, należy wziąć pod uwagę orientację głównych zasad, na których opiera się analiza skuteczności metod motywacji personelu, takich jak efektywność, dokładność, efektywność, złożoność, spójność, obiektywizm, demokracja itp.

Wśród naukowców nie ma zgody co do tego, jak mierzyć efekt wprowadzenia mechanizmu motywacyjnego (tabela 5). Opierając się na punktach widzenia tych naukowców, uważamy, że wskazane jest zastosowanie jako głównego skutecznego wskaźnika wprowadzenia mechanizmu motywacyjnego w przedsiębiorstwie skumulowanego wskaźnika ekonomicznego, który jest obliczany jako ogólny wskaźnik ekonomiczny i jest określany przez działanie wszystkich narzędzi motywacyjnych planowanych do wdrożenia:

$$EUAH = (\pm E1 \pm \ldots \pm En) - К, \qquad (1)$$

Gdzie E1….En – warunkowe roczne oszczędności wynikające ze stosowania narzędzi wykorzystania metod motywacji pracy w ramach doskonalenia planowania, organizacji, motywacji, oceny, kontroli pracy i można je uzyskać w wyniku obniżenia kosztów czasu pracy, zwiększenia wydajności pracy, poprawy jakości pracy wykonanych, terminowości i wcześniejszego zakończenia prac;

К – jednorazowe koszty związane z wdrożeniem narzędzi stosowania metod motywacji pracy (dodatkowe koszty opracowania systemu ewidencji wyników pracy, zaawansowanego szkolenia lub doskonalenia zawodów pokrewnych itp.).

Zatem związek między wskaźnikami działalności gospodarczej przedsiębiorstwa a wskaźnikami skuteczności metod motywacji pracy w systemie zarządzania personelem przedsiębiorstwa jest dość ważny. Rzetelna ocena wpływu metod motywacji pracy na działalność zespołów dokonywana jest poprzez zastosowanie zestawu uzupełniających się metod motywacji pracy.

Można zatem stwierdzić, że dany system kryteriów oceny efektywności motywacji do pracy pozwala na kompleksowe badanie efektywności dźwigni motywacyjnych, ułatwiając poszukiwanie niewykorzystanych rezerw na zwiększenie wydajności pracy. Głównym warunkiem osiągnięcia długoterminowych celów przedsiębiorstwa powinna być wysoce produktywna praca[145]. Kryterium osiągnięcia efektu ekonomiczno-społecznego motywacji do takiej pracy powinna być poprawa wskaźników mikroekonomicznych.

Tabela 5. Ustalenie kryteriów pomiaru wyników wprowadzenia mechanizmu motywacyjnego z punktu widzenia współczesnych naukowców

Autor, źródło	Cel rozwoju mechanizmu motywacyjnego w systemie zarządzania personelem przedsiębiorstw
Lewaszowa L., Savina N.	Wynik ten mierzy się poprzez „zarządzanie”, w którym efekt osiąga się jako stosunek kosztów (robocizny, materiałów, czasu) do wyniku, na który personel pod przewodnictwem podmiotu zarządzania mechanizmem (lub kierownik działu przedsiębiorstwo) musi być zmotywowany do minimalizacji kosztów, aby osiągnąć cele
Denisenko I.A., Tkachuk P.Yu.	Kluczowym kryterium pomiaru rezultatu wprowadzenia mechanizmu motywacyjnego w przedsiębiorstwie jest potencjał pracownika i co za tym idzie jego wzrost
Yadransky D.M.	Kluczowym wskaźnikiem pomiaru efektu wprowadzenia mechanizmu motywacyjnego jest zmiana wydajności pracy, dla której jako główne narzędzie samego mechanizmu wybiera się racjonowanie pracy
Czernuszkina O.A.	Ocenia wpływ wprowadzenia mechanizmu motywacyjnego poprzez zmianę ogólnego wskaźnika efektywności na podstawie stosunku kosztów zasobów do osiągniętego wyniku wolumenu sprzedaży

Źródło: opracowanie własne na podstawie studiów literatury naukowej

Kolejnym krokiem powinna być ocena istniejącego systemu motywacji personelu i możliwości przedsiębiorstwa na tym etapie jego rozwoju[146]. Celem tej oceny jest określenie dobrego systemu motywacyjnego dla konkretnego przedsiębiorstwa. Podejmowanie decyzji powinno ponownie opierać się na danych

[145] Krupski, R. (2007). Podstawy organizacji i zarządzania. Wałbrzych: WWSZiP.

[146] Васенина, Н. (2008). Выход из кризиса: как поступить с персоналом? Практический журнал по работе с персоналом, 2008(12), 15–21.

osobowych. Jeśli więc większość pracowników jest niezadowolona i panuje duża rotacja kadr, wówczas wskazana jest radykalna zmiana istniejącego systemu motywacyjnego, a jeśli nie, optymalizacja jego poszczególnych aspektów.

W szczególności: niektórzy naukowcy skupiają się na przyczynach determinujących potrzebę opracowania systemu motywacji personelu, inni zwracają szczególną uwagę na organizację procesu rozwijania motywacji personelu; w zakresie treści pracy zwraca się uwagę zarówno na przyczyny, jak i organizację procesu, a pod względem treści pracy - wraz z tym bada się czynniki rozwoju motywacji personelu; Na te czynniki zwraca się szczególną uwagę w treści pracy. Jednocześnie analiza treści pozwala zidentyfikować następujący problem naukowy: treść tych prac nie pozwala na jednoznaczne zdefiniowanie samego pojęcia „rozwoju systemu motywacji personelu”.

Analizując przyczyny determinujące potrzebę rozwijania motywacji personelu przedsiębiorstwa, rozwój motywacji personelu jest procesem integralnym w samym systemie zarządzania personelem; jest jednocześnie integralnym procesem w zarządzaniu strategicznym przedsiębiorstwem, realizowanym przez menedżerów w celu przezwyciężenia zjawisk kryzysowych w przedsiębiorstwie; sam proces jest niemożliwy w przypadku braku konieczności podejmowania przez personel wysiłków w celu uzyskania wyniku spełniającego cele rozwojowe przedsiębiorstwa, za co pracownik stara się otrzymać nagrodę[147]. Odsłaniając istotę organizacji procesu kształtowania systemu motywacji pracowników przedsiębiorstwa, zwrócono uwagę na wyniki badań ekonomistów zagranicznych, które zestawiono w tabeli 6.

Jest oczywiste, że pomimo różnic w postrzeganiu istoty i charakterystyki kolejnych etapów organizacji procesu kształtowania systemu motywacji pracowników przedsiębiorstwa, z wyjątkiem tych, które podaje A.V. Czerkasowa każdy naukowiec skupia się na konieczności ustalenia potrzeb pracownika – jako początku procesu. Możemy zatem stwierdzić, że łącznie punkty widzenia tych naukowców na temat istoty organizacji procesu rozwoju systemu motywacji personelu nie są sprzeczne z podaną powyżej definicją samego pojęcia „rozwoju motywacji personelu” system."

[147] Jasiński, B. (2005). Elastyczność organizacji jako odpowiedź na turbulencję otoczenia. In R. Krupski (Ed.), Zarządzanie przedsiębiorstwem w turbulentnym otoczeniu (pp. 41-56). Warszawa: PWN.

Tabela 6. Naukowe podejścia do istoty organizacji procesu kształtowania motywacji pracowników przedsiębiorstw

Autor, źródło	Kolejność etapów organizacji procesu
M. Armstrong	Identyfikacja potrzeb; zdefiniowanie celów, które powinny zaspokajać potrzeby; wybór ścieżek zachowań prowadzących do osiągnięcia tych celów; zaspokojenie potrzeb; ocena wyników w celu zaspokojenia potrzeb
G. Griffin, J.A Stoner	Świadomość potrzeby; określenie celu zaspokojenia potrzeby; realizacja działania mającego na celu zaspokojenie potrzeby; osiągnięcie rezultatu zaspokojenia potrzeby
O.A. Czernuszkina	Określenie potrzeb, zainteresowań i wartości pracownika; utworzenie dla niego systemu motywów; ustalanie priorytetów działania pracownika; kształtowanie zachowań pracowniczych; motywacja (tworzenie warunków do pracy i rozwoju, stymulacja)
A.V. Czerkasow	Prowadzenie bieżącej oceny funkcjonalności mechanizmu motywacyjnego; porównanie kosztów i wyników działań mających na celu rozwój motywacji na podstawie analizy zmian głównego wskaźnika; poszukiwanie optymalnego rozwiązania w zakresie rozkładu kosztów finansowych, z uwzględnieniem czynników wewnętrznych i zewnętrznych wpływających na środowisko motywacyjne; optymalizacja kosztów wydarzeń; ocena wyniku na podstawie zmian głównego wskaźnika; ocena satysfakcji

Źródło: opracowanie własne na podstawie studiów literatury naukowej

Jest oczywiste, że to etapowy proces rozwoju systemu motywacji personelu przedsiębiorstwa charakteryzuje ten proces jako prowadzony w celu jednoczesnego osiągnięcia celu, jakim jest rozwój przedsiębiorstwa i personelu (w szczególności każdego pracownika). Jednocześnie tylko w przypadku osiągnięcia celu rozwojowego przedsiębiorstwa możliwe jest zaspokojenie potrzeb pracownika z uzyskanego pozytywnego wyniku - wzrostu całkowitej produktywności.

Jednocześnie staje się oczywiste, że uwzględnienie czynników środowiska motywacyjnego przez podmiot zarządzania pozwala mu określić cele pracownika w celu rozwiązania problemów - z jednej strony, a z drugiej wybrać zachęty i tworzą motywy do ich rozwiązania. W związku z tym konieczne będzie określenie czynników rozwoju systemu motywacyjnego, które kształtują się bezpośrednio w przedsiębiorstwie. Aby więc opracować skuteczny system motywacyjny dla pojedynczego przedsiębiorstwa, należy przede wszystkim określić motywy i potrzeby załogi, a następnie ukształtować system.

Kształtowanie własnego systemu motywacyjnego ma na celu uczynienie personelu i przedsiębiorstwa jednym integralnym mechanizmem, który z jednej strony będzie maksymalnie dostosowany do osiągania celów i zadań organizacji, a z drugiej do zaspokajania potrzeb każdego pracownika, pozwalając mu w pełni wykorzystać swój potencjał.

Zatem polityka motywacyjna krajowych przedsiębiorstw powinna zmieniać się zgodnie z procesami globalizacji, transformacją gospodarczą, rozprzestrzenianiem się trendów kulturowych, intelektualizacją i socjalizacją pracy. Są to obiektywne procesy XX wieku, które determinują stopień rozwoju przedsiębiorstw i tworzą nowe wymagania w zakresie motywacji pracowników. Jednocześnie istnieje światowe doświadczenie historyczne myśli naukowej w dziedzinie ekonomii (teorie, koncepcje i prawa obiektywne), które należy wykorzystać przy kształtowaniu polityk motywacyjnych.

2.7. Managing labor relations in remote work environments

Distance employment is defined as a non-standard form of employment, providing for flexible social and labor relations between employee and employer in a virtual environment using information and communication technologies. The non-standard nature of this form of employment is determined by the non-stationary nature of the workplace, irregular working hours, instability and flexibility of social and labor relations. The virtual environment of remote employment involves the widespread use of information and communication technologies, work through information networks, work from home and in special centers spatially remote from the main office of the company[148].

The advantages of this form of labor organization are obvious[149]:

- reduction of employer expenses for renting premises and organizing workplaces;
- significant savings in time, energy and money for the employee due to the absence of transport problems;
- increase in labor productivity when it is organized in accordance with the individual needs of the individual in more comfortable home conditions;
- reduction of environmental pollution due to reduction in traffic flows, etc.

Opportunities for remote employment help to increase business activity and employment of the population: some segments of the population (people with disabilities, women with young children, etc.) thanks to new technologies have the

[148]Motorna, I. I. (2013). Conceptual approaches to the regulation of social and labor wages in remote employment. Bulletin of Socio-Economic Research, 32, 283-287.

[149]Barnes, A. (2018). The 4 Day Week: How the Flexible Work Revolution Can Increase Productivity, Profitability and Well-being, and Create a Sustainable Future.

opportunity to work without leaving home, and entrepreneurs can attract workers without providing them with a workplace[150].

According to scientists, in ten years, new technologies will make it possible to perform almost any work outside the office, at home. This leads to a blurring of boundaries between work and personal life. More and more job responsibilities and tasks will be performed by company employees not in the office, but at home; work will be carried out not only during working hours, but even on weekends and holidays.

Experts believe that today more than 40 million workers around the world work from home at least one day a week. The number of employees of different companies with round-the-clock access to email has grown from several million to several tens of millions of people. And at the same time, while in offices, workers will devote more and more time to their personal affairs[151].

The use of remote employment has several features. Remote mode cannot be used by people whose work is based on contact with clients. Employees handling cash will not be able to work outside the office. Restrictions may also apply to work on personal data, since the employee is obliged to ensure the protection of information. The use of remote employment is possible in the following forms. Firstly, it may be the main form of employment in the organization. Remote work is an excellent option for creative professions: artists, programmers, designers, copywriters, webmasters, photographers, journalists, editors, proofreaders, translators, etc. However, if done correctly, most people can move their work home. Secondly, this is the possibility of remote work for individual company employees[152].

In conditions of remote work as the main form of employment, it is also necessary to comply with certain requirements for the organization of work. First of all, don't give up your office. It is the epicenter of business and is needed as a place where all employees can meet, consult, and discuss projects. In addition, the manager needs to bring new employees up to date and conduct the necessary consultations from time to time. The office is indispensable for brainstorming meetings, when specialists need to get together and make agreed upon decisions. Only in the office, observing colleagues, new employees will be able to absorb the internal unwritten rules of the company, effective mentoring and transfer of experience by personal example are possible. Additionally, not all employees can work from home. Sometimes, in addition to a computer, due to the specifics of the task, certain

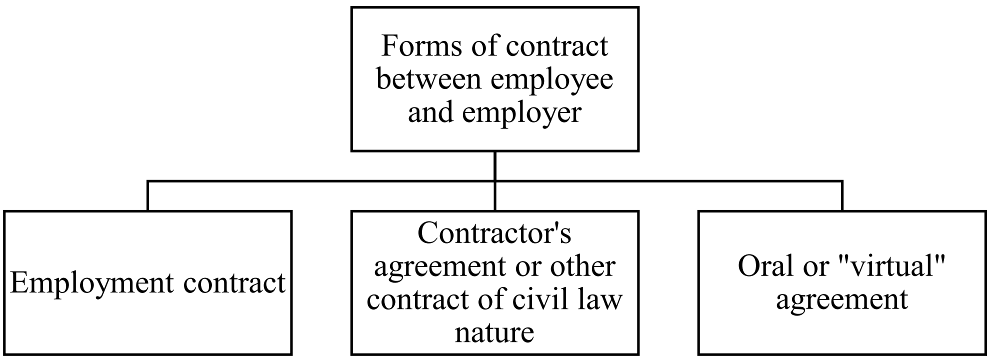
[150] Gostick, A., & Elton, C. (2012). All In: How the Best Managers Create a Culture of Belief and Drive Big Results.
[151] Burkus, D. (2020). Leading from Anywhere: The Essential Guide to Managing Remote Teams.
[152] Emelianenko, L. M. (2015). Formation and regulation of new forms of employment in Ukraine. Ukrainian Society, 1(52), 82-91.

equipment may be required, which may not be available at home. For example, printers, scanners, copiers, etc. In a single center, in the office, a manager or responsible person must be constantly present to quickly respond to emerging situations. That is, an office is a kind of center that is absolutely necessary regardless of the size and type of business[153].

Regarding the possibility of using remote employment by some employees, it should be noted that this largely depends on the conscientiousness and experience of each individual employee. To get the opportunity to work remotely, you need to prove yourself well; perhaps you should ask for remote work after a successfully completed task. You can also suggest that your manager allow you to work from home for a while as an experiment. It should be remembered that this is a chance to show your best side and justify the trust of your manager. During the experimental absence, work must be performed with the highest quality and efficiency. You should also make a list that clearly demonstrates the fact that you can work much more productively outside the office. At the same time, additional advantages should be indicated: saving travel time, willingness to spend much more time on implementing a task, a calm atmosphere, which is especially important when the task requires intellectual effort and deep immersion in the essence of the problem. The economic benefit for the enterprise is also obvious: there is no need to spend money on equipping the employee's workplace.

The nature of the relationship between labor market actors during remote employment depends on the way the relationship between them is formalized. In practice, there are three forms of agreement between employee (Fig. 1).

Figure 1. Forms of agreement between employee and employer



Source: Compiled by the author based on[154]

[153] Fisher, K., Fisher, M., & Fisher, N. (2020). Leading Remote Teams: Embrace the Future of Remote Work Culture.

[154]URL: http://otd-lab.ru/stati/trudovye-otnosheniya/osobennosti-trudovykh-otnoshenii-v-usloviyakhdistantsionnoi- zanyatosti, accessed 17/11/2023.

1. Employment contract. An employee, having concluded a traditional employment contract with an employer, performs his labor duties not on the employer's territory, but at home or in another place convenient for him. This form of labor organization is usually permitted to employees who already have experience working with a given employer and have proven themselves well, since in this case the relations between the subjects are built on a high level of trust and loyalty. All relations between the employee and the employer are regulated by an employment contract, and the employer has the right to demand compliance with the established work schedule (for example, the presence of the employee at a certain time at the "workplace" near the computer or telephone). Often, work at home is combined with work in the office, for example, several hours or days a week, to discuss work issues together as a team and to perform duties that cannot be performed remotely from the office. The employee enjoys all social and labor guarantees in accordance with the law. If the work is one-time or seasonal, the employer may enter into a fixed-term employment contract with the employee.

2. Contract agreement or other civil law agreement. When concluding such an agreement, the employee acts as a performer, and the relations of the parties are regulated not by labor, but by civil law. Of course, in this case, the employee does not have the right to count on social guarantees provided for by the Labor Code (payment of benefits for temporary disability, provision of annual and educational leaves, compensation for harm in connection with harm to health, etc.). But concluding a civil contract is not the worst option for a conscientious employee, since if the terms of the contract are violated, he can still go to court to protect his rights. During remote employment, the third option for formalizing relationships has become widespread[155].

3. Oral or "virtual" agreement. With such an agreement, the interaction between the employer and the employee occurs in an illegal field. The main reason for the employer's reluctance to formalize relations with an employee is the desire to reduce costs associated with hiring labor. Without concluding an employment contract with an employee, the employer does not bear any obligations to the hired employee. The number of employees is not growing, which leads to an understatement of the wage fund and the tax base for determining some taxes and fees. The costs associated with terminating a contract with an employee are also zero. The employer also saves on personnel work - drawing up employment contracts, calculating and accruing wages and other payments, maintaining all

[155] Fried, J., & Heinemeier Hansson, D. (2013). Remote: Office Not Required.

documentation[156].

The employer should also take into account that managing remote workers requires a special approach. And while remote hiring may seem affordable at first glance, it can end up costing a company twice as much if you don't know how to effectively run a business in such an environment. Consequently, the management of “remote” personnel provides for a certain number of features[157].

First and foremost, the manager's goals and expectations should be communicated in writing. You should ensure that employees have a full understanding of the scope of the project they will be working on, as well as the specific task that is being assigned to them, and explain everything in as much detail as possible in writing.

If the work is completed on time or ahead of schedule, bonuses can be introduced. This affects collaboration with creative individuals. For example, an additional 10% if the project is completed one day early, an additional 20% if it is completed two days earlier, etc. This seemingly simple idea can lead to fast turnaround while maintaining quality and time.[158].

A five-minute video/phone call must be maintained at the start of the day. You need to make sure that the team is working in the right mode and moving in the right direction. Five minutes of planning every morning is a great way to hear from the team itself and identify obstacles that need to be known and addressed as the work gets done.

It is necessary to differentiate between the types of remote workers and take into account the characteristics of their aspects of life, which, first of all, concerns people with disabilities and women with children. The need for absence for certain hours in a working day must be agreed upon in advance if, say, it is necessary to undergo procedures. However, this should not cause the work to be completed untimely.

You shouldn't put off solving problems in your team. Problems that arise can easily drive remote workers into despair. If someone on the team needs help or advice, train employees to contact management without delay or hesitation.[159].

It is very important to plan your work schedule. If applicable to the type of work, a work plan should be created in advance that will help the team better feel that they are actually working a full day of work, for example from 10am to 6pm on

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[156]Newport, C. (2016). Deep Work: Rules for Focused Success in a Distracted World.
[157]Grant, A. (2013). Give and Take: A Revolutionary Approach to Success.
[158]Achor, S. (2010). The Happiness Advantage: How a Positive Brain Fuels Success in Work and Life.
[159]Vanderkam, L. (2019). Juliet's School of Possibilities: A Little Story About the Power of Priorities.

weekdays, even if they are working from home. This will help improve productivity and also allow the manager to more effectively control employees. Each person has their most productive work rate at a certain time of the day, so you can ask each employee exactly when they are most comfortable working during the day and set a work schedule accordingly.

Large amounts of work should be broken down into key dates and development milestones. This will help keep employees on task, and will warn them in advance about emerging or planned nuances and issues before they become unresolved or irrelevant. This will allow the manager to easily track and evaluate the success of tasks and help the team work more efficiently.

Monitoring of key performance indicators should also be introduced, especially if this practice is used in the office. Before approving a specific project, you should outline several (three to five) team KPIs and use them to track success on a daily, weekly, or monthly basis.[160].

Thus, in general, the development of remote employment is a step towards greater flexibility of the labor market, which is an objective trend both for countries with transition economies and for countries with a developed market system. However, the use of modern technologies contributes to the transition from a system of traditional stable employment to casual and part-time employment, which does not always meet the interests of workers. The main distinguishing features of labor relations in conditions of remote employment are a remote workplace, the ability to choose working hours, increased staff flexibility, etc. However, workplace virtualization prevents the unification of workers and reduces team cohesion, can cause isolation and isolation of workers, and an insufficient level of social guarantees on the part of employers can cause excessive working hours.

For managers of enterprises aiming to use remote employment, it is also necessary to remember the features of managing personnel employed in this way. This concerns the need to maintain constant communication and be ready to solve emerging problems, taking into account the health characteristics and needs of employees. Consequently, to prevent violations and discrimination on the part of both employees and employers, well-thought-out economic and legal measures are needed to regulate the relationship between remote workers and employers in the legal field and protect each of the parties to the contract from the dishonest behavior of the partner.

The development of information technology and the constant growth in the number of citizens using the Internet and social networks have long led to an increase in the labor market in the number of workers performing labor functions at a distance

[160]Brown, B. (2018). Dare to Lead: Brave Work. Tough Conversations. Whole Hearts.

from the employer.

The opportunity to work remotely appeared with the development of the Internet, when participants in the intellectual labor market realized that they could transfer work results and receive new tasks using a computer and a global network without the need to be in the office[161]. Currently, technology allows you to work from anywhere in the world and be in touch 24 hours a day. Remote work has become a new trend in modern business, and more and more people want to work from home[162].

First, you need to clarify the term “remote work” or so-called “telework”, remote work, freelancing, Internet employment. The word "tele" from the Greek "tele" - into the distance, far - is part of a compound word that means remoteness, action at a long distance. Essentially, telework is work away from the main place of work or office, in other words, without physical presence at the workplace. The use of the word “tele” already determines a certain level of mobility and a more technological nature of work involving technical means of communication in this process[163].

An analysis of scientific literature shows that in domestic and foreign theory and practice, several different approaches to the interpretation of atypical forms of employment have developed[164], constantly improving thanks to the rapid development of new technologies. The concept of remote work was proposed and developed by the American Jack Nilless back in 1972. He was the first to express the idea that employees do not have to be directly in the office to work productively, and that in order to save resources, work can be carried out by remotely maintaining contact with an employee[165]. In 2000, the European Telework OrganizationThe first typology of remote work was proposed and the following types were identified (Fig. 2):

1. Telework at home (home-based telework). This activity includes workers who work at least one day a week from home rather than at their workplace, using computers and telecommunications to interact with colleagues.

[161] Neeley, T. (2021). The Remote Work Revolution: Success from Anywhere.

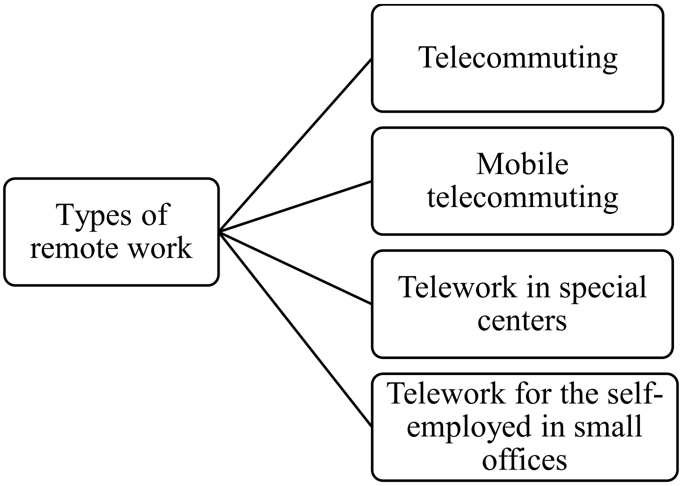
[162]Bondarenko, O. M., Rishko, Yu. I., & Tardaskina, T. M. (2018). Advantages of remote work as an effective form of employment for personnel in current minds. Business Inform, 12, 425-430.

[163]Bezrukova, A. I. (2013). Features of the work of remote workers and the formation of an HR brand. Teacher. XXI Century, 3, 377-383.

[164]Korolev, V. V. (2018). Learning to work remotely. Innovative Economics and Management: Methods and Technologies, 1, 47-49.

[165]Kravchenko, A. L., & Nekhoda, E. V. (2014). Remote work and flexible schedules as additional motivating factors. Human Resource Management - The Basis for the Development of an Innovative Economy, 5, 163-166.

Figure 2. Types of remote work



Source: Compiled by the author based on[166]

2. Mobile telework. Requires being away from your workplace and home for at least 10 hours per week. As a rule, these are business trips.

3. Telework in special centers - telecottages, providing people at their place of residence with learning opportunities, as well as high-performance ICT.

4. Telework for self-employed in small offices - home offices (MODO) (telework by selfemployed in SOHOs). It is a combination of self-employment and telework.

However, remote work is only a type of atypical employment, which usually includes work organization that does not provide full employment[167]. The following forms of atypical employment are distinguished:

1. Part-time work.
2. Urgent (fixed-term) or short-term (short-time).
3. Work at home.
4. Remote (telework, e-work) work.
5. Self-employment.
6. Pseudo-self-employment.
7. Temporary agency[168].

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166 Kokhova, I. V., & Petrochenko, N. P. (2015). The use of non-standard forms of employment to increase the competitiveness of firms in times of crisis. Current Problems of Social and Economic Psychology: Methodology, Theory, Practice, 2, 67-70.

167 Tebenkov, E. V., & Norkina, A. N. (2016). Remote work as an opportunity to optimize costs for business during a crisis. Sciences of Europe, 10, 55-56.

168 Gordienko, G. S. (2018). Ways to increase the efficiency of remote work of employees. International Scientific Review of the Problems and Prospects of Modern Science and Education, 72-73.

So, there is a constant evolutionary change in the characteristics of the content of labor and forms of labor organization. A feature of modern labor is a change in the nature of work towards its increasing “intellectualization”, and at the same time the system of labor organization is changing, there is a transition from a “system of paid jobs” to the creation of “work opportunities”[169]. Today, remote work is most popular among such professions and activities as:

- sales via the Internet;
- Advertising activity;
- journalism;
- translation;
- design, etc.

But the large selection of professions suitable for remote work is not the only reason why many employees prefer to work remotely. Remote workers most often:

- students who want to earn additional income without interrupting their educational process. More often, young people choose the professions of translators, call center operators, and programmers;
- women on maternity leave who want to maintain their professional skills and earn a little money;
- young mothers during maternity and parental leave who wish to continue cooperation with their employer, only remotely;
- pensioners whose pension is not enough to live on. Many managers provide remote jobs to retirees because such workers have extensive experience and can have a positive influence on other subordinates. These include lawyers, accountants, financial analysts;
- workers living in rural areas, far from their place of work;
- people who cannot work in an office because they combine employment with other activities.

Remote work is one of the inevitable changes that the technological revolution has brought with it. And companies whose corporate policy involves working for results have long stopped evaluating employees only by the hours spent in the office. These are mainly IT companies, auditors, analysts, as well as representatives of various creative professions[170]. Remote work provides many benefits for both employees and the company (Table 1).

[169]Hanselman, S., & Lowe, S. (2020). Remote Work: The Career That.

[170]Ohanian, A. (2013). Without Their Permission: How the 21st Century Will Be Created, Not Managed.

Table 1. Advantages and disadvantages of remote work

Parties concerned	Flaws	Advantages
For the employer	– the need to carefully configure business processes to organize remote work; – the need to attract managers with experience in remote work; – introduction of changes to the system of control and evaluation of results; – decrease in efficiency; – poor employee involvement in the life of the company and corporate culture; – inability to make decisions in brainstorming mode;–	– reduction of personnel costs; – payment based on the fact and quality of the work done, solely for the result; – lack of social package and compensation; – reduction of office costs and its maintenance; – reduction of staff turnover; – the ability to attract highly qualified workers regardless of their place of residence; – minimizing conflicts in the team
For employee	– constant search for a connection to the Internet; – self-sufficiency with the equipment necessary for work; – inability to discuss work issues with colleagues; – possible health problems (physical inactivity, eye strain, etc.); – stereotypes in the assessment of others (if at home, then not working); – risk of fraud on the part of the employer	– free (flexible) work schedule (allows you to independently determine the balance of personal and work time); – freedom of movement: a remote employee can work at home, in a park, in a cafe, or travel around the world; – saving time on travel and fees; – savings on transport; – savings on office clothes and food; – no unnecessary distractions from the work process; – reduction of time for communications that are social rather than professional in nature; – freedom from the pressure of corporate culture
For the state	– the need to develop additional programs to support the development of non-standard forms of labor organization; – problems with taxation due to increased labor mobility; – increased competition in the labor market	– reduction in unemployment; – providing, with the help of commercial structures, jobs for representatives of vulnerable segments of the population (people with disabilities, young mothers, etc.); – partial solution to the problems of labor and social adaptation; – solving some of the transport problems (reducing flow during rush hour in cities, etc.); – optimization of the process of providing first jobs to young specialists; – development of small business;–

Source: Compiled by the author based on[171]

[171]Kravchenko, A. L., & Nekhoda, E. V. (2014). Remote work and flexible schedules as additional motivating factors. Human Resource Management - The Basis for the Development of an Innovative Economy, 5, 163-166.

As we can see, remote work has not only positive, but also negative aspects, however, labor market development trends indicate the predominant attractiveness of this form of work for both employees and employers. This is primarily due to economic factors. As studies in America have shown, a remote worker, compared to the same employee but working from the office, saves the business an average of $11,000 per year, and for himself, compared to the same work in the office, he saves $2,000–7,000. Remote work is used in various spheres of human activity in Ukraine. Many independent sites explore issues of remote work, including the Bitrix24 service (more than 1,000 medium, small and large businesses from all regions of the country took part in the survey).

According to the Bitrix24 service together with State Financial Corporation Ukraine, in 2015, more than 20% of Ukrainian enterprises actively used remote workers. The average share of remote workers among office workers in Ukraine was about 7%. In 2017-2020 more than 10% of office employees in Ukraine work remotely. During the pandemic, almost half of office employees already worked online. Thanks to virtual workplaces, employers will be able to save about UAH 3 billion in two years. in year. Of course, not all managers will be able to immediately come to terms with the fact that their subordinates are not in the office during the entire working day. But these are the realities of the modern information society: the "intellectualization" of labor is taking place, and along with this, the entire system of work organization is changing, there is a transition from a system of paid jobs to the creation of work opportunities. In fact, organizing remote work for employees today does not require additional investments from the company. All that is needed is a working laptop and access to the Internet, and the employee has all the software, computing power and documents "in the clouds" (on a remote server). In remote mode, the main thing is to be in touch in order to join in the discussion of projects, answer questions that arise, and communicate with clients and partners.

Thus, today it is much easier to set up a business using remote work organization. All that is now needed from a remote worker is a laptop and Internet access. The storage and exchange of important documents now occurs through cloud technologies. The main thing is that you are in touch, and the necessary documents will always be at hand using the Internet. The use of cloud technologies for users to work with a corporate database allows enterprises to avoid significant costs for the acquisition and maintenance of hardware and software by renting full-featured professional platform tools.

2.8. The role of the customs service in ensuring the economic security of Ukraine in the conditions of globalization

Роль митної служби в забезпеченні економічної безпеки України в умовах глобалізації

Однією з особливостей сучасного періоду економічного розвитку є стрімке зростання обсягів міжнародних економічних контактів, подальший розвиток світового поділу праці, поглиблення економічної взаємозалежності держав, що зумовлено, насамперед, швидким зростанням продуктивних сил і науково-технічного прогресу. Як зазначають Резнік Н. П. та Боровик Т. В. «кінцевим результатом такого процесу стає вільне переміщення товарів, послуг, інтелектуальної власності, капіталу та робочої сили територіями різних держав і поступове зникнення торговельних бар'єрів між ними. Українська економіка поступово інтегрується в цю систему. Враховуючи особливості геополітичного положення нашої країни, зокрема, географічне положення, залежність від імпорту енергоресурсів, структуру економіки, – міжнародне економічне співробітництво є вирішальним чинником її подальшого розвитку»[172].

Митна система бере свій початок ще до нашої ери та розвивається із плином часу. Генезис митної системи України дуже різноманітний. Кожний період історії держави зробив певний внесок у подальший розвиток митно-тарифних відносин. Із становленням України як самостійної держави, паралельно з розбудовою всього державного механізму відбувалося і формування власної системи митних органів в Україні.

У 1991 році було створено Державний митний комітет України – центральний орган державного управління у галузі митної справи, основним завданням якого було «забезпечення захисту економічної безпеки України, додержання законодавства про митну справу, здійснення митного контролю та оформлення»[173].

В процесі становлення та розвитку митної справи в Україні можна виділити такі основні п'ять етапів (табл. 1).

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[172] Резнік Н.П., Боровик Т.В. Митна справа та митна політика держави. Молодий вчений. № 9 (109). 2022. С. 162-165. URL: https://doi.org/10.32839/2304-5809/2022-9-109-34

[173] Указ Президент України «Про Держану митну службу України» від 29.11.1996 № 1145/96. URL: http://zakon4.rada.gov.ua/laws/show/1145/96

Таблиця 1

Основні етапи становлення та розвитку митної справи в Україні

Етап	Роки	Характеристика
I	1991-1996	створення незалежної системи митних органів шляхом утворення Державного митного комітету України; формування та ускладнення структури митних органів через створення територіальних митних управлінь, збільшення кількості митниць та митних постів
II	1997-2004	створення Державної митної служби України (далі – ДМСУ), законодавче затвердження її функціонально-організаційної структури; закріплення повноважень Держмитслужби щодо формування структури та організації діяльності митних органів України через прийняття Митного кодексу України;
III	2005-2011	етап активних структурних та організаційних перетворень: зміна керівництва митної служби на усіх рівнях та повернення до дворівневої структури митних органів (2005); відновлення трирівневої вертикалі митної служби (2006); затвердження нового положення про ДМСУ (2007); розробка Стратегії стабілізації та подальшого розвитку митної служби України на 2010-2015 рр. (2009)
IV	2012-2018	консолідація податкових та митних органів шляхом об'єднання податкової та митної служб та створення на їх основі Міністерства доходів і зборів України (2012); прийняття нового Митного кодексу України (2012); трансформація Міндоходів у Державну фіскальні службу України (2014); розвиток організаційно-функціональної структури ДФСУ.
V	2019-2020	завершення експерименту з об'єднання митної та податкової служб в одну інституцію; створення окремого державного органу в сфері забезпечення митної безпеки України – ДМСУ.

Наразі до складу Державної митної служби України входять регіональні митниці, спеціалізовані установи та управління, митниці у межах певних регіонів та митні пости (рис. 1).

Відповідно до Положення про ДМСУ на неї покладені завдання, які можна узагальнити в кілька основних напрямів: реалізація митної політики та забезпечення митної безпеки; боротьба з правопорушеннями та протидія контрабанді; адміністрування митних та інших платежів; спрощення митних процедур та впровадження новітніх технологій; міжнародне співробітництво та участь у міжнародних організаціях; інформаційна діяльність та аналіз даних.

В умовах воєнного стану перед Україною постають нові виклики та загрози, які потребують негайного реагування та адаптації митних процедур. З одного боку, виникає потреба у спрощенні та пришвидшенні митних процедур для критичного імпорту, гуманітарної допомоги та товарів військового призначення. З іншого боку, посилюються заходи безпеки та контролю для запобігання контрабанди, незаконного переміщення товарів та диверсій [174].

Рис. 1. Структура Державної митної служби України

[174] Тімошенко Н., Дідик О., Смоляр Л. Митна політика України в умовах воєнного стану. Економіка та суспільство. 2024. № 61. URL: https://doi.org/10.32782/2524-0072/2024-61-56

З метою забезпечення підвищення ефективності роботи ДМСУ у 2023 у співпраці з країнами ЄС реалізовувались такі програми: програма «Разом з ЄС до Безпеки Кордонів» (партнер з розвитку – Європейський Союз, представництво в Республіці Молдова), проєкт «Продовження інституційної підтримки в рамках проєкту архітектури реформ в Україні (АРУ)» (партнер з розвитку – Європейський банк реконструкції та розвитку), проєкт «Підтримка зміцнення потенціалу державних органів України у запобіганні та протидії незаконному обігу зброї, боєприпасів та вибухових речовин в усіх його проявах» (партнер з розвитку – Організація з безпеки і співробітництва в Європі (ОБСЄ)), проєкт «Підтримка ЄС України: посилення інтегрованого управління кордонами та шляхів солідарності» (партнер з розвитку – Європейський Союз, представлений Представництвом в Україні), проєкт «Підтримка ЄС у зміцненні інтегрованого управління кордонами в Україні-Стійкість» (партнер з розвитку – Європейський Союз, представлений Представництвом в Україні), проєкт «Операційна підтримка у наданні стратегічних консультацій щодо реформування сектору цивільної безпеки України (2021-2024 рр.)» (партнер з розвитку – Європейський Союз), проєкт «Надання технічної допомоги з метою посилення системи експортного контролю України та протидії розповсюдження зброї масового знищення» (партнер з розвитку – Уряд США через Державний Департамент США / Бюро з міжнародної безпеки та нерозповсюдження), проєкту «Підтримка Громадської ініціативи «За чесну та прозору митницю» (партнер з розвитку – Європейський Союз, представлений Представництвом в Україні) [175].

Задля покращення роботи митної служби Громадська організація «Інститут економічних досліджень та політичних консультацій» проводить щорічні опитування не менше 1000 підприємств експортерів/імпортерів по всій території України щодо діяльності митних органів та реалізації реформ у митній сфері «Моніторинг роботи митниці очима митниці» з метою здійснення відповідної оцінки та підготовки рекомендацій. При здійсненні зовнішньоекономічної діяльності у 2022 році підприємства зазначили, що зазначають такі основні проблеми: черги на кордоні, недостатня спроможність пунктів пропуску, зростання грошових та часових витрати на митні процедури як для експортерів так і для імпортерів (рис. 2).

В опитуванні 2022 року експортерами та імпортерами було також запропоновано оцінити такі аспекти роботи митниці: технічне оснащення митниці, загальне враження від спілкування з митниками, компетенції

[175] Міжнародна співпраця. Державна митна служба України. URL: https://customs.gov.ua/mizhnarodna-spivprazia

митників, ретельність перевірки, рівень корупції. Опитування здійснювалось за 5-ти бальною шкалою (1 – низький рівень, 5 – високий рівень). Підприємства оцінили всі перелічені аспекти роботи митниці на 3,5 бали і вище, тобто вище середнього рівня. Середнє значення за всіма аспектами склало 3,68 бали. Найвище значення отримали такі аспекти роботи митниці як ретельність перевірки (3,9 бали) та компетенції митників (3,68).

Водночас, забезпечення ефективного функціонування митних органів є складним завданням, яке потребує постійного вдосконалення та адаптації до нових викликів. Міжнародні інституції, такі як Світова митна організація (СМО), Всесвітня торгова організація (ВТО), Європейський Союз та інші, активно розробляють рекомендації та стандарти для покращення роботи митних органів. Використання досвіду цих інституцій є основою до реформування митної служби України, зокрема у напрямах спрощення митних процедур, покращення взаємодії з бізнесом, запобігання контрабанді та підвищення прозорості митного контролю.

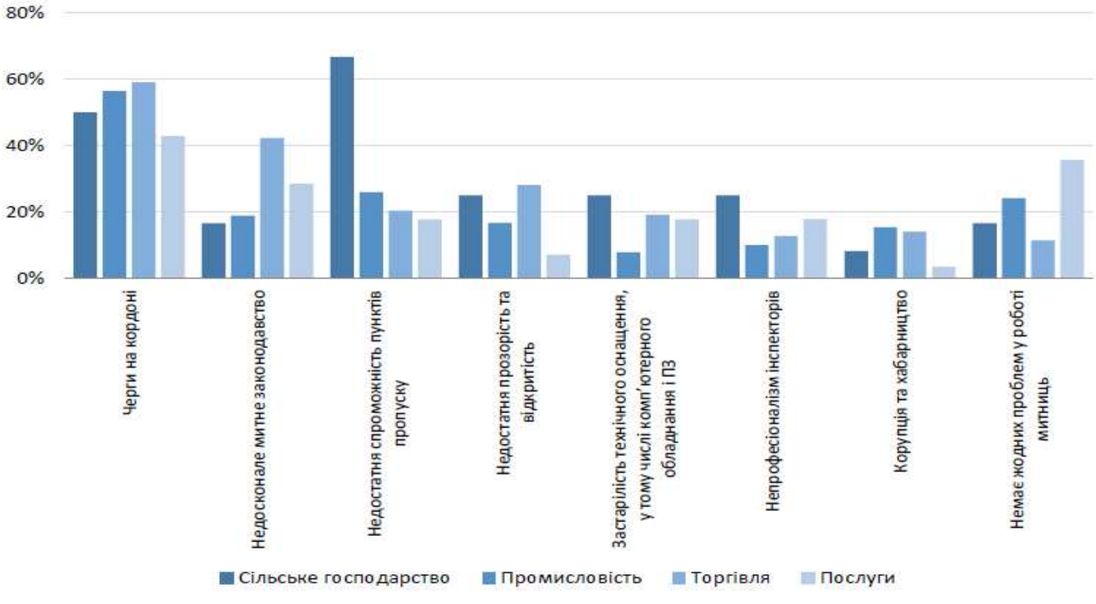

Рис. 2. Проблеми в роботі митниць у 2022 році , за сектором (топ 7 проблем та частка опитаних, які не зіштовхувалися з проблемами), % респондентів

Джерело: [176]

[176] Моніторинг роботи митниці очима бізнесу. URL: https://customs.gov.ua/otsinka-diialnosti

Основні напрями покращення економічної діяльності митної служби в контексті інтеграції України в ЄС наведені на рис. 3.

Одним із основних кроків у покращенні економічної діяльності митних органів є приєднання України до міжнародних митних конвенцій, таких як Конвенція про процедуру спільного транзиту (NCTS) та Конвенція про спрощення та гармонізацію митних процедур (Кіотська конвенція). Приєднання до Конвенції про спільний транзит у 2022 році дало змогу Україні впровадити електронну транзитну систему NCTS, що підвищує ефективність і швидкість транзитних операцій. Впровадження нової фази NCTS Фаза 5 у 2024 році допоможе Україні відповідати стандартам ЄС та підвищити конкурентоспроможність українського бізнесу на європейських ринках.

Рис. 3. Напрями покращення економічної діяльності митної служби в контексті інтеграції України в ЄС

З огляду на досвід європейських країн, також одним з пріоритетних напрямів є автоматизація митних процедур за допомогою електронних систем. За інформацією Всесвітньої митної організації «в Європейському регіоні, загальна частка електронних митних декларацій перевищує 90%. Слід зазначити, що в країнах ЄС митне оформлення займає не більше п’яти хвилин у 63% випадків і перевищує одну годину у 9% випадків. Такі результати не можуть бути досягнуті без вагомого прогресу в діджиталізації митної справи та управлінні митними ризиками»[177].

Міжнародний досвід показує, що важливим елементом ефективного митного контролю є застосування механізмів взаємної адміністративної допомоги з митними органами інших країн. Співпраця з митними адміністраціями країн ЄС дозволяє оперативно обмінюватися інформацією, що сприяє виявленню та попередженню порушень митного законодавства. Протягом 2023 року було зареєстровано значне зростання кількості виявлених правопорушень завдяки інформаційному обміну та міжнародній взаємодії, що сприяло збільшенню зборів митних платежів та виявленню незаконних схем переміщення товарів.

Для успішної інтеграції України до європейського ринку необхідно привести митне законодавство у відповідність до стандартів ЄС. Наразі в Україні окрім Митного кодексу, існує низка інших законів, які регулюють окремі аспекти митного контролю: Закони України «Про митну справу», «Про державну службу», «Про зовнішньоекономічну діяльність», «Про державний кордон України». Також слід враховувати накази, постанови та інструкції, що видаються Кабінетом Міністрів України, Міністерством фінансів та іншими органами державної влади, які деталізують положення законів та Митного кодексу та стосуються процедур декларування, переліку документів для митного оформлення, порядку проведення огляду та інших аспектів митного контролю. Наразі митне законодавство України постійно гармонізується із законодавством Європейського Союзу та змінюється щодо максимального задоволення запитів Міністерства оборони України. В цілому у 2023 році Державною митною службою України у 2023 році забезпечено опрацювання 49 проєктів (у 2022 році –17) нормативно-правових актів, розроблених іншими органами виконавчої влади, які надходили на розгляд, до 21 з них надано обґрунтовані пропозиції та зауваження (у 2022 році – 6).

Важливим напрямом є впровадження принципів Угоди про асоціацію між Україною та ЄС, що включає гармонізацію митних тарифів, розробку єдиних стандартів для класифікації товарів та запровадження нових методик оцінки митної вартості.Співпраця з такими інституціями, як Єврокомісія, Всесвітня митна організація (WCO) та Програма EU4PFM, сприяють впровадженню кращих практик та інноваційних рішень у роботу митної служби. Впровадження

[177] Угрин В.В. Діджиталізація митного контролю в Україні. Інфраструктура ринку. 2020. Вип. 47. С. 168–173. DOI: https://doi.org/10.32843/infrastruct47$31.

рекомендацій WCO та участь у навчальних програмах для митників допомагають підвищити рівень професійної підготовки персоналу.

У IV кварталі 2023 року Держмитслужбою вживалися заходи для підписання Генеральної грантової угоди до Програми «Митниця», яка визначає порядок використання грантових коштів, виділених в рамках Програми «Митниця». Водночас Держмитслужбою погоджено текст Угоди (у формі обміну листами) між Україною та Європейським Союзу щодо зупинення зобов'язань України щодо сплати фінансових внесків у зв'язку з угодами про приєднання до програм Союзу[178].

Покращення інфраструктури митних пунктів пропуску та забезпечення їх сучасними технічними засобами контролю, такими як сканери та системи розпізнавання номерних знаків, дозволить зменшити час перевірки вантажів і підвищити ефективність роботи митників. Інвестиції в цифровізацію процесів та автоматизацію операцій допоможуть знизити ризик корупції та підвищити якість митного контролю. За напрямом розвитку матеріально-технічного забезпечення у лютому 2023 року пункт пропуску «Дяківці» відкрився для міжнародного руху. У грудні 2023 році на будівництво, реконструкцію та капітальний ремонт пунктів пропуску «Дяківці» та «Красноїльськ» Міністерством фінансів України було виділено 10 057,3 тис. гривень. 23.10.2023 відбулася робоча зустріч за участі керівництва Держмитслужби, урядової уповноваженої з питань польсько-українського співробітництва в галузі розвитку Ядвіги Емілевич, її представників та керівництва компанії Unibep S.A. щодо виконання робіт з реконструкції міжнародного пункту пропуску для автомобільного сполучення «Шегині». Також було укладено договір про реалізацію проєкту «Будівництво пішого переходу в пункті пропуску «Рава-Руська» на українсько-польському кордоні» з компанією T4B Sp. Z o.o.

В останні десятиріччя, особливо з кінця 90-х рр. XX – початку XXI ст., у рамках діяльності впливових міжнародних організацій, таких як СОТ, Всесвітня митна організація (далі – ВМО), ЮНКТАД, Світовий банк реконструкції та розвитку, Міжнародний валютний фонд, Міжнародна торгово-промислова палата та інших, здійснюється активна робота щодо спрощення й уніфікації принципів і методів регулювання зовнішньої торгівлі, в тому числі форм та методів діяльності митних органів як структур, що безпосередньо реалізують митну політику своїх держав. Митна служба України бере ініціативну участь у роботі ВМО. Таке активне співробітництво національних митних органів зі

[178] Звіт про результати роботи Державної митної служби України за 2023 рік. URL: https://customs.gov.ua/plani-ta-zviti-roboti

своєю профільною міжнародною організацією має позитивні наслідки, насамперед у царині удосконалення та підвищення ефективності їх діяльності[179].

В Україні з метою забезпечення здійснення міжнародного співробітництва з питань митної справи у складі Державної митної служби створено Управління міжнародної співпраці. Основними напрямами та завданнями Управління є: розробка пропозицій до проєктів міжнародних договорів з питань митної справи, організація їх укладання та здійснення аналізу виконання зобов'язань, взятих за міжнародними договорами України, а також припинення та/або зупинення їх дії; організація взаємодії та обміну інформацією з митними адміністраціями інших держав згідно із законодавством України та міжнародними договорами»; організація, налагодження, здійснення міжнародного співробітництва та заходів щодо виконання зобов'язань у сфері європейської та євроатлантичної інтеграції з питань, що належать до компетенції Держмитслужби; забезпечення співпраці з проєктами міжнародної технічної допомоги; співпраця з іноземними донорськими, міжнародними фінансовими організаціями та Секретаріатом Кабінету Міністрів України щодо залучення і використання міжнародної технічної та фінансової допомоги; здійснення комунікації з іншими неурядовими міжнародними організаціями; організація протокольного забезпечення міжнародних заходів щодо прийому іноземних делегацій у Держмитслужбі, зустрічах з іноземними та міжнародними організаціями та їх представниками, заходів щодо закордонних відряджень співробітників[180].

Управління міжнародної співпраці у межах своїх компетенцій співпрацює з Європейським бюром з питань боротьби з шахрайством (OLAF), Світовою організацією торгівлі (СОТ), Чорноморським економічним співробітництвом (ЧЕС), Всесвітньою митною організацією (ВМО), Організацією за демократію та економічний розвиток – ГУАМ, Місією Європейської Комісії з надання допомоги у питаннях кордону Україні і Республіці Молдова (EUBAM).

Отже, умови глобалізації вимагають інтеграції митної служби України до європейських стандартів та посилення міжнародної співпраці. Визначено, що основними напрямами покращення економічної діяльності митних органів України в контексті інтеграції з країнами ЄС є: приєднання України до міжнародних митних конвенцій, подальша діджиталізація процесів у митній

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[179] Приймаченко Д.В. Митна політика держави та її реалізація митними органами: монографія. Дніпропетровськ: Академія митної служби України, 2006. 332 с.

[19] Міжнародна співпраця. Державна митна служба України. URL: https://customs.gov.ua/mizhnarodna-spivprazia

сфері, вдосконалення митного контролю та боротьба з правопорушеннями, гармонізація митного законодавства з європейськими нормативно-правовими актами, розвиток інфраструктури та технологічного оснащення митних пунктів, інтеграція митних органів України в міжнародні митні організації.

Ці кроки сприятимуть не лише підвищенню ефективності роботи митних органів, але й зміцненню економіки країни, що вкрай важливо в умовах інтеграції до Європейського Союзу та в умовах післявоєнного відновлення України.

2.9. Methodological principles of strategic management of financial risks of the bank

The successful functioning of any economic system can be carried out in the presence of certain external and internal factors and conditions, which together provide favorable opportunities for achieving set goals, that is, if an environment adequate to these goals is created[181]. Analysis of the state and development of business shows that today the place in the market is determined not only by the pace of production expansion, but also by the level of organization of business processes[182].

Business processes are a set of interrelated and interacting measures or tasks aimed at creating a specific product or service that is valuable to consumers[183]. A business process is a unique means to "analyze the operating efficiency of an enterprise, see bottlenecks and weaknesses in the process and improve the process, optimize it if necessary"[184]. Business process description technology ensures clarity of each business process, helps analyze the results of various errors that may occur at a specific stage of work, and also promptly identifies and corrects errors. The main characteristic of business processes is that they are interconnected by a final set of specific actions, determined by economic relations, resources and motives, to serve common interests and achieve a final specific result that will be used by the system itself.

Historical data indicate that the theory of business processes in the modern

[181] Piotrowicz A. (2001). Process organizational structure of the enterprise. Organization Review, No. 6.
[182] Martyniak Z. (2002). New management methods and concepts. Publishing House of the Krakow University of Economics, Krakow.
[183]Obolensky N., Practical business reengineering Publishing house "Lori", 2005.
[184]Glushchevsky V.V., Modeling of flow processes in the division of resources and products along the lines of business processes of an enterprise, Bulletin of KNUTD 2015 (2 (85)), 139-148.

sense arose about 30 years ago and was not popular among specialists[185]. As a result, business leaders were forced to admit that functional management of companies absorbs more and more material and labor costs, but does not produce significant results.

Analysis of bibliographic sources shows that business processes are characterized by continuity of work (functions or operations), their logical relationship, and the presence of both external and internal requirements. In the context of the study, a business process is understood as a logical sequence of production and management actions aimed at generating income and increasing utility for the consumer, taking into account the capabilities of the organization.

The most important characteristic of a business process as an economic category is the "flow" of time segments that make up a specific business process from input to output[186]. The second characteristic can be described as a close relationship between these flows, that is, there must be consistency in the set of actions performed. Most deviations are observed in determining the starting parameters of a business process, that is, its final goals. There are several approaches to defining this category[187]. Therefore, some authors believe that the purpose of business process management is to satisfy customer requirements (Table 1).

Table 1. Basic definitions of the concept "business process"

Definition
The entire set of elements of any flow, the output of which is the consumer receiving products in accordance with his requirements
A flow of work that moves from one person to another, and for large processes, probably from one department to another
Many internal steps (types) of activity that begin with one or more inputs and end with the creation of products needed by the client and satisfying him in terms of cost, durability, service and quality
A sequence of actions performed to achieve a specific goal
Supplier of certain end products to internal and external consumer clients

Source: compiled by the author based on research of scientific literature

[185] Krasniak J., Roszyk-Kowalska G. (2000). Methodological aspects of implementing a process approach to enterprise management, in: Modern enterprise management, 5th Scientific Conference, Zielona Góra.
[186] Adamczyk M. (2006). Process-oriented improvement of the company's organizational structure. Unpublished doctoral dissertation, Wrocław University of Science and Technology.
[187] Jeston J., Nelis J., (2008), Management by Process. A Roadmap to Sustainable Business Process Management, Elsevier.

As a result of careful and comprehensive analysis, it can often be determined that the potential for improving business processes lies in their simplification. Thus, the speed and quality of a certain business process can be increased by sequentially performing previously performed actions or by summarizing and systematizing the most important information (collected at critical points in the business process).

It has been established that simplification can be applied both to the entire business process and to its individual fragments. Other approaches to improving business processes that go beyond simplification require deeper and more radical interventions in the structure of the entire work and the organization of the business process.

It has been proven that the functioning of any business unit consists of the coordinated work of all business processes. The importance of any business process is determined during the operation of the enterprise[188]. Therefore, we proposed a position to determine the content of the company's business process management mechanism, the main components of this mechanism and their impact on the object of management. The theoretical studies conducted show that modern companies need a radical reorganization of the management structure and the formation of a mechanism for managing business processes.

In modern economic conditions, enterprises must constantly improve their management systems. One of the directions for creating an effective management system is the use of a process approach to the organization and management of the financial and economic activities of an enterprise[189].

The process approach to controlling the company's activities is understood as the coordination of the company's activities with business processes. Therefore, the success of the company as a whole depends on the efficiency of the company's business processes.

The advantage of the process approach is the possibility of continuous monitoring through communication between individual processes. This approach emphasizes the importance of:

a) understanding and fulfilling the requirements;

b) the need to understand processes in accordance with their ability to create value;

c) achieving the results of the process and its effectiveness;

d) continuous improvement of processes based on objective measurements.

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[188] Adamczyk M. (2006). Process-oriented improvement of the company's organizational structure. Unpublished doctoral dissertation, Wrocław University of Science and Technology

[189] Pavlyuk L.V., Oksenyuk K.I., Theoretical foundations for researching business processes in enterprises, Economic Forum 2017 (4), 148-151.

The term “business process” has become very popular recently, but everyone has a different understanding of what exactly this term means[190]. A business process is a logical, sequential and interconnected set of actions that, when using available resources, create added value and allow achieving a certain positive result. International Standard 180 9000:2000 adopted the term "process", but the terms can now be considered synonymous.

A business process is a series of actions performed in a business in order to achieve a certain result (profit). A business process is a series of different activities that transform a series of inputs into a series of outputs (products or services) for another customer or process using people and devices. We are all involved in processes and at different times we play the role of a client or supplier.

Global experience shows that the best companies usually have well-designed and clearly defined (described) business processes and methods for implementing processes efficiently and reliably. All this must be supported by flexibility and strong motivation of staff, the use of modern information technologies and attention to customer needs.

Many famous economists participated in the transition to process-oriented business management. The first elements of the process approach and a more detailed and correctly expressed process approach were proposed by A. Fayol[191].

Business processes are the result of many relationships between departments that assign and delegate tasks to each other in a specific order. Gradually, the final result - a product or service - grows out of demand.

The competitiveness and profitability of a business directly depends on the efficiency of business processes. To understand the need to regulate business processes, you need to understand how a business works. Before going through the process of creating business processes, it is necessary to take into account that each activity of a business corresponds to its current business processes, which have a specific format called “processes as they are”[192].

Traditionally, the structure of each enterprise is a pyramid consisting of several functional levels. At the top of the pyramid are the President, CEO and Chief Executive Officer. The next level is the vice presidents of the company. Typically these are vice presidents of finance, marketing, human resources, production, and in some companies, quality control or customer service. Sometimes this level includes the

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[190] Adamczyk M., Trzcieliński S. (2003b). Organizational structure of the enterprise and process orientation. Scientific Journals of the Poznań University of Technology, Organization and Management series, No. 37.

[191]Fayol A., General and industrial management, 1984.

[192]Dubina V.V., Rationalization of business process management of enterprises: approaches and methods, Economic space 2016 (113), 124-135.

chief information officer. Each of them works in the area of their functional responsibilities and often has only a vague idea of what happens outside of this area.

Since the properties of products that have customer value are the result of horizontal processes, they are the focus of our interest. The business process management process can be divided into four stages:

- The first step is to create a business process diagram, from which you need to see how a given process is currently performed.
- The second step is to identify existing and potential problems and inconsistencies in the business process itself.
- The third step is to identify the causes of emerging problems.
- The fourth step is to develop recommendations for improving business processes, which will be recorded on the created diagram to show how this business process should work.

A business process diagram is a graphical representation of a process from start to finish, including all the steps, individual activities, and relationships in the process. A detailed diagram allows you to critically analyze how this process occurs in the company and shows which stage should be given special attention in order to achieve the set goals or project goals.

So, for example, if the goal of the project is to significantly reduce the cycle time of the entire process, then the main focus should also be on the activities that require the most effort. If the goal is to reduce costs, you should carefully consider which process steps consume more resources[193]. If the goal is to achieve a flawless level, then you should focus on the phases in which the most errors occur and the performance indicators are the lowest.

Once the right process has been selected, the next step in the process mapping phase is to identify the roles and people involved in the process[194]. They can be identified by drawing a relationship diagram.

The connection diagram is a typical block diagram with input and output. Between the input and output there are blocks, each of which represents a specific functional area dedicated to a business process. At the stage of creating a relationship diagram, it is not necessary to use all the activities that make up a certain business process, but it is very important to indicate which departments and people are involved.

The activity of any business is a chain of business processes from marketing

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[193] Grajewski P. (2003). The concept of process organization structure. TNOIK Organizer's House, Toruń.

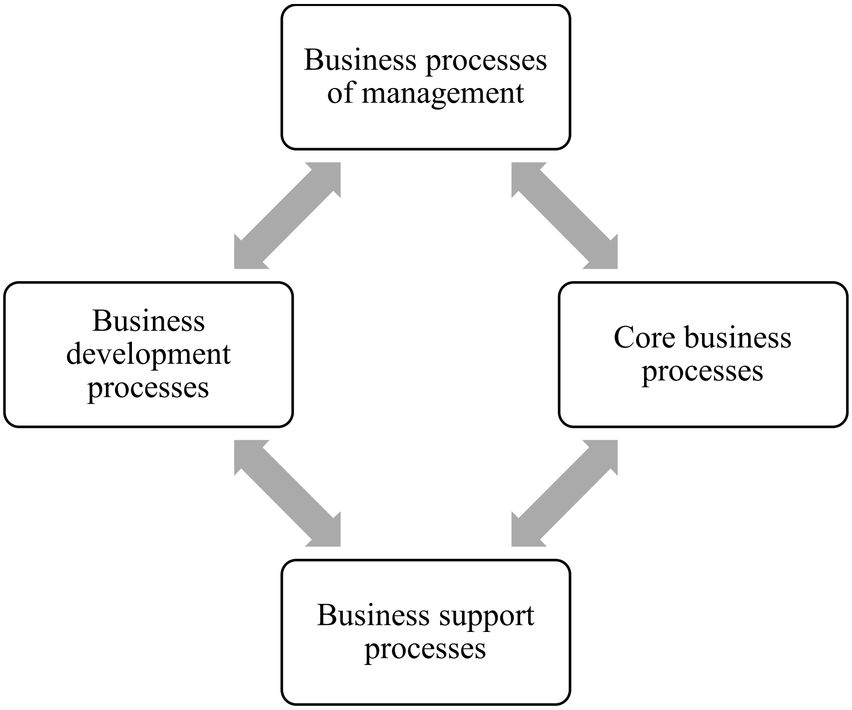
[194] Kafel T.,(2007), Wykorzystanie metodyki zarządzania procesowego w organizacjach gospodarczych i administracji, Zeszyty Naukowe AE w Krakowie nr 736 z 2007, Kraków.

and planning to sales and customer service. Each business process must be: described in detail, optimal and performed according to the description described above. The company's operating results, including financial ones, depend on this.

Companies have a significant effect from formalizing and optimizing business processes, which is as follows[195]:

- entrepreneurs clearly understand how their business works;
- key business processes have standard characteristics, that is, they are unified;
- the quality of work and manageability of the enterprise increases;
- the ability to consciously improve the company's activities, including interaction between departments;
- the enterprise's dependence on the human factor is reduced, the requirements for the qualifications of workers are reduced, that is, it becomes possible to hire cheaper personnel;
- increasing customer satisfaction, reducing costs and increasing profits.

Figure 1. Classification of business processes of a manufacturing enterprise



Source: compiled by the author based on [196]

[195] Olszewska K. (2003). Process orientation as a concept of managing organizations in the 21st century. Organization Review, No. 12
[196] Demidenko V.V., Business process management as a warehouse process approach to enterprise management, Effective Economics 2015 (11).

When studying business processes at the stage of describing the activity "as is", it is necessary to carry out significant work. To increase the efficiency of processing an abundance of information, work must be properly structured. To do this, the business processes existing in the company are divided into four groups, each of which has its own characteristics and differences (Fig. 1). Basic business processes – generate income from the enterprise's activities; business support processes – production support: service enterprises and infrastructure provision activities; business processes of management – managers and top management of the enterprise: their work and main functions. Business processes of enterprise development - search for new areas of activity, diversification of production, search for new clients, suppliers, markets, etc.

This approach to classifying business processes is one of the most common in practice.

To successfully implement and manage business processes, the manager must have accurate and complete information about their implementation, stages of the business process, information about customers, the level of satisfaction with the original products, etc.[197]

At the same time, each business process must simultaneously have suppliers and consumers with whom it interacts. The end or "output" of one business process can be the beginning or "input" of another. Business processes in a company are the result of many relationships between functional areas, workshops and production areas, workplaces that transfer main tasks to each other in accordance with the long-term planning of the company[198]. Thus, input resources are converted into final results (Fig. 2).

The business model of any company consists of a number of separate business processes, the success and profitability of the company as a whole depends on their effectiveness[199]. In Ukrainian companies built on a functional principle, employees are responsible for the activities of departments, but none of them is responsible for ensuring that these processes as a whole are carried out efficiently and quickly.

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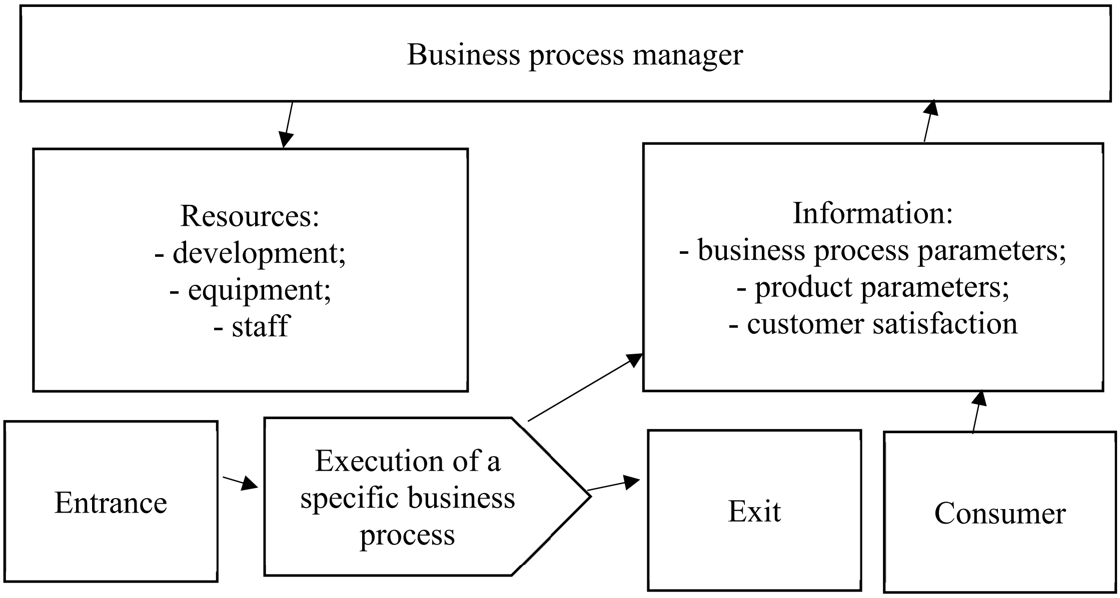
[197] Gorlachuk V.B., Yanenkova I.G., Business Economics View of ChDU im. Petra Mogili, Mykolayiv 2010.

[198] Drejewicz, S. (2012). Understanding BPMN. Business process modeling. Gliwice: Helion..

[199] Aref'eva O.V., Poberezhna Z.M., Organizational and economic security of anti-crisis management of business processes during the implementation of reengineering of business activities, Economic Newsletter of the Dnipro River ITekhniki 2020 (4), 155-162.

Figure 2. Scheme of business process implementation in an enterprise



Source: compiled by the author based on[200]

Thus, the most successful companies today are those with well-thought-out and clearly defined (described) business processes, and the methods for their implementation are effective and reliable. All this must be supported by flexibility and strong motivation of staff, the introduction of modern information technologies and an emphasis on customer needs[201].

Building an effective management system is a serious challenge for any enterprise. Reorientation to business processes is accompanied by numerous problems, some of which are routine in nature and can be easily solved by specialists using proven mechanisms and methods for developing and implementing management decisions[202]. At the same time, a large number of atypical problems arise that require the use of new techniques, methods and means of decision support. In addition, enterprise managers may not have enough experience and capabilities to

[200]Ershova O. O., Foreign evidence of the effective management of business processes of enterprises, Bulletin of the Kiev National University of Technology and Design 2016 (6), 66-79.
[201]Wang D., Light trends in managing business processes of enterprises, Business Information 2020 (10), 407-412.
[202] Kasprzak, T. (2005). Reference models in business process management. Warsaw: Difin.

solve problems in a timely manner. The situation becomes more complicated if they lack practical experience in process-oriented management and a full understanding of the assigned tasks[203].

Therefore, the study of theoretical and practical provisions for making decisions on managing business processes of an enterprise to optimize, improve or reengineering them remains an urgent task both for the head of the enterprise and managers at all levels of management, as well as for scientists[204].

A study of recent publications on process management has shown that scientists and practitioners pay considerable attention to the issues of business process management. The corresponding term "Business Process Management" (BPM), borrowed from foreign literature, is actively used by domestic practitioners and scientists.

If business process management is considered as a continuous activity to implement the main management cycle, i.e. planning, analysis, implementation, control, optimization and improvement, then its essence lies in continuous (or periodic) monitoring of the execution of business processes and making management decisions in the event of deviations in process parameters[205]. As a result of the analysis of literary sources, the main decisions made at each stage of the business process management cycle were identified (Table 2). To implement business process management functions during the management cycle, a subsystem for managing the achievement of goals must be created. Then the content of management decisions will develop an option for achieving goals, and making decisions on managing business processes will consist of choosing the best option.

When managing business processes, a number of issues may arise related to the implementation of the decision support process. To identify the needs for decision support and determine its nature, the range of functional responsibilities of decision makers at each level of management and the corresponding knowledge should be determined. For this purpose, scientists propose to consider all the problems of tasks and decision-making actions from two perspectives - in the context of the hierarchical management structure and in terms of managerial aspects.

[203] Fedonin O.S., Shvidanenko G.O., Lavrenenko V.V., New trends in the development of enterprise management: monograph of KNEU, Kiev 2011.
[204] Bitkowska A., Business process management in the enterprise, Vizja Press & IT, Warsaw 2009.
[205] Fedonin O.S., Shvidanenko G.O., Lavrenenko V.V., New trends in the development of enterprise management: monograph of KNEU, Kiev 2011.

Table 2. Management decisions in business process management

Business process management cycle	Management decisions
Planning	Planning resource allocation to achieve maximum efficiency of set process goals Planning targets Decisions regarding allocation of liabilities Organizational structure decisions
Execution	Implementation of decisions made Assigning tasks to performers Execution time control Operational decisions regarding the execution of current operations
Control	Checking process execution based on planned indicators Evaluating Alternatives Deviation Analysis Operational control Analysis of the degree of goal achievement
Adjustment	Adjustments regarding resource allocation, changes in plans, timing and process results in accordance with corrective actions
Business Process Modeling	Selecting a model type Selecting Modeling Tools Choosing how to distribute models for sharing Checking the conformity of the constructed model Identifying bottlenecks Project cost estimate

Source: compiled by the author based on[206]

In general, various methods and tools for analysis, assessment, modeling and forecasting of possible scenarios for the development of events and the likelihood of their consequences are used to support decision-making. An analysis of the literature on decision theory showed the presence of a large number of studies on these issues. Let's consider the use of certain decision-making methods that are fundamental for managing business processes, specifically: modeling, multi-criteria decision-making methods, methods of group work.

[206]Ponomarenko V.S., Minukhin S.V., Znahur S.V., Theory and practice of business process modeling: monograph View. KHNEU, Kharkiv 2013.

2.10. Theoretical aspects of managing the sustainable development of territorial communities in the conditions of a secure environment.

The organization of security system management at the local level has been a new challenge for Ukrainian communities in recent years. Features of the socio-political context of the country influenced the organization of security in communities. Armed conflict and the process of decentralization are two key factors affecting communities in the implementation of security programs today.

The concept of "safe environment" is widely used both in practical activities and in scientific research. There is practical experience in creating safe environments in communities, relevant methodical advice, concepts, etc. have been issued. For example, the Institute of Peace and Understanding developed a methodology for creating a safe environment at the community level [1], as well as a proposed methodology for building security, which will help citizens independently go through the full cycle of developing and implementing an effective security program [2]. A project of the public safety and civil defense strategy of Ukraine was also developed [3]. Scientific research usually uses the analysis of a safe environment, methods of its assessment and other aspects are considered [4, p. 33; 5, p. 6].

Management of the sustainable development of territorial communities in the conditions of a secure environment is extremely relevant in the modern world. The growth of natural disasters, terrorist threats, man-made accidents and other dangers can seriously threaten the sustainable development of territorial communities. One of the key tasks of management is the development of strategies and policies aimed at increasing the level of community security and avoiding threats to their development. Competent risk management, the use of modern technologies and control mechanisms can help territorial communities achieve stable and sustainable development in the conditions of an irreversibly changing environment.

There is no understanding of the concept of "security environment" in regulatory documents, and only a few can be traced in scientific ones. In particular, such scientists as: Bohdanovich V. offer their own interpretations of the mentioned concept. Yu., Ilyashov O. A., Komarov V. S., Oleksiiuk V. IN. in the article "Approach to assessing the security environment in modern conditions of armed conflict" [4, p. 33]. Bocharnikov V. P., Sveshnikov S. IN. in the monograph "Safe Environment 2030" [5, p. 6,]; Reznikova O. AT. in the monograph "National stability in the conditions of a changing security environment" [6]. G. Yefimova and M. Pavlova wrote about the importance of the role of the territorial community in ensuring the economic independence and freedom of Ukraine, precisely thanks to their active participation in the formation and implementation of economic policy, it contributes to the creation of a stable competitive economic environment [7]. In his turn, V. Franchuk, researching the theoretical and methodological aspects of the security environment, revealed and elaborated the author's approach to understanding and interpretation of the conceptual concept "security environment" and similar concepts [8]. The need for this study arose due to the lack of a clear conceptual understanding of the concept of "safe environment", its structure and derived concepts. This leads to the fact that, at the practical level, the terms of security are used in different contexts in territorial communities, which can lead to different perceptions of them. This, in turn, can negatively affect the law-making process, the organization and planning of safe events.

Therefore, the purpose of the article is to reveal the theoretical foundations of managing the sustainable development of territorial communities in the conditions of a safe environment.

Modern changes in the administration of the state, which arose as a result of the process of decentralization, caused the appearance of the term "united territorial community". United Territorial Community (UTH, United Community) is an administrative-territorial unit created in accordance with the Law of Ukraine "On Voluntary Association of Territorial Communities". According to the current legislation, a territorial community may include residents united by permanent residence within the boundaries of a village, settlement, city, which are independent administrative-territorial units, or a voluntary association of residents of several villages with a single administrative center. Systematization of theoretical concepts allows to identify the territorial community according to the following criteria: territorial unity, common interests, social interaction in solving problems, self-identification of each member of the community. Researchers indicate the importance of the local economy, socio-demographic indicators of the village, local organizations, natural resources and institutions in the formation of communities [9, p. 32].

Our opinion is that a territorial community is a kind of socio-economic system, the components of which are interconnected, cover a large territory and spend significant resources on their own development. That is, the territorial community is a self-regulating social basis, the sustainable development of which is key to the formation of civil society.

Through the efforts of scientists over many generations, the concept of sustainable development was developed and presented, which received international recognition. This concept is a belief system about the interaction of economic systems and communities with nature without controversy. Today it is considered as the most valuable model for future world development, which indicates a qualitatively new stage in social progress, recognized as post-industrial. The theory and practice of sustainable development at all levels, including global, national, regional and local, is a reflection of the objective need to change economic and social development, taking into account the main goal of preserving natural and human resources for current and future generations [10].

Stimulation of the sustainable development of territorial communities, which involves the ecologically safe use of natural resources for the benefit of the social well-being of current and future generations, aimed at increasing the economic viability of economic sectors, has gained significant demand in recent years. During the past decades, the United Nations has developed and announced a number of concepts of global development aimed at overcoming the systemic crisis in socio-eco-economic aspects at the global level [11].

The theory of sustainable development has deep roots and defines the priority directions of future world development in the most important international documents and declarations. This theory is based on the balance between the global ecological-social-economic system, aimed at improving the quality of life of people and preserving the sustainability of supporting ecosystems [12]. Sustainable development is a managed process based on a systematic approach and the use of modern information technologies. These tools allow you to quickly create various development strategies, accurately predict their results and choose the most optimal path. However, ensuring a truly sustainable growth of positive social trends, sustainable economic growth and development is impossible without reaching a social consensus around the main components of the organizational and economic mechanism, which will guarantee the legitimacy and effectiveness of state policy. Such a consensus can be created only through the practical growth of potential, in particular economic, at the level of territorial communities, their transformation into effective subjects of the implementation of the socio-economic development policy and the effective use of the potential of the territories that make up the national potential.

Special attention is paid to the scientific aspects of the formation of the concept of sustainable development of territorial communities. The term "sustainable development of territorial communities" is defined through separate components: "sustainable" (in the sense of "unchanged", "continuous", "long") and "development" (the process of transitioning something from one state to another, more perfect one). It follows that the sustainable development of territorial communities means a continuous and long-term process of qualitative and quantitative changes in meeting the needs of territorial communities. The transition of territorial communities to the principles of sustainable development is a complex process that requires the provision of a multi-level coordinated system of management, economic, social and environmental measures, based on complex, balanced and harmonious implementation [9]. Sustainable development of the territorial community is possible only with the effective use of strategic planning tools in the management of the territory and ensuring proper interaction between three economic entities - residents of the community, local self-government bodies and entrepreneurship.

Currently, Ukraine faces a variety of threats at various levels, both external and internal. There is a serious concern about threats of a hybrid nature, which turn out to be quite complex. Their coordinated and simultaneous application in various spheres poses a great danger to the state and society. Countering these threats requires significant financial, technical and human resources, the amount of which is often limited in most countries, especially in Ukraine, which suffered serious material and human losses as a result of the aggression of the Russian Federation. In modern conditions, the potential for the stability of the state and society as complex systems requires development and adaptive management. In the conditions of martial law, the word "security" is associated, for the most part, with survival in general. A large number of local self-government organizations work in a changed mode of operation, and the uncertainty and constant change in some territories of operating conditions bring new dangers and risks. Therefore, despite the tragic challenges of today, it is important to shift the emphasis in security management to the protection and adaptation of territorial communities to functioning in these extreme conditions.

In this regard, in practice and science, they began to use various concepts to denote the living environment from the point of view of safety, such as "safe environment", "safe environment", "dangerous environment", without understanding their essence. The scientific literature and normative legal documents of Ukraine do not contain clear definitions for the terms "safe environment" and "dangerous environment", and they are used at the level of colloquial speech. It is worth noting that such a practice also exists at the institutional level. The most common term is "security environment", with its essence, which is revealed differently by different authors (Table 1.1)

The concept of "safe environment" indicates the presence of the necessary capabilities and tools that allow protecting society and the state from threats. It also means the result of the activities of various institutions and individuals aimed at countering threats. The main components of a safe environment are the conditions and relationships that contain mechanisms and tools for the physical and self-interested protection of organizations and individuals from threats to ensure their livelihoods.

In wartime, it is critical to ensure management decisions aimed at minimizing the negative impact of danger or turning it into opportunities. Security management consists in making timely decisions regarding the implementation of appropriate actions. During martial law, this is made more difficult by the high uncertainty and high risk, which aims to minimize these factors.

Table 1.1. Definition of "security environment"

The author of the term	The essence of the concept
Bocharnikov V. P., Sveshnikov S. IN. [5, p. 33]	it is a set of external and internal relations between forces operating in all spheres of national security, as well as conditions, factors and circumstances that in a certain way affect or may affect these relations"
Bohdanovich V. Yu., Ilyashov O. A., Komarov V. S., Oleksiiuk V. IN. [4, p. 6]	are areas where conditions or hazardous phenomena arise, exist, accumulate, or manifest that may affect national interests related to geopolitics, politics, diplomacy, warfare, and information. The state interacts with international security structures, strategic partners, allies, military-political and other organizations to ensure sustainable development within a certain time interval
Reznikova O. AT. [6]	it is a set of factors that are relevant for a certain territory or the territory of Ukraine in general, which affect the level of security of the civilian population, state authorities, local self-government, economic entities in this territory"

Usually, the lack of certainty is a necessary condition for optimal functioning and can lead to risk in the decision-making process. Therefore, a more accurate definition is that risk is understood as a possible negative event in conditions of uncertainty [13].

In the complex conditions of martial law, the classification of uncertainties is complicated by the variety of causes and factors that lead to their occurrence, constant changes in the external environment, as well as the complexity and variety of operating conditions in general. In such conditions, security management, since its main goal is to reduce the effects of negative factors, takes on an adaptive nature.

Therefore, there is a need to reveal and justify the content of the activity of the subject of the safety environment in relation to its development, that is, qualitative and/or quantitative purposeful transformations in the living environment that ensure its transition to a qualitatively new, safer state.

The subject of the security environment is a public, state or private body, institution, organization or association that, with the help of its resources, creates conditions for the safety of people, organizations, society and the state, developing appropriate measures and protection mechanisms against any possible threats, both internal and external. The specified subjects must use their ability, which should be understood as a set of human, material, technical and financial resources that determine their ability to conduct their own operational and other activities, as well as effectively organize countermeasures against threats, emergency and crisis situations, ensure recovery and functioning the main spheres of life of society, state, community and others. In addition, they must demonstrate readiness to quickly and adequately respond to threats, security situations, danger and maintain a culture of safety in society. Safety culture is a component of the organizational culture of a person, organization, society, state, which is formed and manifests itself in the form of safe thinking as a value and safe behavior as a norm in economic relations. [14].

Thus, the community is also obliged to create conditions and opportunities for security activities. That is, such an activity that contains mechanisms or at least one of them (prevention, detection, elimination of threats, and in the case of their implementation - recovery mechanisms (of processes, activities, system integrity, compensation for damages, etc.)) and aimed at preserving the integrity of the system and protecting interests: private, corporate, public, and national.

The effectiveness of security activities largely depends on the effectiveness of the administrative activities of the territorial community. It is this activity that is decisive, as it performs an integrating and coordinating role not only in ensuring its vital activity, but also in the development of a safe environment. The performance of these roles largely depends on the level of the management hierarchy. The national level defines general and mandatory security requirements and mechanisms for all, while the regional level forms local requirements and mechanisms. However, the main goal of managing a safe environment is a purposeful impact on the living environment to ensure qualitative or quantitative changes that will contribute to its transition to a qualitatively new, safer state.

For effective management, it is important that the subject of the security environment has the necessary authority, that is, the right to dispose of people and resources to solve security tasks. The extent of delegation of authority depends on the hierarchy of management and on which subsystem it belongs to: managerial, productive or supporting. In general, powers should ensure the right to make decisions, organize activities, direct implementation of decisions and other related work, as well as the right to exercise control over activities and their results. The presence of such powers in the management system of the subject of the security environment and their effective use allows you to start activities to counter threats and successfully complete them.

Analysis of the theory and practice of the development of a safe environment in Ukraine, as well as the results of an expert survey, shows that in modern conditions, the development of a safe environment should be carried out by:

- increasing the capabilities and readiness of subjects of the security environment for safe activities;

• countermeasures (prevention, detection, elimination of threats and restoration of processes, activities, system integrity) to threats to protect interests, preserve the integrity of processes, systems (organization, society, state);

• unification and coordination of efforts of the state, citizens and the public; establishment of a safe culture in society, which is manifested in the form of safe thinking as a value and safe behavior as a norm in relationships.

Conclusions. Local state administrations and local self-government bodies play an important key role in the coordination of activities in the field of civil protection, readiness to respond to emergency situations, development of relevant capacities of communities and territories, as well as in ensuring the effective organization and functioning of state-wide systems and territorial defense on the ground. They act within the limits of their powers defined by the laws of Ukraine.

At the levels of territorial communities and regions, as well as in the state in general, there is no single comprehensive mechanism for coordinating activities to ensure national stability. This mechanism should include situation monitoring, risk assessment, vulnerability identification, preparedness, planning, response and post-crisis recovery. The existing forms of interagency cooperation in Ukraine are aimed mainly at preparedness and response to certain types of threats, such as terrorist or military actions, as well as emergency situations. Vertical connections between the center and regions reflect departmental focus. However, there is no integrated approach to countering various threats at all stages, the possible cascading consequences of the implementation of these threats are not taken into account.

Interaction with the non-state sector, civil society and the population to ensure security and stability, including at the level of regions and territorial communities, takes place in a limited format, and strategic communications are not permanent in nature. The potential of existing interdepartmental structures is not sufficiently used as platforms for vertical and horizontal interdepartmental interaction and communication between business and public organizations with self-governing bodies for the purpose of forming an effective regional policy, ensuring the security and stability of regions and territorial communities. In particular, such a problem exists in the Interagency Coordination Commission for Regional Development, regional development agencies and other similar structures.

It can be noted that, although there is a significant potential for the stability of the state and society, until now, systemic mechanisms for ensuring national stability, necessary for increasing the adaptability of security policy and management of the main spheres of life support against the background of uncertainty and rapid changes in the security environment, have not been created in Ukraine, and also to eliminate the conditions that contribute to the vulnerability of the state and society. Solving the specified systemic problems in the field of national stability of Ukraine requires a comprehensive approach based on a systemic approach and clear conceptual foundations, and not just individual measures in various areas.

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3. The Draft Strategy of Public Safety and Civil Defense of Ukraine, approved by the Decree of the President of Ukraine dated 06/29/2021. https://mvs.gov.ua/uk/ministry/normativna-baza-mvs/proekti-normativnix-aktiv/strategiya-gromadskoyi-bezpeki-ta-civilnogo-zaxistu-ukrayini-zatverdzeno-vid-29062021

4. Bohdanovich V. Yu., Ilyashov O. A., Komarov V. S., Oleksiiuk V. IN. An approach to assessing the security environment in modern conditions of armed conflict. Collection of scientific works of the Center for Military and Strategic Studies of the National Defense University of Ukraine named after Ivan Chernyakhovsky. 2021. No. 2 (72). WITH. 33.

5. Bocharnikov V. P., Sveshnikov S. IN. Security environment 2030: monograph. Kyiv: Master Books, 2019.

6. Reznikova O. AT. National stability in the conditions of a changing security environment: monograph. Kyiv: NISD, 2022. 532 p.

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2.11. The influence of management style and methods in ensuring the effective functioning of the enterprise

An enterprise is a complex system that consists of a large number of elements: personnel, technology, information, finance, and the like. All these elements are important for the successful operation of an enterprise, but the central place among them is occupied by personnel. It is the company's employees who manage and use all other resources, on which the performance of the enterprise depends. In essence, how staff perform their duties determines the efficiency with which other resources are used. If the personnel are unqualified and poorly motivated, then neither additional capital investments nor the latest technologies will help the enterprise, since such personnel can use them irrationally[207].

In the scientific literature one can find many arguments regarding the modern era of high technology and, first of all, the importance of innovation. This is partly true, but quite often they forget that any technology needs to be managed, and this is done by the enterprise personnel. Perhaps one day scientific and technological progress will reach the development of powerful robots with artificial intelligence that will be able to fully replace the functions of personnel, and then the situation will change. But even if this happens, it will not happen soon, and therefore the primary role now and, at least for several decades, at enterprises will be played by personnel.

Therefore, it is important for enterprises to find ways to effectively manage personnel. The human resource management process is associated with such concepts as: recruitment and selection of personnel, training and advanced training of employees, social policy in the company, including ensuring an appropriate level of

[207] Robbins, S. P., & Judge, T. A. (2017). Organizational Behavior. Pearson.

wages and psychological climate in the team, as well as the choice of management methods and leadership style.

Analysis of scientific literature has revealed a considerable number of scientific approaches to defining the concept of "management style". This has given rise to a wide variety of definitions of this term, which are presented by various scientists, philosophers, psychologists and other researchers. Table 1 summarizes the main scientific views on the essence of the concept of "management style".

The analysis allows us to state that in the scientific literature the term "management style" is defined differently. Each of the scientists who have studied this phenomenon tries to give their own interpretation of this concept. At the same time, it cannot be said that any of the existing approaches to the interpretation of the concept of "management style" is incorrect. The diversity of these approaches is due to the fact that each scientist considers this definition from his own point of view and focuses on its different aspects. In general, management style describes the behavior of the top management of an enterprise in relation to their subordinates.

Scientists have proven that management style is a powerful tool for influencing staff productivity. In modern times in Ukraine, when there is a noticeable outflow of the best personnel abroad and losses due to war, it is the management style that should be given priority attention. Since it allows not only to effectively influence personnel, but its improvement does not require significant financial investments.

The last factor is especially important in conditions of shortage of financial resources[208].

Table 1. Main scientific approaches to defining the essence of the concept of "leadership style"

Author	Leadership style is
A.N. Babenko[209]	a set of means of influence of a manager on his subordinates, which is determined by the specifics of the tasks assigned to the enterprise, the relationship of the manager with his subordinates, the scope of his official powers, and the personal qualities of all team members
O.U. Hourless[210]	a typical system of techniques for influencing subordinates for a manager (leader)

[208]Britchenko, I. G., Smerichevskyi, S. F., & Kryvovyazyuk, I. V. (2018). Transformation of entrepreneurial leadership in the 21st century: prospects for the future. Advances in Social Science, Education and Humanities Research, (217), 115-121.
[209]Babenko, O. M. (2017). Formation of elements of strategy for the development of leadership in the enterprises of the restaurant state. Scientific Bulletin of the Poltava University of Economics and Trade, (4), 81-86.
[210]Bezchasny, O. U. (2019). The concept of forming a communication management system in the development of industrial enterprises. Economics and Management, (2), 73-82.

I.I. Vinichenko[211]	a set of means of influence of a manager on his subordinates, which is determined by the specifics of the tasks assigned to the enterprise, the relationship of the manager with his subordinates, the scope of his official powers, and the personal qualities of all team members
L.G. Danchenko[212]	manifestation of certain personal qualities of a leader in his relationships with subordinates, ways of solving production and other problems
E.A. Zharik[213]	characteristic behavior of a manager, prevailing in his management activities, with the help of which a manager can influence subordinates and stimulate them to achieve the goals of the organization
L. Kalushka[214]	flexible behavior of a manager in relation to employees, which changes over time depending on the situation and is manifested in the ways of performing managerial work subordinate to the manager of employees
I.G. Britchenko[215]	the way a manager works to achieve company goals. Management style includes how he makes decisions, supervises team members, and plans and delegates tasks
R.Chin[216]	the way a manager works to achieve his goals, especially with subordinate workers. This includes all ways of planning and organizing the work of the workforce: from decision-making to delegation of authority and day-to-day management of each employee.
M.S Rao[217]	a stable set of characteristics of a leader that are used in communication with subordinates

Source: compiled by the author based on a synthesis of scientific literature

[211]Vinichenko, I. I., & Didur, K. M. (2011). The essence and theoretical basis of management style. Agrosvit, 21, 28-32.
[212]Danchenko, L. G., & Gordina, V. V. (2015). Current strategic models of types of care and leadership in an organization. Young People, 11(26), 52-55.
[213]Zharik, E. A., & Gurzhiy, N. M. (2018). Analysis of the leader's pouring of ceramics on the effectiveness of the work of machine-building enterprises. Bulletin of the Azov State Technical University, 35, 288-296.
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[216]Chin, R. (2015). Examining teamwork and leadership in the fields of public administration, leadership, and management. Team Performance Management, 21(3/4), 199-216.
[217]URL: http://scholar.valpo.edu/jvbl/vol9/iss1/13, accessed 02/12/2023.

Based on the systematization of scientific literature, we consider it appropriate to provide our own interpretation of the concept of “management style”. In our opinion, management style should be understood as one of the important management tools, which consists of a set of methods, principles, rules, and values that guide a manager when managing his subordinates.

The personality of the leader is mostly associated with the leadership style, as an individual way of carrying out managerial activities. Management style is formed under the influence of the relationship between the manager and the team in the process of making and implementing management decisions, individual characteristics and preferences of the manager[218]. Consequently, we can conclude that management style is currently one of the most effective tools of influence on the workforce and can both promote and hinder the achievement of set goals.

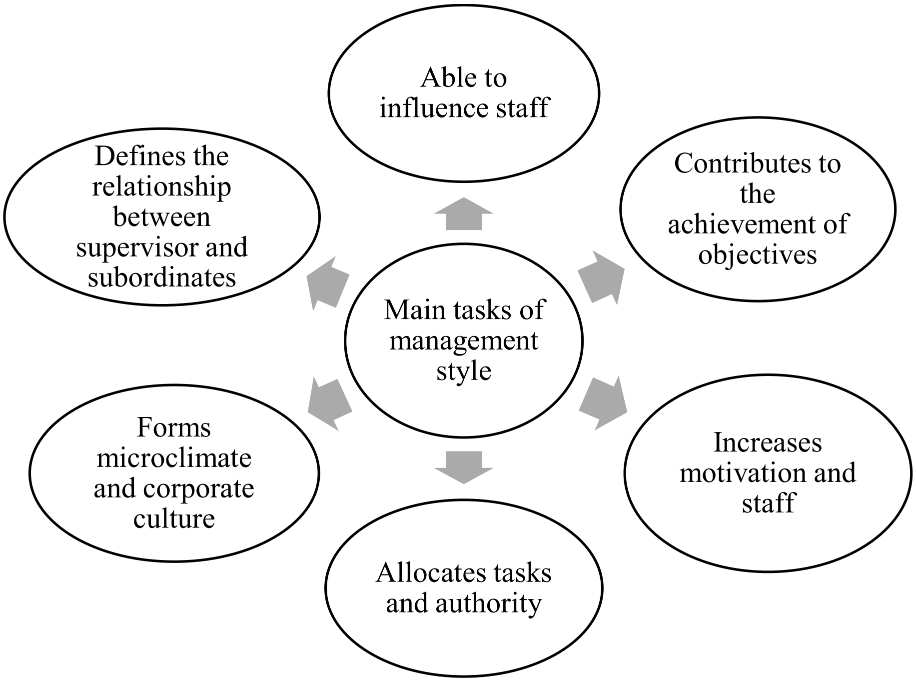
It should be noted that it is impossible to predict management activities with a high degree of probability, since each person to whom management influence is directed is unique in his own way, and his behavior in space and time depends on both subjective and objective factors. Therefore, such a delicate instrument as management style should be used with great care and at a high professional level. Due to the uniqueness of each individual, under the influence of a number of factors, the management style must constantly change and improve, and the manager must acquire new skills, abilities, etc. Figure 1 shows the main objectives of the management style.

In fact, management style affects all areas related to personnel management. Therefore, the role of management style is significant in ensuring the final results of the enterprise. Numerous studies by scientists have shown that management style has a direct impact on employee turnover rates. A properly selected management style in each specific case is the basis for creating the appropriate conditions for highly efficient and motivated work of personnel.

The management style is based on the measures by which the manager influences the staff. The unity of methods and management style is that the latter is a form of implementation of the method. Thus, management style is purely individual, since it is determined by the specific characteristics of a particular person and reflects the characteristics of working with people and decision-making technology[219].

[218]Daft, R. L. (2015). Management. Cengage Learning.
[219]Goleman, D. (2000). Leadership That Gets Results. Harvard Business Review.

Figure 1. Main objectives of management style



Source: compiled by the author based on[220]

A successful manager not only knows the rules and methods of management, but first of all, he develops his own management style that suits him. Many studies show that employees value managers who stay true to their own principles more highly because they want to feel confident that they can trust their manager.

Management plays an important role in strengthening the bonds between employees and making them work together as a unit. Management's responsibility is to ensure that employees are satisfied with their work conditions, accept their job responsibilities, and ultimately achieve the highest level of productivity. Management must understand its employees well and make every effort to meet their expectations of a stress-free work environment. It is worth noting that there is no optimal management style; it all depends on the specifics of the company's activities, the specific situation, and the individual characteristics of the manager and his subordinates[221].

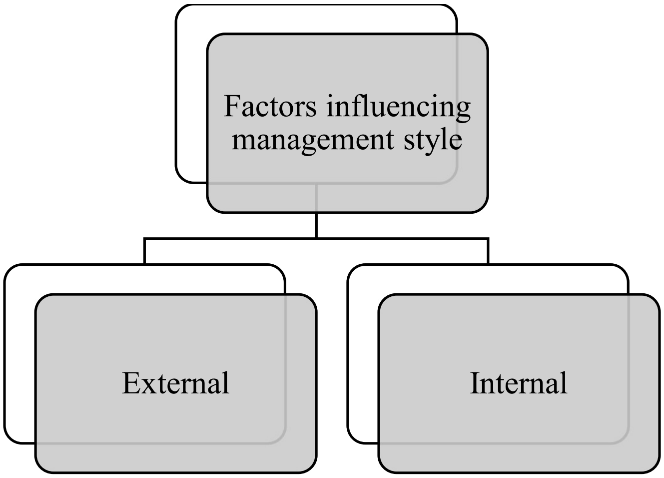
Every manager has his own management style, even if he never thinks about his approach to management. Most managers define their work in terms of the tasks to be performed rather than the methods to be used. Their management styles are

[220]Moroz, I. V. (2009). Management and marketing coverage. Light of Ukraine..
[221]Kotter, J. P. (2013). Leadership Styles. Harvard Business Review..

usually just an extension of their personal styles. Managing people is too important to be left to chance. So, different ways of communicating with subordinates in the workplace are called management style[222].

Systematization of scientific literature made it possible to identify a number of factors that influence management style. All of them are traditionally divided into the following (Fig. 2).

Figure 2. Factors influencing management style



Source: compiled by the author based on [223]

External factors are:
- employment laws;
- political and economic stability in the country;
- actions of competitors;
- market situation;
- purchasing power of consumers;
- demographic situation in the country/region;
- social stability in society;
- the attitude of the population towards work and the like.

Internal:
- the character of the leader and subordinates;
- values and norms professed by the leader;

[222]Chin, R. (2015). Examining teamwork and leadership in the fields of public administration, leadership, and management. Team Performance Management, 21(3/4), 199-216.

[223]Arabadzhi, Y. I., & Dashko, I. M. (2016). Psychological features of the formation of an effective management style of a manager. Mykolayiv National University named after V.O. Sukhomlinsky, (9), 1-6.

- formed corporate culture at the enterprise;
- enterprise size and controllability;
- leadership skills and abilities;
- cultural and personal level of the leader;
- personnel qualifications, etc.

Note that the key factors influencing the management style include the nature of the team (production, research, etc.), the specifics of the tasks (regular, habitual or urgent, unusual), the conditions for performing these tasks (favorable, unfavorable or extreme), methods and means of activity (individual, pair or group). Along with the above, the factor that stands out is the level of development of the team. The individual psychological characteristics of a particular leader bring originality to his managerial activities. Based on the results of the corresponding transformation of external influences, each manager exhibits his own individual management style.

Scientific research has documented certain connections between the style, type of leader, the effectiveness of the organization and its management culture. In general, they boil down to the following provisions[224]:

- style reflects the established methods of activity of a certain type of leader; is closely related to the psychological characteristics of his thinking, decision-making, communication, etc.;
- style is not an innate quality, but is formed in the process of activity and changes, it can be adjusted and developed. Leadership styles can also be taught;
- description and classification of styles to a certain extent reproduce the substantive characteristics (parameters) of management activities (specificity of tasks, relationships with subordinates, etc.);
- leadership style is determined by the cultural values and traditions of the organization;
- environmental factors (socio-economic, political, socio-psychological, etc.) influence the formation of leadership style.

Management style has both an objective and a subjective basis. It depends on moral standards, socio-economic and political factors, the existing system of relations, as well as on the personal traits of the leader.

The ability to manage is an innate property of a person that can only be developed throughout life, while acquiring the necessary knowledge, skills and rethinking personal experience. All definitions of management style come down to a set of techniques and methods for solving management problems, that is, style is a system of constantly applied management methods.

[224] Bass, B. M., & Bass, R. (2008). The Bass Handbook of Leadership: Theory, Research, and Managerial Applications. Simon and Schuster.

The practice of management and leadership styles refers to individual methods of managing people to accomplish tasks and goals. Leading people usually involves setting a good example, providing direction and motivation, and maintaining high standards. It also focuses on developing the skills and abilities of people so that they can make significant contributions to the enterprise.

Management styles describe the different approaches different managers use to support and lead their team in their work. All managers have the same responsibilities, but management styles describe how different types of managers specifically use their management tools to motivate team members. No two managers are exactly alike: experience and access to leadership development opportunities influence how each chooses to manage. Over the years, researchers have created names and categories for common leadership habits and traits they see in the workplace to help us understand different management styles.[225].

Thus, management styles are one of the most complex and most discussed topics in scientific discourse. In general, management style should be understood as a set of methods, techniques, principles, and norms that a manager uses to influence the team. The effectiveness of subordinates and the achievement of their goals depend on the management style. There is no universal management style; all people are different, and accordingly, the manner of communication and the arsenal of management methods can differ radically. Often managers make the mistake of using the same style for everyone, regardless of ability, conditions or motivation.

The question of the types of management styles remains quite controversial. Management styles are diverse, as are people, who are unique individuals and use different leadership principles and methods. It is extremely difficult to find two managers who would absolutely accurately reflect each other in behavior when communicating with subordinates, the same set of management methods, and profess the same principles and values. However, scientists, based on numerous studies, surveys and experiments, were able to identify several of the most typical management styles.

The most significant contribution to the development of the theory of management style was made by the German scientist K. Lewin in the 30-40s of the last century[226]. Based on his research, he managed to introduce into scientific circulation the first classification of management styles, which is still in use today. According to K. Levin’s classification, it is customary to distinguish three types of management styles:

- authoritarian;

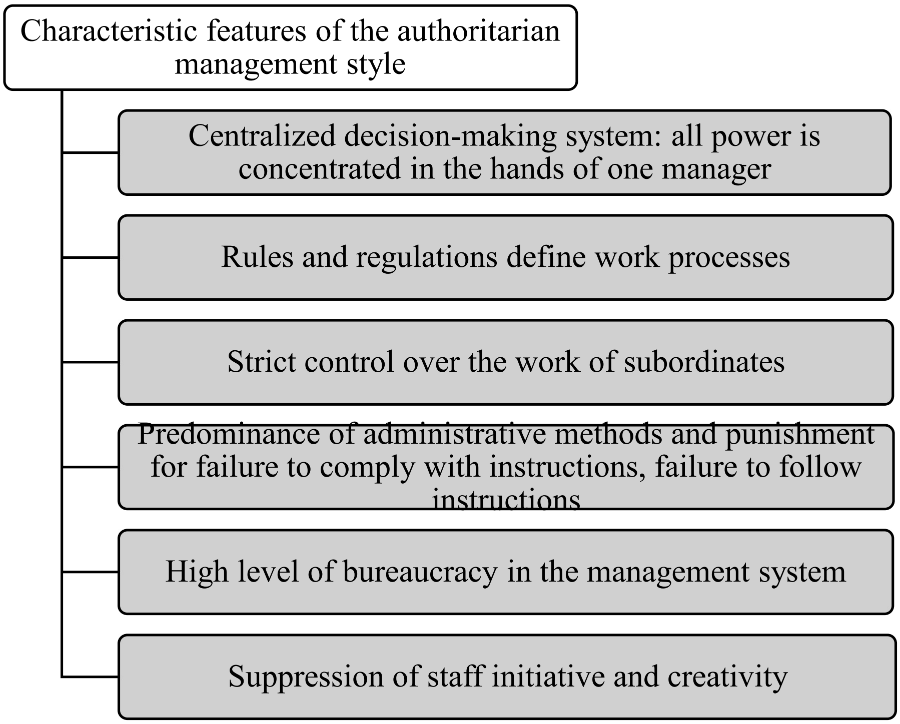
[225]Adler, N. J. (2016). International Dimensions of Organizational Behavior. Cengage Learning.
[226] Mintzberg, H. (2009). Management. HarperBusiness.

- democratic;
- liberal.

An authoritarian management style is a style in which the leader alone makes all decisions and gives orders, without taking into account the thoughts and knowledge of subordinates[227]. It is typically used in organizations where there is a need for quick decisions and clear directions. Authoritarian leaders typically have a high degree of control over their subordinates and use their authority to achieve results. Most often, this management style is characterized by the use of methods of punishment, subject to non-compliance with its decisions.

One of the main advantages of this management style is that it can be very effective during a crisis. When there is a need for quick decision making, an authoritarian leader can often make decisions quickly and efficiently. This management style can also be useful in situations where clear, concise direction is required. Another benefit of an authoritarian management style is that it can help motivate employees by instilling feelings of fear or respect.

Figure 3. Characteristics of an authoritarian management style



Source: compiled by the author based on [228]

[227] Northouse, P. G. (2018). Leadership: Theory and Practice. Sage Publications.

[228] Arabadzhi, Y. I., & Dashko, I. M. (2016). Psychological features of the formation of an effective management style of a manager. Mykolayiv National University named after V.O. Sukhomlinsky, (9), 1-6.

However, the authoritarian management style also has some significant disadvantages. One of the main disadvantages is that this style of management often leads to a high degree of conflict, and also destroys the moral and psychological climate in the work team. When subordinates feel like they have no influence or control over the decisions they make, it can lead to frustration and resentment. Additionally, an authoritarian management style can often stifle creativity and innovation as employees may feel unable to share their ideas or suggestions. The final disadvantage worth noting is that this management style relies on the leader's ability to judge and make decisions. If a manager is unable to make the right decisions, this can have negative or even catastrophic consequences for the enterprise[229].

The opposite style of management to authoritarian is democratic. It is characterized by consultation with subordinates and taking into account their suggestions and input when making decisions. This type of management style is often used in businesses where there is a need for collective decision making and input from all team members. Democratic leaders tend to have a high degree of respect for their subordinates and believe that everyone should have a say in decisions[230].

Democratic managers collaborate with their team members to distribute the decision-making process. They invest in their team's well-being and career development. This management style encourages creativity and engagement among employees. Although they are still the ones who make the final decision, managers who use a democratic style encourage input from all team members[231].

Some advantages of democratic management style include[232]:

- increased creativity and innovation: when employees feel that their ideas are valued and have a say in the decision-making process, they are more likely to be creative and innovative;
- Improved trust and communication: Democratic leaders usually have strong communication skills. They can listen to and understand the views of their subordinates, which improves communication within the organization and increases trust between leaders and employees;
- greater employee motivation: when employees feel that they are part of the decision-making process, they are more likely to be motivated and put more effort into achieving their goals.

However, the democratic management style also has some disadvantages:

[229]Lencioni, P. (2002). The Five Dysfunctions of a Team: A Leadership Fable. Jossey-Bass.
[230]Sinek, S. (2014). Start with why. MT Business.
[231]Covey, S. R. (2013). First to understand, then to be understood. MT Business.
[232]Nowak, L. (2018). Enterprise management. PWN Scientific Publishing House..

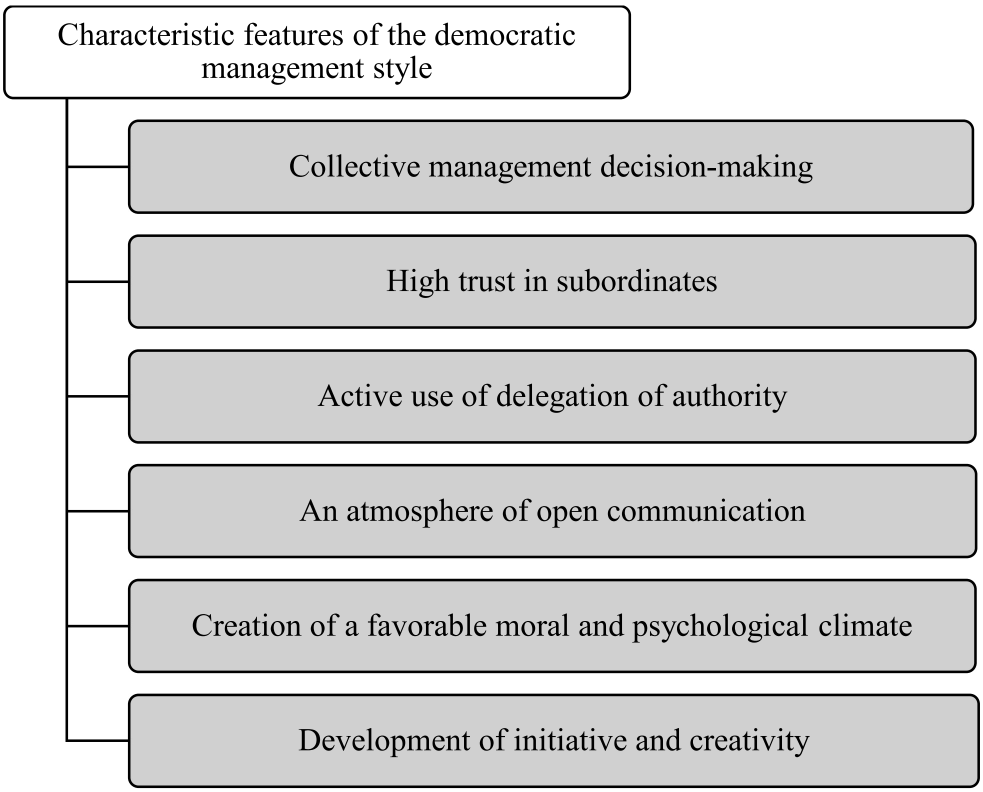
- slow and ineffective decision making: this type of leadership requires the participation of many or all team members, which can be problematic when quick and decisive decision making is required;

- difficult to implement in large organizations: it may be impractical to consult with a large number of employees regarding various decisions;

- Relies heavily on the consultative abilities of leaders: For democratic leadership to be effective, leaders must have strong consultative skills and be able to take points of view into account.

Based on the study of the features of the democratic management style, Figure 4 shows its characteristic features.

Figure 4. Characteristics of a democratic management style



Source: compiled by the author based on[233]

The third management style is liberal. This style is characterized by the lack of active participation of the leader in managing the team, thus the leader’s position is

[233]Arabadzhi, Y. I., & Dashko, I. M. (2016). Psychological features of the formation of an effective management style of a manager. Mykolayiv National University named after V.O. Sukhomlinsky, (9), 1-6.

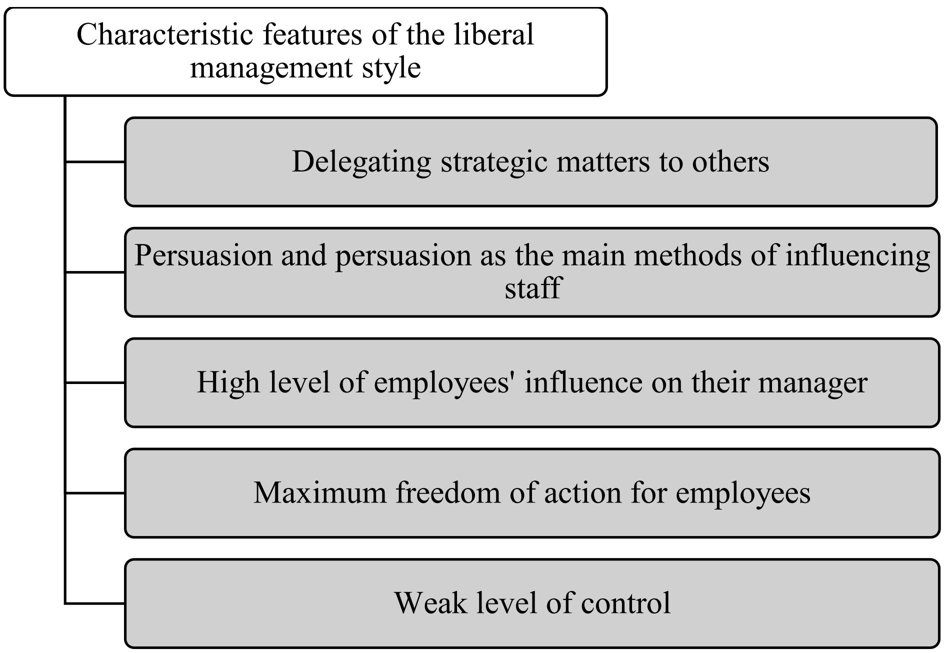
on the side of the group. Workers are left to their own devices and have complete freedom to make independent decisions on basic production tasks. There is almost no praise or condemnation from the manager.

The main positive characteristics of a liberal leader are: politeness, good nature towards subordinates, willingness to listen to suggestions and even criticism from subordinates, etc. The negative aspects of a liberal manager are: lack of initiative, waiting for instructions from above, uncertainty, ease of influence from others, undemandingness towards subordinates, lack of control, if an order is not carried out by a subordinate, he can carry it out himself, etc.[234]

Based on the study of the features of the liberal management style, Figure 5 shows its characteristic features.

A leader with a liberal management style is quite easy to manipulate, and quite often employees can use such a leader to perform their functions dishonestly. The authority of a liberal leader is quite low in the eyes of his subordinates. Therefore, the liberal management style in its pure form is ineffective and does not allow enterprises to achieve their goals.

Figure 5. Characteristic features of a liberal management style



Source: compiled by the author based on[235]

[234] Golebiewski, J. (2018). Managing sales. Wolters Kluwer.
[235] Rudinska, O. V., & Lenska, N. I. (2016). The daily structure and effectiveness of management methods. Market Economics: daily theory and management practice, 2, 105-122.

From the above comparative analysis we can conclude that today there is no "ideal" management style. Each of the main management styles has its own positive and negative sides. In addition, the effectiveness of a particular management style depends on the situation in the external environment, the financial condition of the enterprise, its goals, composition and structure of personnel and other factors. In addition, the choice and effectiveness of management style also depends on the scope of the enterprise and the tasks that need to be solved. In particular, American scientists M. Meskon and M. Albert are convinced that the effectiveness of a certain management style depends on the specifics of the work performed, professional requirements, etc[236].

Table 2 Main advantages and disadvantages of management styles

Management style	Advantages	Flaws
Authoritarian	Quick management decisions; Effective in crisis conditions and emergency situations; Promotes compliance with rules, routines and instructions; High control	Suppression of initiative and creativity; Suppresses the moral and psychological climate and motivation; Constant overload of the manager with routine operations; High level of subjectivity in decision making
Democratic	Ensures effective and healthy communication between management and employees; Encouraging initiative and creativity; Promotes staff development and the formation of a healthy microclimate in the team; Well-established feedback	Requires significant time to make management decisions; Weakening of control; Quite often it is difficult to find the person responsible for making a wrong decision; Sometimes lead to indiscipline
Liberal	Considerable freedom of action and initiative; Employees experience trust; Expands the range of powers and responsibilities of employees	The authority of the leader is undermined; Weak level of control; Productivity and effectiveness suffer

Source: generated by the author based on[237]

[236]Mazaraki, A. A. (2014). Fundamentals of management. Folio.
[237]Vinichenko, I. I., & Didur, K. M. (2011). The essence and theoretical basis of management style. Agrosvit, 21, 28-32.

As evidenced by the results of various studies, none of the management styles actually occurs in its pure form. At enterprises, managers use a mixed management style with clear signs of at least two styles.

The takeaway from the management style research question is that no one style works best in all situations. Many managers make the mistake of trying to use the same style with every person in every situation. To be a good manager, you need to develop your style depending on the situation and the individual. Therefore, in modern conditions, an effective manager is one who is able to adapt to the situation and, under different conditions, apply a different management style, which at a given time will bring the best results[238].

So, an important condition for ensuring the effective work of personnel is a properly selected management style, which will allow directing the workforce to achieve common goals. Management style is how the head of an enterprise behaves when communicating with the workforce, what methods he uses to manage them. According to the traditional approach, there are three management styles: democratic, authoritarian and liberal. Most often in the practice of enterprises there is a symbiosis of individual elements of all three management styles.

2.12. Theoretical aspects of designing the organizational structure of the enterprise

The creation of enterprises of different organizational forms of ownership involves the construction of an appropriate organizational management structure. The term “organization” is considered one of the most commonly used. It is used with the following meanings[239]:

- as a system, and in particular, as a control system, considered as a single organism;

- as a stage of the management process intended for the creation of a new or reorganization or liquidation of the current system;

- as an economic entity, etc.

In a broad sense, the term “organization” means a certain order, and increasing the level of organization means ordering. The achieved order can be considered complete if four aspects of orderliness are practically embodied in it, based on the fact that they are defined[240]:

- the limits of the system, that is, it has been established how many and what

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[238]Sagan, P. (2013). Ethics in management. Polish Economic Publishing House.

[239] Johatch, M. 2014. Organization theory. Translated by Dr. Danayifard.H, Mehban publications.

[240] Rezayian, A. 2005. The basics of organization and management. SAMT publications.

system-forming units it covers;

- variables characterizing the units that form the system;

- established acceptable relationships between possible quantitative values of variables by imposing restrictions on each of them;

- the mode of action of each unit and the scheme of their interaction.

The systems approach in management considers the organization as a set of interconnected and ordered components, which ensures the integrity of the organization and its relationship with the external environment[241].

Organizing as a management function is the process of creating an enterprise structure that allows people to work together effectively to achieve a common goal[242]. So, a precondition for creating an enterprise structure is the formation of a strategy, and the main goal of the organizational function in management is to ensure the transition from strategy to structure.

Organizational function is often viewed as the process of assigning responsibilities and coordinating the efforts of personnel to ensure maximum performance in achieving a predetermined performance goal. There are several aspects of organizational function:

1) relationships of authority that unite senior management with lower levels of workers and provide the ability to distribute and coordinate tasks;

2) creation of a management system, that is, the creation of management objects (managed systems), management subjects (control systems) and the establishment of connections between them;

3) improvement of the management system.

The practical result of performing an organizational function is[243]:

- approval of the structure of production, the structure of management bodies, the scheme of relationships between divisions;

- regulation of functions, subfunctions, works and operations, establishment of the rights and responsibilities of management bodies and officials;

- approval of regulations, instructions;

- selection, placement of personnel and formation of staff in management and managed systems.

As for the structure, this concept comes from lat. the words “structura” (construction, structure) and means the internal construction of a certain object,

[241] Sudol S. S. 2002. Enterprise. Fundamentals of enterprise science. Theories and practice of management, TONiK "Dom Organizatora", Torun.

[242] Rees W.D., Porter C. 2001. Skills of Management, 5th Edition, Thomson Learning.

[243] Shams, F; Mahjurian, A. 2010. The principles, basics and methods of service-oriented organizational architecture. Shahid Beheshti University publications.

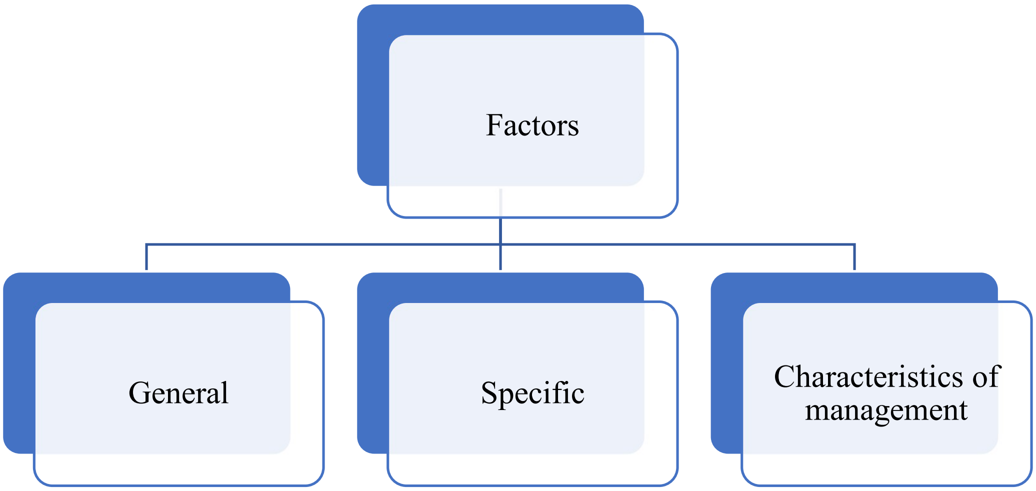
reflecting the relationships within the object. According to V. Didenko, structure is a stable reflection of the mutual relations of the elements of an integral object[244].

The concept of "organizational structure of enterprises" defines the relationship (hierarchy) between the functions performed by its employees[245]. They manifest themselves in the form of division of labor, the creation of specialized units, a system of positions and are a necessary element of an effective organization.

An analysis of the views and positions of scientists regarding the essence of the organizational structure allows us to come to the conclusion that the organizational structure is a set of certain levels of management that are formed at each enterprise in accordance with its goals and objectives, while displaying their relationships[246].

The formation of the organizational management structure of an enterprise is influenced by various factors. S. Dubinsky establishes three groups of factors influencing an enterprise's choice of a certain type of organizational management structure (Fig. 1).

Figure 1. Factors influencing the choice of organizational management structure



Source: compiled by the author based on[247]

[244] Didenko V.M. 2013. Management: Textbook by Condor, Kyiv.
[245] Koźmiński A.K., Piotrowski W. 2004. Management. Theory and practice, PWN Scientific Publishing House, Warsaw.
[246] Rabbinz, S. 2012. The basics of organizational management. Translated by Parsian and Arabi. Cultural research office. Rezayian, A. 2005. The basics of organization and management. SAMT publications.
[247] Mazaraki A.A., Moshek G.E., Gomba L.A. 2015. Management: Theory and Practice: A textbook Ataka, Kyiv.

General factors determine the initial choice of organizational management structure. The scientist includes the strategy of the enterprise, the type of product (or type of technology), the size of the enterprise, and the external environment[248]. The main characteristics of management are centralization, formalization, complexity and standards of control in the sphere of control. Specific factors determine the features of the development of the organizational structure, these include: computerization of information processes, control and power[249].

In turn, T. Tsygankova identifies two main groups of factors influencing the organizational structure of management – strategic and managerial. Strategic factors include the goals, mission and corporate strategies of the enterprise, and managerial factors include the existing organizational structure, management decision-making practices, corporate culture and readiness to delegate authority.

The most comprehensive, in our opinion, approach to determining the factors in the formation of the organizational structure of enterprise management was proposed by I. Novakovsky. He identified a number of factors influencing any changes in the organizational structure of enterprise management, ranging from the wishes of the founders to forced changes in accordance with the needs of the external environment. The main determining factors that determine the parameters of the organizational structure are the mission and strategic goals of the enterprise. The author considers important the perception by top management of the phase of the organization's life cycle and the volitional decisions made (for example, in the process of enterprise development, the need for control and coordination increases due to the increase in the volume of management work, the development of the division of labor and the formation of additional links, which implies corresponding changes in the organizational structure) . The scientist considers the next influencing factor to be the level of development of information technology in the organization (for example, the creation of local networks based on PCs will lead to the elimination or reduction of the amount of work at the middle and lower levels).[250] The external environment, which is characterized by different groups of influence, ranging from consumers to organizations that regulate the foreign economic activity of the enterprise, also has a significant impact on the organizational structure.

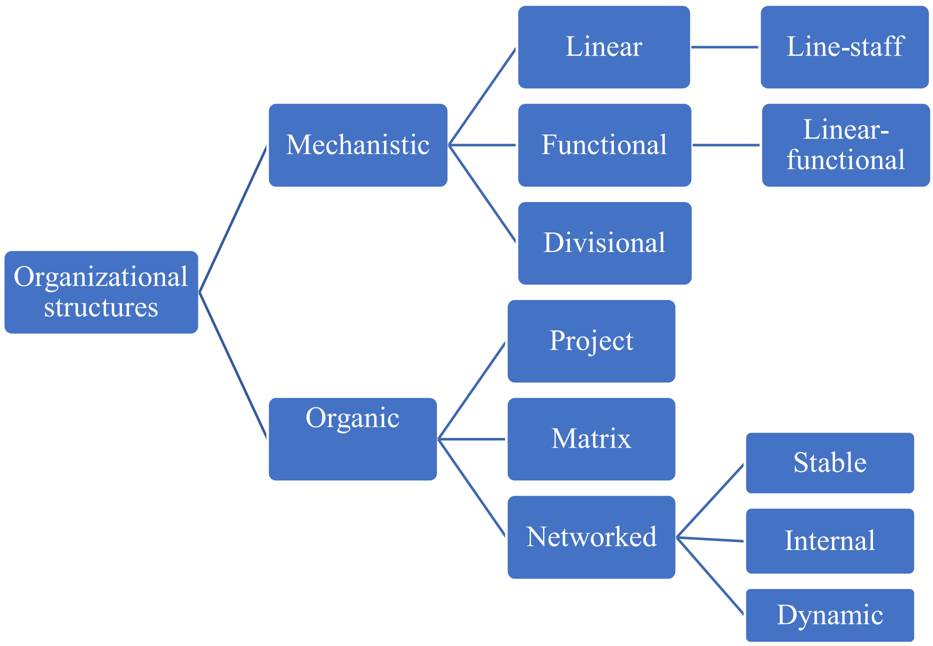
Thus, the organizational structure is a set of certain levels of management that are formed at each enterprise in accordance with its goals and objectives, while

[248] Harris R.D. 2004. Organizational Task Environments: An Evaluation of Convergent and Discriminant Validity, Journal of Management Studies 41, no. 5.
[249] Kałowski A., Wysocki J. 2014. "Enterprise of future," Institute of Enterprise , Warsaw School of Economics, Warsaw.
[250] Boddy, David. 2012. Management: an introduction. Pearson Education.

reflecting the relationships between its divisions and their hierarchical structure[251]. Each organizational structure has a number of common factors that influence it, in particular, management levels, individual employees and the relationships between them, which form horizontal and vertical divisions; degree of centralization and decentralization; distribution of management functions, tasks, powers between departments and display of connections between them; information relationships; number of employees, number of management levels; number of divisions, depending on the size of the enterprise; information and technical support. A special role in market conditions is played by environmental factors that directly affect the results of the enterprise.

In the practice of operating enterprises, two types of organizational structures are distinguished: mechanistic and organic (Fig. 2).

Figure 2. Main types of organizational structures



Source: compiled by the author based on[252]

Mechanistic structures (they are also called hierarchical, traditional, classical) are distinguished by a clearly defined hierarchy in the enterprise, a bureaucratic

[251] Head, A., Hohman, F., Barik, T., Drucker, S. M., & DeLine, R. 2019. Managing messes in computational notebooks. Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems, 1–12.
[252] Nazarova G.V. 2010. Organizational structures of corporations' management: monograph by INZHEK, Kharkiv.

system of responsibilities and rights[253]. These structures are characterized by formalized rules and procedures, most decisions are made centrally, and the reward system is objective. Personnel selection occurs according to established criteria, and within enterprises, labor functions are strictly distributed. Mechanistic management structures function as a well-coordinated mechanism. This type includes linear and functional structure, their symbiosis - linear-functional, linear-staff, as well as divisional management structure.

If the external environment is more stable, with minor changes observed, then enterprises can quite successfully set mechanical organizational structures that have little flexibility and require more effort to change.

In modern conditions of a dynamic external environment, the organizational structure must be flexible, capable of responding to changes in a timely manner. These are organic (adaptive) structures that have blurred control boundaries[254]. They are characterized by weak or moderate use of formal rules and procedures, decentralization of decision-making, ambitious responsibility, and informal interpersonal relationships. In enterprises with this type of organizational structure, as a rule, there is a small number of management levels, structural divisions have greater decision-making rights, and constant changes in leaders are possible depending on the nature of the problems being solved. In an enterprise with an adaptive type of organic structures, a system of norms and values is formed in the process of discussions and agreements, opportunities for self-expression and self-development increase for employees, assignment of work to integrated project groups can be on a temporary basis[255]. Organic types of structures include matrix, project, network and similar organizations, which are certainly distinguished by great flexibility in interaction with the external environment.

Let us briefly consider the features of each type of structure and determine under what conditions they allow you to effectively manage an organization. The linear organizational structure is shown in Fig. 3.

The linear organizational structure is a consequence of the growth in the scale of the enterprise's activities, which used a simple two-level management system. With such a structure, all powers - direct (linear) - go from the highest level of management to the lowest. This structure uses generalist managers who perform all types of special

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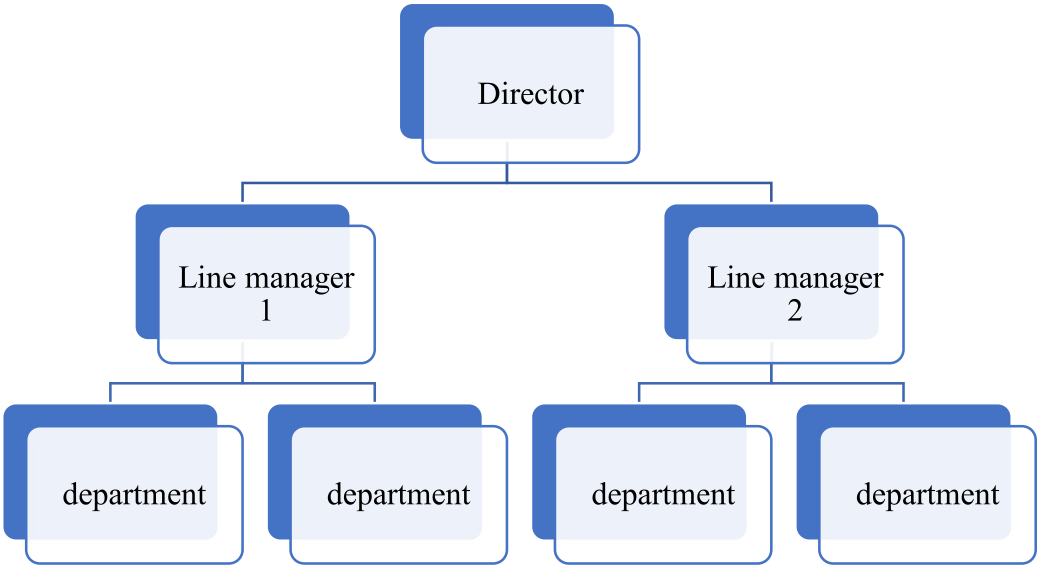
[253] Tanilkan, S. S., & Hannay, J. E. 2024. Managing the changing understanding of benefits in software initiatives. *Journal of Systems and Software*, *208*, 111903.
[254] Zhang, Y., Dolan, S., Lingham, T., & Altman, Y. 2009. International strategic human resource management: a comparative case analysis of Spanish firms in China. Management and Organization Review, 5 (2), 195-222.
[255] Burlton, R. T. 2001. Business Process Management: Profiting from Process. Indianapolis, IN: Sams.

management work: planning, accounting, control, regulation, management. The advantages of a linear organizational structure are the dominance of vertical information flows, established obligations, clarity and ease of interaction, and the speed of making and implementing management decisions[256]. The disadvantages of the linear structure of an organization are inflexibility, rigidity, the need for managers with universal qualifications, the possibility of an unreasonable increase in the management apparatus, inability to further growth of the organization, overload of the upper levels of management, limitation of the initiative of lower-level employees[257].

Figure 3. Linear organizational structure



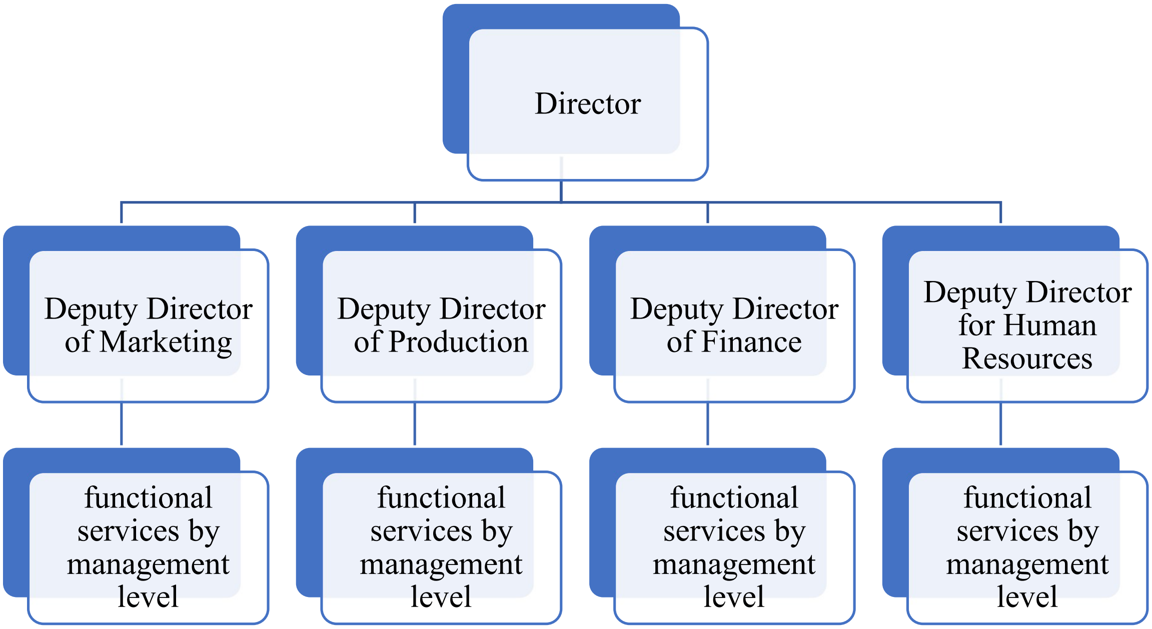
Source: compiled by the author based on[258]

The distribution of labor in the sphere of management leads to the emergence of the following type of structure - functional or mine, in which all the same types of management work are transferred to the jurisdiction of a hierarchy of special services

[256] Burton, R. M., & Obel, B. 2004. Strategic Organizational Diagnosis and Design: The Dynamics of Fit (3rd ed.). Berlin: Springer.
[257] Hernaus, T. 2011a. The Process-Based Face of Organizations. In M. A. Sarlak (Ed.), The New Faces of Organizations in the 21st Century, (Vol. 2) (pp. 33- 80). Toronto: NAISIT Publishers.
[258] Novakivskyi I.I., Petrov Y.M. 2008. Logistic principles of transformation of organizational management structures, Bulletin of Lviv Polytechnic National University (633), 521-531.

("mines") that solve highly specialized problems (Fig. 4). As a result, the quality of management increases, effective centralized control over the achievement of results improves, but many functional connections appear, which complicates the structure. Subordinate units are not always informed how to coordinate the instructions received from functional managers and in what order to carry them out. Therefore, such a structure can only operate in small enterprises.

Figure 4. Functional organizational structure

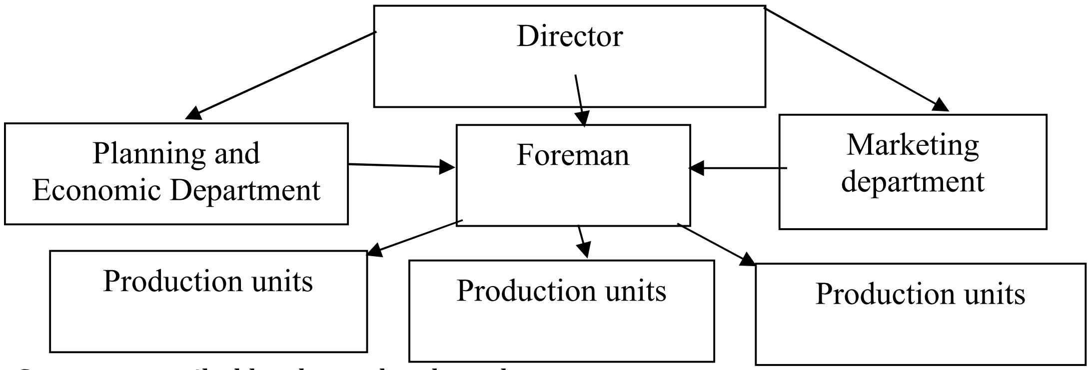


Source: compiled by the author based on[259]

The most common in the practice of Ukrainian enterprises is a linear-functional management structure (Fig. 5). In it, linear connections are complemented by multifunctional ones. This structure includes several levels, at each of which there are line and functional managers who help management professionally justify this or that management decision.

[259] Liedtka J. 2013. Design Thinking: What it is and why it works. Darden School of Business.

Figure 5. Linear-functional organizational structure



Source: compiled by the author based on:

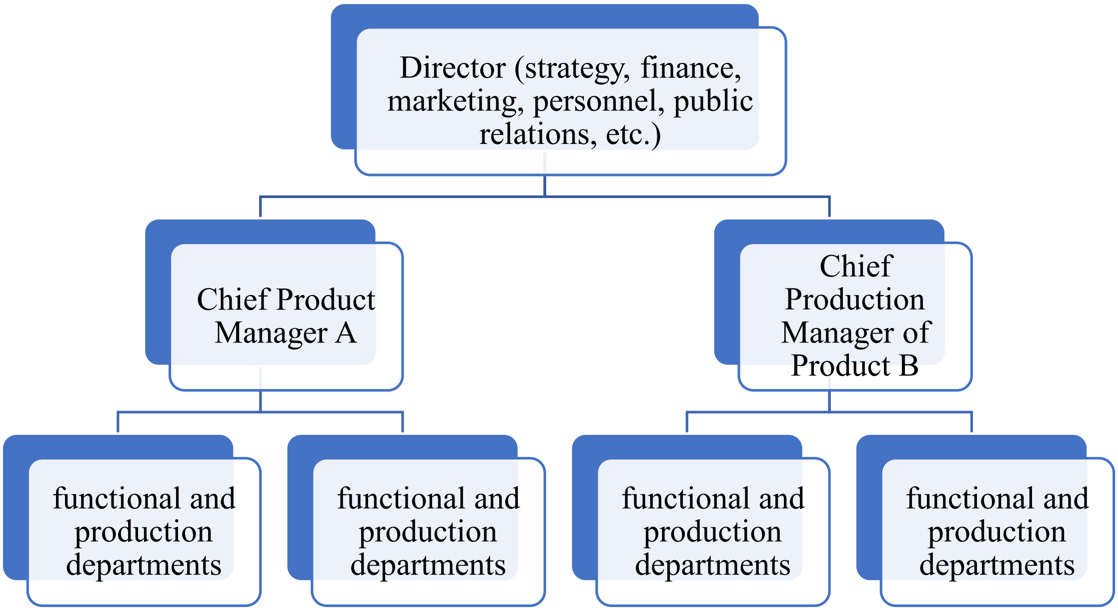
The advantages of a linear-functional structure are the ability to manage a large number of performers, reduce the number of management levels, increase the information efficiency of decision-making, relieve top management, and the enterprise becomes more stable. Among the disadvantages of a linear-functional structure, we name the following: a decrease in the speed of strategic response to changes in the external environment, discrepancies between linear and functional employees, difficulty in horizontal coordination, complication of the control procedure, and a decrease in resistance to any changes in the activities of the enterprise.

If it is necessary to carry out technological changes at an enterprise, it is advisable to use a line-staff management structure. It involves the creation of multifunctional headquarters at the level of line managers to quickly solve problems by increasing the concentration of efforts. But the disadvantage of such a structure is that it increases the risk of an unreasonable increase in the staff apparatus and reduces the speed of response to changes. Therefore, line-staff structures are often temporary and become the basis for the creation of other more flexible types of organizational structures.

When an enterprise uses a divisional management structure, the organization is divided into completely economically autonomous production departments (divisions) that specialize in product or region (Fig. 6). These departments are entrusted with full responsibility for the development, production and marketing of homogeneous products, and the department itself may have a linear-functional structure.

Although there is duplication of functions across branches, management flexibility is greatly enhanced by allowing different policies to be applied to different products and markets. Compared to linear and functional mechanical organizational structures, the divisional structure has significant advantages: a more effective response of the enterprise to changes in competition, technology, consumer demand, unloading top management from routine work and providing the opportunity for strategic management, decentralization of operational management decisions and increased responsibility for division levels , competition between divisions of the enterprise[260]. The disadvantages include: an increase in management costs due to duplication of the same types of work for different types of products, possible disagreements between the goals of divisions and the general development goals of the enterprise, the danger of information problems arising between divisions and divisions of the enterprise, inefficient use of resources in conditions of their centralized distribution, increase in vertical management.

Figure 6. Divisional organizational structure (by product type)



Source: compiled by the author based on[261]

The key role in divisional structures is played not by the heads of corporate services, but by the heads of divisions (chief managers, vice presidents). If a department is removed from the structure of the enterprise, it receives the status of a subsidiary, that is, a transition occurs from a divisional structure to a holding, then a concern, or a syndicate.

Divisional management structures are widely used in companies with more than 1,000 employees, but the need for its use may arise even with 500-700 employees.

260 Szwiec P. 2008. The impact of leadership on employees' creative activity. Human Resource Management, 3-4, 37-49.
261 Petrenko S.A. 2010. Comparative analysis of models of organizational structures of the enterprise, Bulletin of the International Nobel Economic Forum (1 (3)), 245-254.

They are also effective in organizations that span large geographic regions or have a wide range of products (services offered).

The next type of organizational structure - project - refers to organic (adaptive) types of structures. Its implementation involves the creation of a special department within the existing management structure - a temporary project team. The necessary specialists are recruited into this team, and the team leader is given some project authority. If there is a need for an organization to develop a project that will allow achieving targeted changes in the system, for example: developing new types of services or technologies for their provision, upgrading equipment, etc., then in this case similar projects are formed. If the project is completed, its team will disband, and the specialists will return to their usual permanent places of work or move to a new project structure.

The advantages of project-based organizational structures should be considered maximum customer focus, a high degree of flexibility and speed of response to market demands, effective use of personnel taking into account their professionalism, the ability to attract the best resources (primarily human), a high degree of specialization and focus. But the disadvantages of such structures are a strong dependence on clients, a high degree of demands on the information network, a limited scope, the risk of lack of projects, instability with personnel in the context of their workload.

The matrix type of organizational structure also refers to organic (adaptive) types of structures. It is also considered a certain modification of the linear-functional structure - in the part that is responsible for the development of new product (Fig. 7).

Figure 7. Matrix organizational structure

Source: compiled by the author based on [262]

[262] https://trainual.com/manual/non-profit-organizational-chart

The company's specialists are combined into a group to work on a special project. The introduction of horizontal connections in the structure allows you to reduce the time spent on coordinating activities. This is achieved as a result of the introduction of a new link - project managers, who receive authority to use various types of organization resources while working on the project. Thus, the contractor may have two or more managers: one is the head of the department (linear), and the other is the project manager (functional). Successful implementation of a matrix organizational structure requires long-term employee training and organizational culture.

The advantage of a matrix structure is the achievement of greater flexibility, coordination of work and response to changes in the external environment, more efficient use of the organization's personnel, reduction of the load on top-level managers, and increased personal responsibility of a particular manager both for the project as a whole and for its elements. Disadvantages include unclear distribution of rights and responsibilities as a result of double subordination, conflicts between functional managers and project managers, complexity of control, ineffectiveness in crisis situations, and excessive overhead costs.

The use of project and matrix structures in practice is advisable under certain conditions: the group's work on the project should be carried out for a limited time and should not be routine, the product is transferred to regular functional departments as soon as the product enters mass production. It is also important that the solution to the problem is carried out on the basis of the joint efforts and abilities of the project team.

In the modern world, network organizational structures are becoming increasingly common. Such structures are a collection of independent firms or specialized units, coordinated through market mechanisms and interconnected by a chain of orders and contractual relations. Network organizational structures are internal, dynamic and stable. Internal networks make it possible to use the principle of free enterprise within an organization through the creation of so-called organizational markets, which involve interaction between divisions of the organization based on market prices. Stable networks are characterized by the fact that a significant part of the work is transferred to contractors who may not be related to the main enterprise. In the case of dynamic networks, the parent enterprise manages capital and other organizations in order to achieve its goals.

The advantages of network organizational structures include the most flexible adaptation to the environment, professional management, low overhead costs for staff, and the development of the enterprise together with the environment and each individual network participant. However, at the same time, the use of such a structure can lead to a decrease in power by the main managers and a loss of control over resources. It should also be noted that during the operation of the enterprise, the risk of unauthorized use of knowledge will be high.

In real practice, the management of an enterprise can use various types of organizational structures in a mixed form, which allows them to achieve their goals in the shortest possible time.

2.13. The impact of military risks on the staffing of the public sector in the region

Problem Statement. During the war in Ukraine, significant personnel losses and increased demands for the professional competence of public administration employees have become major challenges for the public sector. The need for highly qualified personnel capable of quickly adapting to crisis situations has become critically important. War-related risks not only diminish the overall human resource potential but also affect the stability and efficiency of management processes. Thus, there is a pressing need to evaluate and improve mechanisms for staffing the public sector that can respond to the challenges of modern conditions while preserving the human resources of the regions.

Analysis of Recent Research and Publications. Recent studies have focused on assessing the impact of war risks and crisis situations on public administration, particularly on human resources. Researchers emphasize the issues of staffing and the necessity to adapt management mechanisms in crisis conditions.

Antonova O.V. analyzed the vulnerability of the civil service to crisis situations such as the pandemic and martial law, highlighting the need to enhance the adaptive capacities of public administration in Ukraine [1]. Kachan Y. examines the issues of adaptive management in the public service under martial law, emphasizing the importance of a flexible approach to personnel management during crisis periods [2]. Furthermore, Kachan Y. also explores the personnel policy of public administration during wartime, stressing the need to improve employees' qualifications and their ability to adapt to new conditions [3].

Oliinyk N. focuses on digital competencies as a crucial element of national security, especially during wartime and post-war recovery, utilizing an archetypal approach [4]. Parkhomenko-Kutsevil O.I. investigates the mechanisms of personnel auditing during military conflicts, substantiating the importance of effective personnel evaluation for the stability of public administration [5].

Pivnenko O. emphasizes the role of public administration in overcoming the consequences of military actions, which contributes to preserving human resource potential in crisis conditions [6]. Ponomarenko O.S. studies the impact of military actions on the efficiency of public administration in Ukraine, focusing on the decline in effectiveness due to personnel losses [7].

Thayer A. analyzes the role of communication technologies in enhancing the effectiveness of public administration during wartime, highlighting the importance of well-established communication for stability [8].

Tur O., Tur O., and Tyukha I. examine the impact of labor legislation on personnel administration, stressing the importance of a strong legislative framework for managing human resources during crises [9]. Chumakova H. and Pasichniuk V. explore leadership qualities in crisis conditions, emphasizing their importance for effective management during martial law [10].

Purpose and Objectives of the Study. The purpose of this study is to analyze the impact of war-related risks on human resource management in the public sector of the region. The objectives of the study are as follows: To identify war-related risks and their impact on the civil service; To highlight the effects of the war on staffing in Mykolaiv Oblast; To provide recommendations for overcoming war-related risks and improving human resource management in the public sector of the region.

Presentation of the Main Material. War-related risks have a significant impact on staffing in the public sector, particularly in crisis conditions when the demand for competent specialists increases. The primary task of the civil service is to ensure the stable functioning of the state apparatus, including policy development and implementation, maintaining public order, and ensuring the proper operation of the executive branch. However, in the context of ongoing military actions in Ukraine, the processes of forming and maintaining human resources in the public sector face considerable challenges and constraints, creating new demands and requiring the adaptation of personnel management approaches.

Since the onset of military actions in Ukraine, the issue of staffing at the regional level has gained additional strategic importance, as many specialists have been mobilized into the Armed Forces of Ukraine or forced to leave their homes due to safety concerns [3]. The forced migration of the workforce from active combat regions has significantly reduced the pool of available candidates for positions in the public sector, becoming a key factor in staffing shortages. A low number of job applications during the conflict increases the workload on existing employees who remain in their positions, requiring them to demonstrate additional flexibility, resilience, and readiness to handle a greater volume of responsibilities.

Moreover, the war has transformed the requirements for individuals seeking to work in the public sector [2]. In the current environment, the most critical competencies include adaptability, the ability to operate under high stress and risk, and experience in managing crisis situations. This shift is driven by the need for swift responses to unforeseen challenges and managing processes in unstable conditions, which have become the norm for Ukraine's modern public sector. Organizations have intensified their focus on professional competence, as the state apparatus requires exceptional reliability and efficiency in fulfilling its functions during the hardships of wartime.

Heightened demands on personnel have also prompted new approaches to recruitment. Given the limited physical access to regions and institutions, as well as safety concerns, online interviews and remote training for new employees have gained popularity. This format offers significant advantages, such as saving time and reducing risks, by minimizing in-person meetings and ensuring an uninterrupted hiring process even under challenging circumstances. Leveraging internet technologies for candidate selection has proven to be an optimal solution. Beyond adapting to wartime conditions, it also promotes the integration of modern digital approaches to human resource management.

At the same time, the public administration system has witnessed an increasing emphasis on qualities such as motivation and stress resilience, which are becoming highly valued among candidates for public sector positions [5]. In situations where working in the public sphere may involve significant risks to life and health, an intrinsic sense of mission and moral readiness to perform duties, even under dangerous conditions, becomes critically important. This significantly affects recruitment processes and raises the requirements for the psychological preparedness of potential employees. Such an approach enhances the stability of government institutions, which, during wartime, is vital for ensuring the functioning of society and maintaining public order.

The staffing of the public sector in the Mykolaiv region during the war has undergone significant changes and transformations due to challenges arising from active hostilities in the area [11]. Public authorities in Mykolaiv have faced new tasks, including supporting defense efforts, ensuring the safety of residents, and coordinating humanitarian aid. These challenges necessitated rapid adaptation of human resource policies to ensure the effective functioning of the public sector under such difficult conditions.

One of the greatest challenges for personnel policy in the region has been the significant increase in the workload assigned to public servants. In addition to their traditional functions, such as providing administrative services, they are now responsible for ensuring security, implementing support measures for internally displaced persons, organizing evacuations, and distributing humanitarian aid. In such conditions, public servants must demonstrate high productivity and mobility, requiring significant focus and rapid decision-making. This increased workload is accompanied by a pronounced need for additional resources, as the efficiency of public service during wartime becomes one of the primary conditions for regional stability.

Another critical aspect of personnel policy in the Mykolaiv region has been the reduction in the number of public servants due to active hostilities and evacuations. This has compelled public authorities to review functional responsibilities and redistribute tasks among those who remain in service. As a result, there has been a pressing need to optimize personnel management to minimize the effects of staff shortages and ensure the uninterrupted fulfillment of priority functions.

Between 2022 and 2024, a significant number of job vacancies were posted on the website of the Mykolaiv Regional State (Military) Administration, highlighting an increased demand for personnel against the backdrop of heightened requirements for public administration during wartime [11]. Compared to the pre-war period, the need for specialists across various positions has risen considerably. This increase is driven by the necessity for effective management of regional resources, ensuring security, and promoting digitalization and modernization of administrative processes.

A particular shortage is evident in positions related to finance, digital development management, as well as defense and mobilization efforts. Vacancies for chief specialists in the departments of planning, budget execution, and financial support within the finance department emphasize the growing demand for professionals capable of efficiently managing regional budgetary resources amid evolving economic challenges. This underscores the need for experienced financial specialists who can ensure prompt and effective financial planning and oversight.

In addition, vacancies in the fields of digital development, transformation, and digitalization highlight the importance of adapting administrative processes to modern technological standards. The Mykolaiv Regional Military Administration has seen increased demand for deputy heads of departments, chief specialists in digitalization, and administrators of administrative service centers. Through these roles, the administration aims not only to implement modern technologies but also to enhance management efficiency and improve access to public services for the population. This is particularly relevant during wartime when citizens require prompt information and support.

A significant portion of job postings is dedicated to roles related to defense and mobilization work, including positions for chief specialists in the mobilization department and heads of mobilization activities management. This reflects an urgent need for specialists capable of organizing mobilization efforts, ensuring proper coordination with military structures, and supporting national security. These roles demand not only specialized knowledge but also an understanding of the unique challenges of working under constant risk, imposing specific requirements on candidates.

It is also worth noting the presence of numerous vacancies in the departments dealing with public relations, internal auditing, and legal services. Positions such as chief specialists in citizen services, heads of departments handling citizen appeals, and those responsible for monitoring compliance with internal standards highlight the importance of communication with the public and ensuring transparency in administrative actions. The recruitment of specialists in these areas contributes to increasing public trust in local authorities and ensuring higher-quality services for citizens.

The military conflict in the region has also led to changes in the priorities of human resource policies. The main tasks today are focused on enhancing defense capabilities, protecting citizens, and coordinating humanitarian support. This requires a shift in the competencies of public servants, which now includes crisis management skills, basic security knowledge, and first aid training. The ability to communicate with the public during wartime, showing support and understanding of their needs in difficult times, is essential. Furthermore, for many of the public servants who remain in the region, skills in coordinating humanitarian aid and working with internally displaced persons are now required, which were not part of their duties before.

The process of training and professional development of personnel in Mykolaiv region has also been affected by martial law. Specifically, the content of training programs has been adapted to the new realities to provide public servants with the knowledge necessary to perform new tasks effectively. Due to limited opportunities for in-person training and seminars, remote learning formats have become widespread. Online courses enable public servants to acquire essential knowledge on security, crisis management, and communication while ensuring the safety of employees.

Given the wartime circumstances, there has also been a need to adjust approaches to personnel rotation. In the critical conditions of Mykolaiv region, staff rotations are carried out as needed, focusing on ensuring stability in the operations of organizations and filling the most critical vacancies. Public servants are transferred to positions that are essential for ensuring the proper functioning of public administration bodies in the context of the military conflict. This contributes to strengthening the personnel structure and ensuring the prompt delivery of services to the population.

The infrastructural and socio-economic consequences of military actions have significantly impacted the region's human resources potential, necessitating the adaptation and development of specialized programs to support employees of government and local authorities. The main areas of focus in this context include providing psychological assistance, improving stress resilience among public servants, and retaining key personnel through comprehensive motivational measures. Supporting specialists who can effectively work in crisis conditions has become one of the key elements of the regional strategy to ensure stability in the public sector, contributing to the sustainable operation of the state apparatus and meeting the needs of the population.

An important part of this strategy is the development of psychological support programs for employees who have been affected by the hostilities and are under constant stress. This requires creating conditions for personalized assistance, including individual consultations with mental health professionals, as well as conducting group training sessions to help improve the emotional resilience of public servants. Educational and informational work on stress management methods, adapting to wartime conditions, and managing one's emotional state form the foundation of these programs. Specifically, government and regional authorities must ensure access to informational materials and courses that support the psychological well-being of public service employees.

At the same time, social support for employees is an essential element of ensuring their motivation and commitment to work. Organizing social assistance for affected employees, including financial aid and support in resolving housing issues, is particularly important for those who have lost property due to military actions. It is equally important for the state to provide medical assistance to employees who have suffered physical injuries. This approach creates an atmosphere of trust and care, which positively impacts employee motivation, reducing the risks of valuable specialists leaving the public sector in Mykolaiv region.

A key task is to create conditions for the professional growth and development of public servants, which strengthens their commitment to work. In particular, it is necessary to develop a system for continuing education and career advancement, which will provide employees with opportunities to deepen their knowledge and skills in response to new challenges. In wartime, it is especially important to adapt educational programs to the needs of public servants, including providing them with knowledge in crisis management, effective communication management, and adaptation to extreme conditions. This approach creates opportunities for career growth, enhancing the attractiveness of working in the public service, while also contributing to the development of professional potential at the regional level.

Fostering a strong sense of collective spirit within public institutions is an important tool for maintaining employee motivation. Organizing joint activities that promote internal cohesion, as well as establishing teamwork, is especially significant in times of instability. This helps create a sense of support and mutual assistance among employees, which is a critical element for the effective operation of public servants in crisis situations. It is also important to support the morale of employees through public recognition of their contributions and efforts in stabilizing the situation in the region.

Overall, the successful implementation of these measures depends on a comprehensive approach to staffing in the public sector. Adapting to wartime conditions and developing new management mechanisms is critically important for maintaining the effective functioning of government structures, especially in regions that have been most affected by military actions, such as Mykolaiv region. Only a systemic approach, which takes into account the social, psychological, and professional aspects of public servants' work, can ensure personnel resilience in the public sector of the region and enhance its capacity to respond to current challenges.

Conclusions. Overall, the impact of military risks on the staffing of the public sector in the region is reflected in a series of systemic changes, including a decrease in the number of applications for vacancies, higher requirements for candidates, and the active implementation of remote technologies in the recruitment and training processes. This creates a new reality for human resources policy, aimed at supporting the effectiveness of the government apparatus and ensuring an adequate level of security in an ever-changing environment. The human resources policy in the public sector of Mykolaiv region during the war has become more flexible and focused on a rapid response to changes. The conditions of martial law have forced public authorities to adapt to new challenges while maintaining core functions and ensuring stability in providing necessary services. An analysis of the vacancies posted by the Mykolaiv Regional State (Military) Administration indicates a significant expansion of staffing needs, with an emphasis on financial management, digitalization, and mobilization and legal support. This human resources policy addresses current challenges and enables quick responses to pressing tasks in the region.

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2.14. Educational smart technologies as innovative methods of training and development of enterprise personnel

Освітні smart-технології, як новітні методи навчання і розвитку персоналу підприємства

Сучасні підприємства функціонують в умовах посилюючоїся конкуренції, швидких змін та глобалізації, що робить навчання і розвиток персоналу одним із ключових чинників успіху підприємства. За таких умов ефективне навчання та розвиток персоналу стає одним з сучасних інноваційних напрямів у сфері людських ресурсів [12], який повинен базуватися на сучасних інформаційно-комунікативних або smart-технологіях. У цьому контексті освітні smart-технології стають незамінним інструментом для підвищення ефективності навчального процесу та адаптації працівників до нових викликів.

Smart-технології – це «технології, які використовують штучний інтелект, машинне навчання та аналіз великих даних, щоб забезпечити когнітивну обізнаність об’єктів, які в минулому вважалися неживими» [16, 13]. Smart-технології, як нові інтелектуальні технології smart-економіки, базуються на використанні цифрових рішень, штучного інтелекту, великих даних, інтернету речей (IoT), мобільних додатків та хмарних обчислень, що передбачають використання комп’ютерних систем і мікропроцесорів для виконання щоденних завдань і обміну інформацією на підприємствах.

На сьогоднішній день smart-технології стрімко впроваджуються у всіх сферах економіки, в тому числі і в сфері освіти. За рахунок цих технологій в освіті «поступово відбувається перехід від старої схеми репродуктивної передачі знань до нової, інтерактивної форми навчання» [11,13]. Завдяки чому традиційна система освіти трансформується в smart-освіту (smart-education) [13]. Smart-education – це «концепція, яка передбачає комплексну модернізацію всіх освітніх процесів, а також методів і технологій, що використовуються в цих процесах [14]. Smart-освіта – це «застосування в навчальних цілях смартфонів, планшетів, інтерактивних дошок, інших пристроїв із доступом до інтернету, а також усяких навчальних програм та додатків» [5,13].

Метою smart-освіти є поєднання освітнього процесу з сучасними інформаційно-комунікаційними або smart-технологіями, що забезпечить постійний доступ до знань та безперервність освітнього процесу [13]. Характеристика складових smart-освіти наведена в табл. 1.1.

Таблиця 1.1.

Основні характерні риси smart-освіти

Характеристика smart-освіти	Сутність
Безшовність	забезпечує сумісність програмного забезпечення, розробленого для різних операційних систем
Безперервність	можливість доступу до процесу навчання в будь-який час на протязі доби через смартфон або планшет
Мобільність доступу	можливість доступу до процесу навчання з будь-якого місця через смартфон або планшет
Автономність викладача і здобувача	доступ до процесу навчання викладача і здобувача здійснюється через особистий акаунт у відповідній програмі, який захищений паролем авторизації
Гнучкість процесу навчання	можливість адаптації навчальної програми під потреби і можливості кожного окремого здобувача
Результативність процесу навчання	результати процесу навчання є відкритими, здобувач може самостійно перевірити власні результати навчання, побачити і усунути помилки.
Самоосвіта	здобувач самостійно обирає індивідуальну траєкторію навчання та темп освіти, прискорюючи чи сповільнюючи виконання завдань

Джерело: складено автором за [8, 13]

Освітні smart-технології відкривають нові можливості для ефективного навчання, підвищення кваліфікації та розвитку навичок працівників підприємств. Вони забезпечують інтерактивність, персоналізацію, автоматизацію і доступність процесу навчання працівників як з відривом від виробництва, так і без відриву.

Роль smart-технологій у навчанні та розвитку персоналу підприємства узагальнена в табл. 1.2.:

Таблиця 1.2

Роль smart-технологій у навчанні та розвитку персоналу підприємства

Роль smart-технологій	Сутність
Персоналізація навчання	Smart-технології дозволяють створювати індивідуальні освітні траєкторії для кожного працівника, враховуючи його професійний рівень, інтереси та потреби. Наприклад, системи штучного інтелекту аналізують дані про працівника (тестування, результати оцінки, активність у навчальних програмах) і пропонують відповідний контент чи завдання.
Гнучкість і доступність	Завдяки використанню мобільних додатків та хмарних платформ, працівники можуть навчатися у зручний для них час і місце. Це особливо важливо для компаній із розподіленими командами або співробітниками, які працюють у віддаленому форматі.
Інтерактивність та залученість	Використання інтерактивних елементів, таких як віртуальна реальність (VR) або доповнена реальність (AR), робить навчальний процес більш цікавим і мотивуючим. Наприклад, за допомогою VR можна відтворювати реальні робочі ситуації, що дозволяє працівникам тренувати навички у безпечному середовищі.
Швидкий доступ до знань	Чат-боти та голосові асистенти, інтегровані в навчальні системи, дозволяють швидко отримувати відповіді на питання або доступ до навчального контенту. Це сприяє вирішенню проблем у реальному часі і скорочує час на пошук інформації.
Моніторинг і оцінка ефективності	Smart-технології дозволяють автоматично відстежувати прогрес співробітників, аналізувати їхні результати та формувати звіти. Такі системи, як Learning Management System (LMS), дають змогу керівникам оцінювати ефективність навчання і визначати зони, що потребують вдосконалення.
Розвиток soft skills	Використання ігор (gamification) у навчанні стимулює розвиток таких навичок, як командна робота, критичне мислення, адаптивність та лідерство. Наприклад, симуляції або колективні завдання в ігровій формі сприяють залученню працівників і підвищують їхню мотивацію.
Оптимізація витрат на навчання	Завдяки smart-технологіям підприємства можуть скоротити витрати на проведення тренінгів і залучення зовнішніх тренерів. Онлайн-платформи та цифровий контент знижують потребу у фізичній присутності викладачів та дозволяють масштабувати навчання.

Джерело: складено авторами

Сучасна система формування людського потенціалу розростається на підґрунті інформаційно-комунікаційних технологій, які відіграють чи не найважливішу роль, зокрема такі [15]:

–застосування штучного інтеллівекту для розвитку персоналу, наприклад, чатботи (віртуальні помічники, які надають інформацію, відповідають на запитання та виконують завдання, пов'язані з навчанням), інтелектуальні системи підтримки навчання (системи, які аналізують дані про успішність навчання, виявляють слабкі місця та рекомендують персоналізовані навчальні матеріали), системи адаптивного навчання (системи, що автоматично підлаштовують навчальний контент і темп навчання до індивідуальних потреб кожного працівника); використання віртуальної та доповненої реальності (симуляції); використання онлайн-платформ навчання (електронні курси, вебінари, соціальні мережі для навчання); використання мобільних навчальних додатків (навчальні ігри, електронні книги, мовні додатки) тощо;

–гейміфікація – це інноваційна бізнес-концепція, яка полягає у використанні механік і принципів ігор у неігровому середовищі, відтворення поведінкової економіки у реальних бізнес-процесах. Переваги гейміфікації у формуванні людського потенціалу: підвищення мотивації, оскільки дає змогу зробити навчання та роботу більш цікавими та мотивуючими, що приводить до кращого засвоєння знань і зростання продуктивності; збільшує залученість користувачів до процесу навчання та роботи, що спонукає до кращого розуміння та виконання завдань; стимулювання командної роботи, що дає можливість створити атмосферу співпраці та командної роботи, отримати кращі результати у спільних проектах; підвищення лояльності користувачів до бізнесу або бренду, покращення іміджу та зростання продажів. Гейміфікація – це пошук нестандартних рішень, які допомагають зробити будь яку роботу цікавішою, де використовуються інструменти для чітко структурованих сценаріїв [2];

–програми розвитку емоційного інтелекту є ефективним інструментом (EQ), який може підвищити продуктивність, мотивацію й ефективність працівників, а отже, всього бізнесу загалом та створити позитивний емоційний клімат в організації. Програми розвитку EQ стають все більш популярними, адже вони допомагають людям підвищити свою самосвідомість, навички спілкування та стресостійкість, лідерські якості, покращити самоконтроль.

Розвиток навичок і навчання співробітників є ключовими елементами створення продуктивної та конкурентоспроможної команди, бізнесу в епоху цифрових, інноваційних технологій. Інновації у сфері навчання та підвищення кваліфікації дозволяють бізнесу ефективно адаптуватися до мінливих потреб ринку праці та використовувати потенціал сучасних технологій у підвищенні кваліфікації співробітників. Працівники все частіше розраховують на персоналізований підхід до роботи, який враховує їхні індивідуальні потреби та вподобання. Окремі організації реагують на ці очікування, впроваджуючи гнучкі робочі моделі. Завдяки цьому співробітники можуть краще керувати своїм часом, що обумовлює підвищення відданості та лояльності до діяльності бізнесу.

Використання платформ, інструментів електронного навчання та цифрових засобів у навчальних процесах дозволяє бізнесу організувати працівникам гнучке та індивідуальне навчання [9]. Наприклад, платформи електронного навчання часто пропонують інтерактивні навчальні матеріали, тести та можливість відстежувати прогрес навчання, що сприяє ефективності навчального процесу. Крім того, професійний розвиток стає більш персоналізованим завдяки використанню сучасних індивідуальних планів розвитку, які створюють можливість працівникам розвивати навички відповідно до їхніх потреб та кар'єрних прагнень. Аналіз даних про співробітників, включаючи результати періодичних оцінок, навичок, досвіду та професійних інтересів, дають змогу бізнесу створювати персоналізовані плани розвитку з урахуванням індивідуальних потреб і прагнень працівників. Завдяки цьому персонал почувається більш мотивованими та залученими до процесів навчання, що спричиняє підвищення ефективності та відданості роботі.

Одним із інноваційних підходів до організації навчального процесу є персоналізація процесу професійної підготовки. Персоналізація навчання спрямована на підготовку фахівців, готових до професійної діяльності, що передбачає можливість суб’єкта навчання керувати власною діяльністю; підтримку умов для розвитку професійних гнучких і жорстких навичок та інтересів; можливість самостійно вибирати зміст, збалансований темп вивчення навчального матеріалу, його складність; наявність деталізованого зворотного зв'язку; застосування новітніх інноваційних технологій навчання; побудова інноваційного освітньо-культурного середовища [3].

Персоналізація процесу професійної підготовки фахівців – це підхід до навчання, який враховує індивідуальні потреби, здібності, інтереси та цілі кожного фахівця, що означає адаптацію навчального процесу для забезпечення найкращих умов для розвитку кожного індивідуума [4]. Такий підхід до професійної підготовки фахівців включає:

1. Створення індивідуальних навчальних планів, освітніх програм, що враховують сильні та слабкі сторони працівника, його інтереси та кар'єрні цілі.

2. Надання фахівцям можливості обирати курси, які відповідають їхнім інтересам і майбутнім планам.

3. Використання цифрових технологій, онлайн-ресурсів і штучного інтелекту для адаптації навчальних матеріалів до рівня знань і стилю навчання індивідуума; різних методів, таких як проєктне навчання, ігрові технології та інтерактивні завдання, реалізація проєктів, розв’язання професійних завдань і тематичних кейсів різного спрямування, моделювання тощо.

4. Впровадження системи оцінювання, яка враховує індивідуальні досягнення фахівця.

5. Забезпечення кожного фахівця наставником, тьютором або коучем, який допомагає орієнтуватися в навчальному процесі, ставити цілі та розробляти плани їх досягнення.

Персоналізація процесу професійної підготовки фахівців спрямована на те, щоб кожен працівник міг максимально реалізувати свій потенціал і досягти успіху в навчанні та майбутній професійній діяльності. Використання штучного інтелекту дає змогу аналізувати поведінку, навички та професійний досвід працівників, адаптувати кадрову політику до мінливих умов на ринку праці.

Для організації навчання та розвитку персоналу підприємства можуть бути використаними різні види освітніх smart-технологій, що наведені на рис.1.

E-learning або електронне навчання – це навчання, яке передбачає передачу та отримання знань через інтернет та цифрові технології. E-learning – це більше методика навчання, тоді як «distance learning» є формою навчання [17].

M-learning або мобільне навчання – це навчання з будь-якого місця та в будь-який час, оскільки мобільний пристрій завжди перебуває під рукою. Персонал підприємства отримує доступ до просунутої онлайн-платформи, яка допоможе їм поглибити необхідні практичні навички [7].

U-learning (ubiquitous learning) або усепроникаюче (повсюдне) навчання – це безперервний процес самовдосконалення за допомогою найрізноманітніших інформаційних пристроїв від комп'ютера до смартфона чи планшета, що мають доступ до мережі інтернет у будь-якому куточку світу [1].

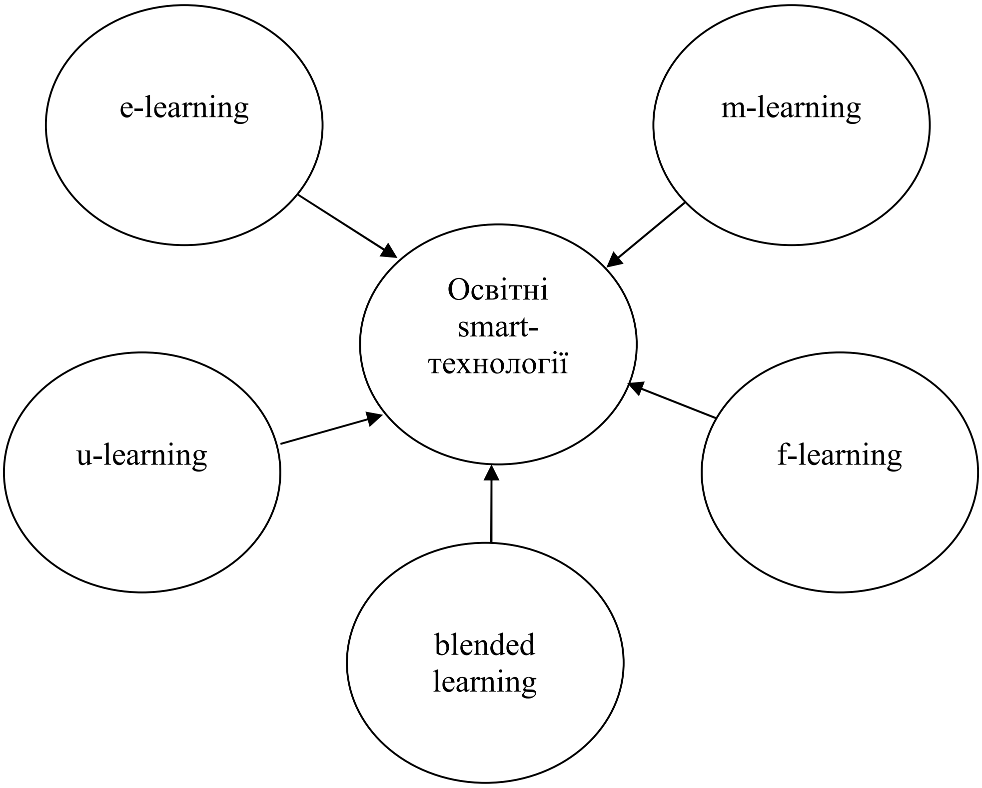

Рис. 1. Види освітніх smart-технологій

Джерело: складено авторами за [10]

F-learning (flipped learning) або «перевернуте» навчання – це форма активного навчання, що дозволяє «перевернути» звичайний процес навчання таким чином: студенти поза аудиторією переглядають відповідні навчальні матеріали, що будуть розглядатися на наступному занятті, самостійно вивчають теоретичний матеріал, а в аудиторії здійснюють його обговорення, виконують практичні завдання [6].

Blended learning або змішане навчання – це технологія навчання, яка поєднує вище зазначені технології з аудиторними заняттями за традиційною системою.

Взаємозв'язок різних освітніх smart-технологій навчання та традиційного навчання представлено на рис. 2.

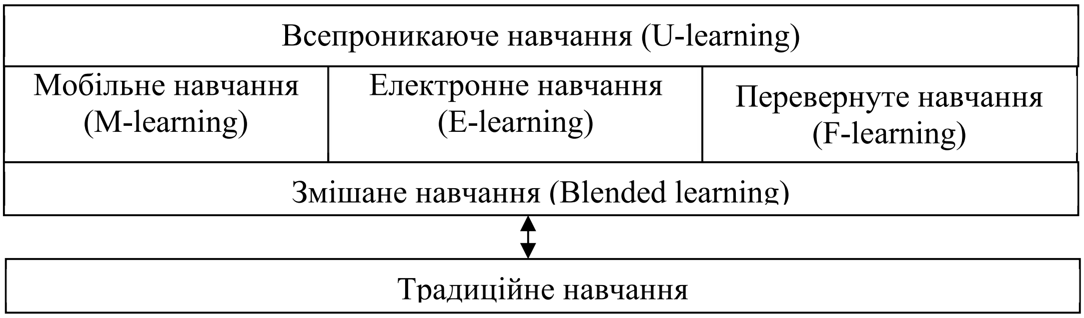

Рис. 2. Взаємозв'язок різних освітніх smart-технологій навчання та традиційного навчання

Джерело: складено авторами за [6]

Прикладами використання освітніх smart-технологій для навчання і розвитку персоналу підприємств є наступні:

– корпоративні платформи для онлайн-навчання, такі як «Coursera for Business», «Udemy Business» або внутрішні «LMS»;

– VR-тренінги, наприклад, для навчання техніці безпеки або підготовці персоналу до можливих екстремальних ситуацій на підприємстві;

– мобільні чат-боти, які виконують роль віртуальних наставників або відповідають на типові питання працівників підприємства.

– Big Data-аналітика для оцінки компетенцій працівників і планування їх кар'єрного зростання на підприємстві;

– мобільні додатки, що підтримують мікронавчання (microlearning) – невеликі навчальні блоки для швидкого засвоєння необхідного навчального матеріалу працівником.

Попри численні переваги, впровадження освітніх smart-технологій у навчання та розвиток персоналу підприємства може зіткнутися з певними викликами:

– необхідністю додаткових інвестицій від підприємства у розробку освітніх програм;

– проблемами кібербезпеки та захисту персональних даних персоналу підприємства;

– недостатньою цифровою грамотністю працівників підприємства;

– низьким рівнем інтеграції спеціалізованих і загальносистемних програмно-технічних платформ в освітню діяльність [10];

–необхідність цілодобового безкоштовного доступу до Wi-Fi або створення безкоштовних Wi-Fi зон на території підприємства [6];

–певними технічними проблемами: обмежений термін роботи батареї мобільного пристрою та неперервна підзарядка (бездротова) [6];

–відсутністю в Україні нормативно-правового та законодавчого регулювання застосування освітніх smart-технологій у навчанні та розвитку персоналу підприємства.

В умовах війни в Україні зазначені вище проблеми посилюються періодичним відключенням світла та доступу до інтернет мережі на підприємстві. Однак, з подальшим з розвитком освітніх smart-технологій та їхньою інтеграцією у діяльність сучасних підприємств ці проблеми поступово зникатимуть.

Таким чином, освітні smart-технології стають потужним інструментом для підвищення ефективності навчання та розвитку персоналу підприємства. Вони забезпечують персоналізацію, доступність, інтерактивність і автоматизацію бізнес-процесів підприємств, сприяючи підвищенню професійної компетентності працівників і конкурентоспроможності підприємства в цілому.

У майбутньому освітні smart-технології ставатимуть дедалі більш інтелектуальними, пропонуючи ще більшу інтеграцію із реальними робочими процесами, що сприятиме створенню ефективних і адаптивних систем навчання і розвитку персоналу підприємства.

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2.15. Management of inclusive development of the national economy

Управління інклюзивним розвитком національної економіки

У сучасних умовах концепція інклюзивного розвитку активно розвивається і просувається на рівні світових організацій. У підсумковому документі саміту ООН 2015 р. «Перетворення нашого світу: порядок денний у сфері сталого розвитку до 2030 р.» [1] ідея інклюзивності синергована у формулюванні практично усіх 17 затверджених ним Цілей сталого розвитку (ЦСР).

Оцінку інклюзивного зростання вперше було опубліковано колективом науковців у 2013 році за підтримки МВФ.

На Всесвітньому економічному форумі в Давосі (Швейцарія) у 2018 році було запропоновано Індекс інклюзивного росту та розвитку (Inclusive Growth and Development Index, скорочено IDI) як показник, альтернативний до ВВП на душу населення. Проте ВВП на душу населення враховується як одна зі складових при визначенні індексу IDI. На форумі обгрунтовано, що рейтинг країн за шкалою індексу інклюзивного зростання та розвитку здатен більш точно відобразити справжній стан речей в тій чи іншій країні.

За задумом Всесвітньому Економічному форумі в Давосі він повинен інформувати та спонукати суспільства до сталого та інклюзивного економічного розвитку. Іншими словами, це агрегований показник, який враховує не тільки ВВП, а ще й 11 параметрів. 12 складових індексу IDI розділені на три групи (табл. 1).

Нові дані Конференції ООН з торгівлі та розвитку UNCTAD [2], опубліковані 16 листопада 2024 р., підкреслюють обмеження валового внутрішнього продукту (ВВП) як всеохоплюючого показника прогресу, підкреслюючи, що вищий економічний результат не означає більш інклюзивне та стійке зростання.

Запроваджений у червні 2022 року Індекс інклюзивного зростання [3] Організації ООН з питань торгівлі та розвитку вимірює не лише традиційні економічні показники, такі як ВВП, але й показники умов життя, рівності та екологічної стійкості.

У 2023 році його було розширено, щоб охопити економіки таких держав, як Китай та Індія, і тепер включає 129 країн, що представляють 93% населення світу та 96% світового ВВП.

Таблиця 1

Індекс інклюзивного розвитку (Inclusive Development Index)

Група	Показники	Параметри	Одиниці вимірювання
(i)	**Зростання і розвиток**	ВВП на душу населення	дол. США у величинах 2010 р.
		продуктивність праці – ВВП на одного працівника;	дол. США
		очікувана тривалість здорового життя;	роки
		зайнятість населення;	%
(ii)	**Інклюзивність**	коефіцієнт розшарування суспільства за доходами;	від 0 до 100
		рівень бідності;	%
		коефіцієнт розшарування суспільства за розподілом багатства;	від 0 до 100
		медіанний дохід;	дол. США
(iii)	**Наступність поколінь і сталість розвитку**	скориговані чисті заощадження (% від валового національного доходу);	%
		парникова інтенсивність ВВП;	кг викидів СО2 на дол. США
		державний борг;	% від ВВП
		коефіцієнт демографічного навантаження	%

Джерело: складено авторами

Останні дані демонструють, що, незважаючи на те, що зберігаються значні диспропорції – середній загальний бал розвинених країн за інклюзивним зростанням майже вдвічі вищий, ніж у країн, що розвиваються, - деякі розриви скорочуються.

Наприклад, в екологічній категорії розвинені країни отримали в середньому 42,5 бала зі 100 можливих, порівняно з 31,3 бала для країн, що розвиваються – менш різкий контраст, ніж в економічній категорії, де показники становлять 41,7 та 14,7 бала, відповідно.

Країни з розвиненою економікою, такі як Люксембург, Швейцарія та Ірландія, продовжують очолювати загальний індекс. Сінгапур та Об'єднані Арабські Емірати (ОАЕ) є єдиними країнами, що розвиваються, у першій 30-ці.

Але більш уважний розгляд показників виявляє сильні показники економік, що розвиваються, за різними складовими.

Сінгапур, наприклад, набрав 90,4 бала за умовами життя, випереджаючи багато розвинених країн. Аналогічно, Аргентина, Бразилія, Чилі, Китай, Коста-Ріка, Малайзія, Таїланд, Туреччина, ОАЕ та Уругвай мають показники вище 70, що ближче до середнього показника розвинених країн (85,3), ніж до середнього показника країн, що розвиваються (43,8).

З точки зору рівності, Китай (78,7), Мексика (77), Аргентина (76,8) і Намібія (75,3) відповідають середньому показнику розвинених країн (77,2), значно перевищуючи середній показник країн, що розвиваються (45,2) [2].

Індекс підкреслює нагальну проблему розриву зв'язку між економічним зростанням, використанням природних ресурсів та відходами, оскільки розвинені економіки виробляють приблизно вдвічі більше відходів на душу населення, ніж країни, що розвиваються.

Люксембург, наприклад, лідируючий в економічному стовпі, виробляє приблизно 800 кг відходів на людину щороку, що становить понад 2 кг щодня.

На іншому кінці спектру, за оцінками, жителі Лесото виробляють лише 37 кілограмів відходів на душу населення щороку. Загалом, найменш розвинені країни та малі острівні держави, що розвиваються, мають найнижчі показники відходів на душу населення.

Незважаючи на те, що вищий рівень економічного виробництва та населення з високою щільністю зазвичай створюють більше відходів, такі країни, як Японія і Південна Корея, демонструють, що ефективне управління відходами можливе.

Оскільки світ бореться з нагальними викликами, пов'язаними зі зміною клімату та розширенням соціально-економічної невідповідності, індекс надає необхідні дані для політиків, щоб визначити сфери для вдосконалення та розробити більш ефективні рішення.

Потреба у більш комплексному підході до оцінки розвитку стала ключовою темою Саміту майбутнього (Summit of the Future) [4].

На Саміті майбутнього 22 вересня 2024 року світові лідери прийняли «Пакт майбутнього» та додатки до нього: «Глобальний цифровий договір» та «Декларацію про майбутні покоління».

У Розділах Пакту майбутнього [5]:

Сталий розвиток і фінансування розвитку;

Міжнародний мир і безпека;

Наука, технології та інновації та цифрове співробітництво;

Молодь і майбутні покоління;

Трансформація глобального управління;

наголошено:

«Ми віримо, що існує шлях до світлого майбутнього для всього людства, включаючи тих, хто живе в бідності та вразливих ситуаціях. Діями, які ми робимо сьогодні, ми сповнені рішучості стати на цей шлях, прагнучи світ, який є безпечним, мирним, справедливим, рівним, інклюзивним, стійким і процвітаючим, світу, в якому добробут, безпека та гідність і здорова планета гарантовані для всього людства» [5].

«Ми визнаємо, що наші зусилля, спрямовані на виправлення несправедливості і зменшити нерівність всередині країн і між ними, щоб побудувати мирні, справедливі та інклюзивні суспільства» [5].

В Україні забезпеченню реалізації ЦСР присвячена Національна доповідь «Цілі Сталого Розвитку: Україна», підготовлена Міністерством економічного розвитку та схвалена Міжвідомчою робочою групою високого рівня для організації процесу імплементації ЦСР для України [6]. Показники Індекс інклюзивного зростання (IGI) України у 2021 р. наведено в табл. 2.

Таблиця 2

Індекс інклюзивного зростання (IGI) України у 2021 р.

Категорія	Загальний індекс	Економіка	Побутові умови	Рівність	Навколишнє середовище
Україна	32,7	14,2	68,7	57,7	20,3

Джерело: наведено авторами на основі [3]

Динаміку стану інклюзивної економіки України та її інклюзивне зростання проаналізовано на основі звітів міжнародних та національних організацій «World Development Indicators» (WDI) [7].

Аналізування проведено по чотирьом категоріям показників [8]: екологічні; економічні; соціальної рівності; умов проживання. До екологічних показників належать: рівень викидів діоксиду вуглецю (CO2); рівень енергоємності первинної енергії; відсоток загальної площі суші, які є наземною природоохоронною територією (рис. 1).

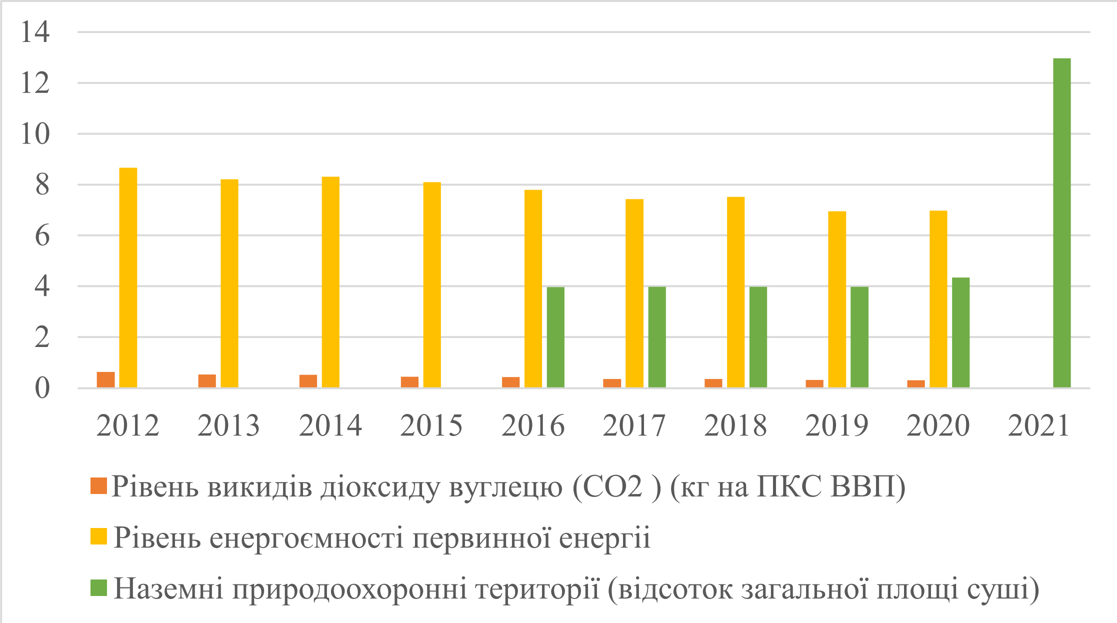

Рис. 1. Динаміка даних WDI екологічних показників України

Джерело: складено авторами на основі [7]

До економічних показників належать: ВВП на душу населення ПКС; ВВП на одну зайняту особу (рис. 2); експорт товарів; співвідношення зайнятого населення до загального (рис. 3).

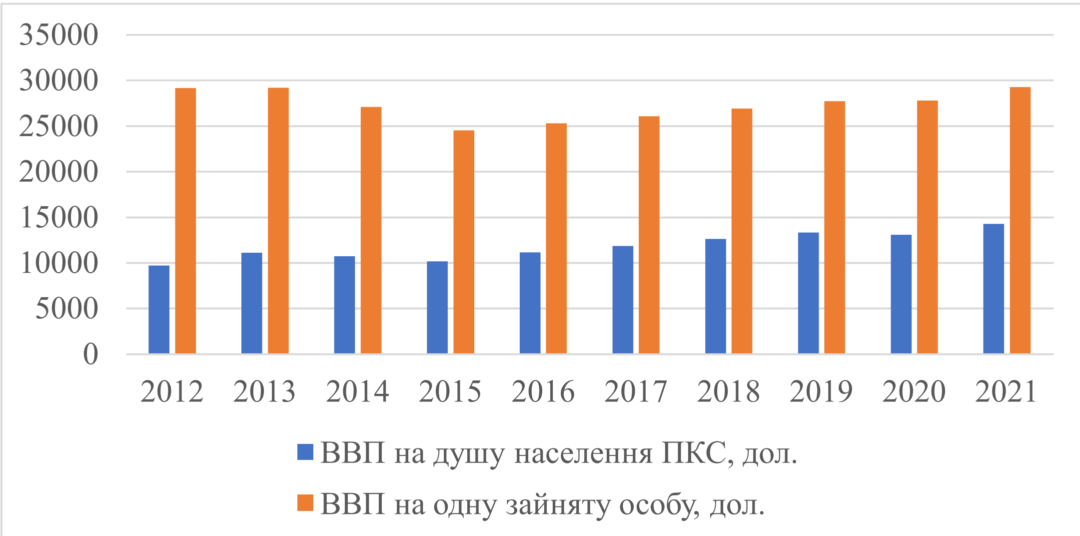

Рис. 2. Динаміка даних WDI економічних показників України

Джерело: складено авторами на основі [7]

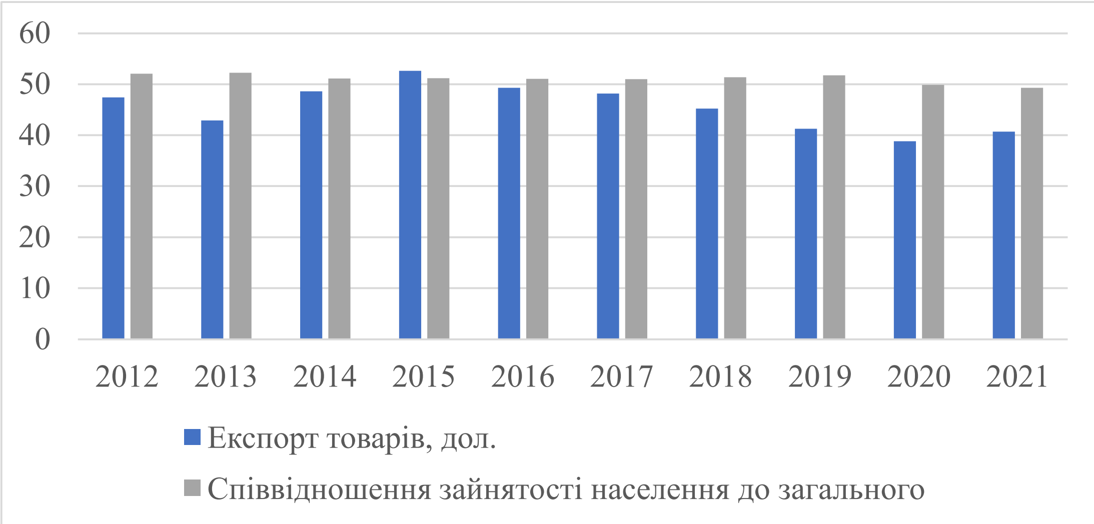

Рис. 3. Динаміка даних WDI економічних показників України

Джерело: складено авторами на основі [7]

До показників соціальної рівності належать: індекс Джині; коефіцієнт бідності при доході 6.85 на день (2017 Р) (% населення) (рис. 4).

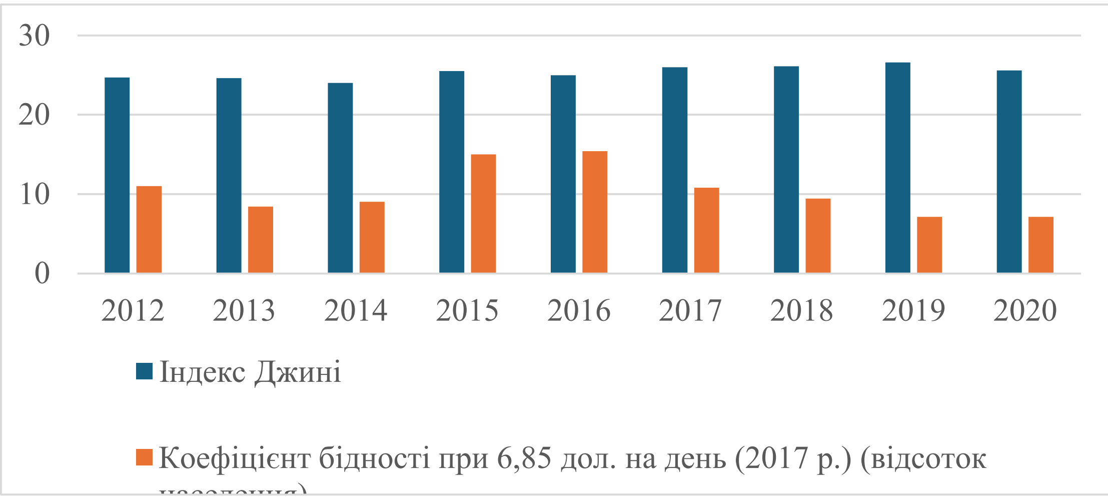

Рис. 4. Динаміка даних WDI показників соціальної рівності України

Джерело: складено авторами на основі [7]

До показників умов проживання належать: загальний рівень безробіття; зайнятість жінок у сфері послуг; люди користуються безпечними послугами питної води; наймані працівники жінки (рис. 5); підписки на фіксований широкосмуговий зв’язок (на 100 осіб); співвідношення рівня участі жінок і чоловіків у робочій силі (відсоток) (змодельована оцінка МОП); частка місць, які займають жінки в національних парламентах (відсоток) (рис. 6).

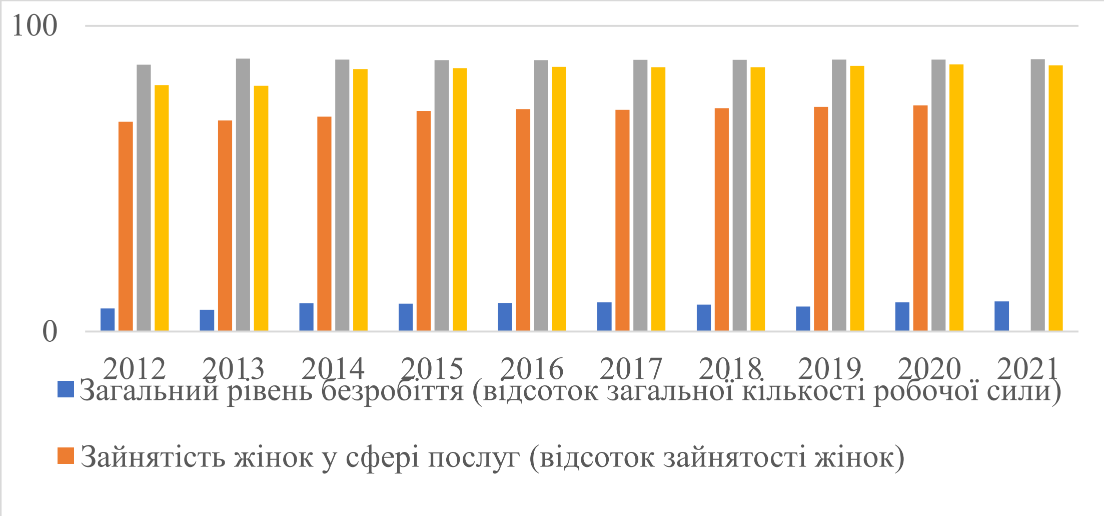

Рис. 5. Динаміка даних WDI показників умов проживання в Україні

Джерело: складено авторами на основі [7]

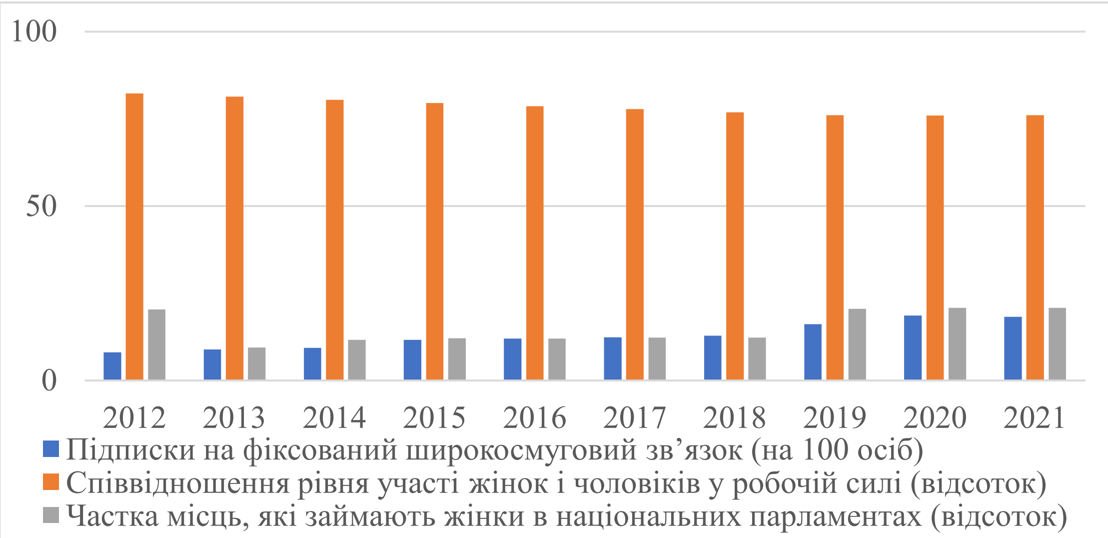

Рис. 6. Динаміка даних WDI показників умов проживання в Україні

Джерело: складено авторами на основі [7]

Ключовим наративом інклюзивного розвитку є формування політики сталого економічного зростання, що передбачає створення гідних умов праці, акумулювання фінансових ресурсів держави для їхнього подальшого інвестування у природоохоронні заходи, науку, освіту, культуру і спорт, охорону здоров'я, інфраструктуру, соціальне забезпечення і соціальний захист [9].

Публічне управління інклюзивним розвитком економіки України передбачає цілеспрямований вплив держави та інститутів громадянського суспільства на задоволення потреб та реалізацію можливостей усіх верств населення [9].

Сучасна політика інклюзивного розвитку України має реалізовуватись у межах концепції сталого розвитку і, відповідно, Глобальних цілей сталого розвитку [10] та Європейського зеленого курсу (зелена трансформація) [11].

У межах глобального та європейського зеленого курсу формуються такі новітні сфери, покликані стимулювати інклюзивний розвиток економіки [9]:

1) smart-економіка – розумна економіка, заснована на моделі цифровізації виробництва, розподілу та споживання із використанням smart-технологій, що передбачає досягнення цілей SMART: S – Specific (конкретність/специфічність), M – Measurable (вимірюваність), A – Achievable (досяжність), R – Relevant (релевантність/доречність), T – Time-bound (обмеженість у часі);

2) біоекономіка – охоплює всі сектори та системи, які залежать від біологічних ресурсів (тварин, рослин, мікроорганізмів і похідної біомаси, включаючи органічні відходи), їхні функції та принципи [12 с. 5]; повертає ресурси в реальний сектор, створює робочі місця, сприяє підвищенню рівня екологічності виробництва та споживання, дає змогу оптимально використовувати обмежені ресурси на безвідходній циркулярній основі [13];

3) циркулярна економіка – забезпечує покращення добробуту населення та екологізацію суспільства шляхом скорочення споживання та відновлення ресурсів і вторинної переробки матеріалів;

4) зелена економіка – забезпечує покращення добробуту населення, соціальної справедливості, зменшення екологічних ризиків та екологічного дефіциту шляхом використання зелених технологій у сільському та лісовому господарстві, рибальстві, енергетиці, промисловості, будівництві, транспорті, туризмі та переробці відходів.

Суттєвий вплив на динаміку та рівень інклюзивного розвитку чинить інституційне середовище, що являє собою сукупність політик, соціальних, економічних, екологічних та юридичних норм і правил, що визначають основи поведінки людей в усіх сферах суспільного життя. У цьому контексті, по-перше, важливим є задіяння внутрішніх (ендогенних) чинників формування сприятливого інституційного середовища, формування моральної свідомості бізнесу до вкладення власних капіталів в економіку України і діяльності державних інституцій, спрямованої на забезпечення добробуту населення [14].

По-друге, реалізація заходів, визначених Глобальною ціллю 17 «Партнерство заради сталого розвитку», що ґрунтується на принципі забезпечення економічної та соціальної інклюзії, спрямовує міжнародну допомогу транзитивним країнам [8].

Необхідність управління інклюзивним розвитком національної економіки передбачає: 1) створення умов для задоволення потреб та реалізації можливостей усіх без винятку членів суспільства; 2) подолання економічної та соціальної нерівності; 3) подолання бідності; 4) ліквідацію дискримінації у будь-яких її проявах; 5) адаптацію до сучасних тенденцій старіння населення; 6) зменшення рівня забруднення довкілля та боротьба із наслідками зміни клімату; 7) врахування швидких темпів НТП, зменшення негативного впливу та використання його переваг для задоволення власних потреб і реалізації можливостей; 8) адаптацію до умов глобалізації і використання її переваг для задоволення власних потреб і реалізації можливостей; 9) опанування цифрових навичок та їх використання; 10) створення безпечного середовища життєдіяльності; 11) формування інклюзивного суспільства [15].

Реалізація цих заходів забезпечить управління інклюзивним розвитком національної економіки України для побудови сталого та інклюзивного суспільства.

Дослідження проведено за підтримки Європейського Союзу в рамках проєкту Жана Моне [номер гранту ERASMUS-JMO-2023-HEI-TCH-RSCH, 101127252 – «Просування європейських навичок та підходів до сталої біоекономіки в умовах сучасних викликів в Україні» (PESAB)].

«Фінансується Європейським Союзом. Проте висловлені погляди та думки належать лише авторам і не обов'язково відображають погляди Європейського Союзу чи Європейського виконавчого агентства з освіти та культури. Ні Європейський Союз, ні орган, що надає гранти, не можуть нести за них відповідальності».

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"Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European. Neither the European Union nor the granting authority can be held responsible for them".

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Part 3

HOSPITALITY AND TOURISM INDUSTRY: STATUS AND CHALLENGES

ІНДУСТРІЯ ГОСТИННОСТІ ТА ТУРИЗМУ: СТАН ТА ВИКЛИКИ

3.1. Motivation and stimulation of staff work in restaurant service

The presence of qualified, permanent and motivated personnel who can identify and regulate tasks at different levels and achieve goals is one of the most important factors for the effective operation of modern companies in a market economy[263]. Therefore, for effective of the company, it is necessary to have reliable, stable and persistent employees on its staff, aimed at realizing their labor potential.

Currently, the world is creating effective personnel management systems in companies. It is believed that the task of these systems is to find effective ways to manage labor and guarantee the activation of the human factor. This factor is motivation, which affects the effectiveness of human work. Consequently, both the economic and social effect of the company, and, of course, the final result depend on the effectiveness of employee management and their motivation.

And in the conditions of the development of the economy of our country, such a modern mechanism as personnel motivation is not very developed, and therefore certain problems with competitiveness arise[264]. Therefore, the topic of motivating the work of company personnel is very interesting and relevant in our time.

So, let's highlight one concept "staff labor motivation", which implies encouraging staff to work to achieve the company's goals by meeting their needs and is one of the most important functions of management[265].

The most important goal of labor motivation is to obtain greater returns from the use of available labor resources[266]. This affects the overall efficiency and profitability of the company.

There are modern concepts of personnel motivation, which are based on four basic theories based on human needs (Fig. 1).

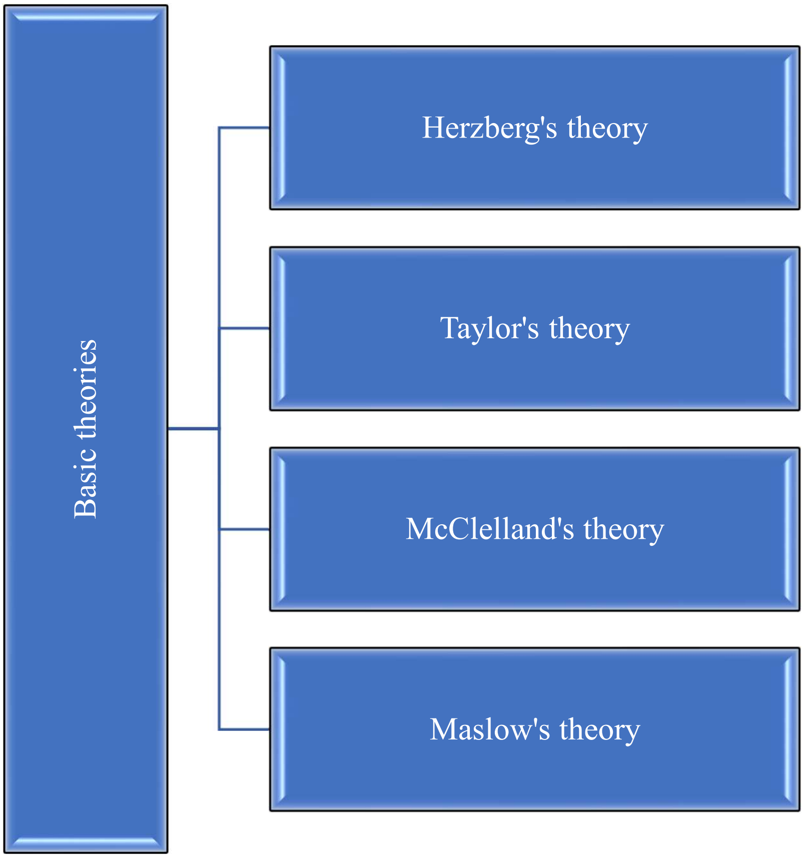
263 Stoner, J. A. F; Freeman, R. E & Gilbert, D.R. (2000) Management (Sixth Edition). New Delhi:Prentice – Hall of India, 11.

264 Robbins. S. P. (2000) Organisational Behaviour (Ninth Edition) New Delhi: Prentice – Hall of India, 97.

265 Langfred C. W. 2000. The paradox of self-management: Individual and group autonomy in work groups. Journal of Organizational Behavior, 21: 563-585.

266 Bala O.I., Corporate culture: functions and duties of the Institute of Education and Science of the National University "Lviv Polytechnics", Lviv 2007, 127.

Figure 1. Four basic theories based on human needs



Source: Compiled by the author based on[267]

- Herzberg's theory. In this theory, it is believed that the efficiency and effectiveness of an enterprise depends on external and internal conditions. In accordance with them, it is necessary to provide workers with comfortable working conditions (external aspect) and stimulate a sense of satisfaction from work (internal aspect);
- Taylor's theory. The founder of this theory believes that an employee's motivation directly depends on how well the job satisfies his physiological needs and instincts. In accordance with this, the motivation system should be built on a number of management methods, among which the most important are: setting clear rules for performing job duties, remuneration corresponding to the number of working hours or performance, and there is a minimum degree of pressure on employees. That is,

[267] Berislavska A.V., Motivating management personnel to ensure increased economic results of enterprise: abstract. dis. ...cand. ekon. Sciences Kherson. national tech. University, Kherson 2013, 117.

colleagues should experience a certain level of competition at work and even excitement;

- McClelland's theory. A person is guided by three basic desires: power, belonging to a certain VIP group of people, success[268]. In accordance with this, the entire team can be divided into 3 conditional groups, for which separate methods of stimulation are selected;

- Maslow's theory. Perhaps the most popular theory of human needs in the sociological space. Maslow saw the individual as a being with needs in the form of a pyramid. In the first place we have physiological needs (food, water, shelter, etc.), in second place is the need for safety, in third place is love (if we talk about work, then respect from colleagues), in fourth place is recognition (with on the part of colleagues and society), and on the fifth – self-improvement as a person and a professional.

Work motivation today is one of the driving forces that helps in solving a complex of socio-economic problems. Methods of motivating staff work may be different. But mainly they depend on the incentive and management system of the enterprise[269]. A large number of companies and firms in our country use traditional mechanisms of material motivation, for example, fixed salaries, one-time bonuses, etc., without using the experience of using modern methods of motivating personnel of companies in developed market economies[270].

Methods of motivating employees are part of the organizational culture. Many scientists share their thoughts on modern personnel practices. Therefore, we will first consider methods of motivating staff work on the one hand (Table 1).

Today, a large number of companies in the world use the remuneration method, and therefore practice employee participation in income. It is understood that with additional profit of the enterprise through increased productivity and quality, the profit is divided between the company and the staff. The division occurs among all employees of the enterprise who made efforts to do this.

[268] Kozlowski S. W. J., Gully S. M., Salas E., Cannon-Bowers J. A. 1996. Team leadership and development: Theory, principles, and guidelines for training leaders and teams. Advances in Interdisciplinary Studies of Work Teams, 3: 253-291.
[269] Kleingeld A., van Mierlo H., Arends L. 2011. The effect of goal setting on group performance: A meta-analysis. Journal of Applied Psychology, 96: 1289-1304.
[270]Doronina M. S., Socio-economic mechanism of motivation of work behavior, Economics of Development 2018 (2), 20 – 22.

Table 1. Basic methods of motivating staff work

Motivation methods	Essence of the method
Compulsion	Based on a feeling of fear of being punished. For example, in the material sphere, coercion is associated with fines, dismissals, transfer to another, low-paid position or job. In the socio-psychological sphere of management, the coercion method most often uses forms associated with the fear of public humiliation, insult and stress. A person, afraid of being offended or worried about his health, becomes submissive
Reward	Based on a system of economic and non-economic incentives for highly productive labor
Solidarity (identification)	Development of employees' values and goals that are close to the values and goals of the organization, which is achieved through persuasion, education, training and creating a favorable organizational climate in the organization. At the same time, employees perceive motives as internal. As a result, employees begin to view the well-being of the organization as the basis of their well-being, and its successes and failures as their own.
Device	Most applicable for middle and even upper-level managers. It allows employees to influence the goals and objectives of the organization itself, adapting them partially to their goals. People are more willing to follow their attitudes than those of others. The strength of this method of motivation, first of all, is that employees who influence the goals and objectives of the organization have a feeling of co-owner, an accomplice in the most important strategic issues of the existence of the organization or their division

Source: Compiled by the author based on[271]

[271]Melnikova T.F., Study of staff loyalty to the company, Young Scientist 2018 (23).

There are a certain number of types of personnel compensation systems based on the collective distribution of benefits from productivity growth:

- the Scanlon system is based on the distribution between employees and the company of savings in wage costs resulting from increased labor productivity, specifically output per employee;

- Rucker's system is based on bonuses to workers for increasing the volume of conditionally net production per dollar of wages. on bonuses to employees for saving working time (in man-hours) spent on producing a given volume of products;

- the Iproshear system is based on bonuses to employees for saving working time (in man-hours) spent on producing a given volume of products.

Rewards are shown in different forms and are based on the provisions of the theory of needs in that goals, aspirations, values and behavior act as motives. These could be gifts, travel vouchers, bonuses, etc. Reward encourages you to believe in yourself, gives hope for successful completion of tasks, and increases the desire to work with higher efficiency. This makes it possible to increase the popularity of achievements in the field of increasing efficiency and quality of work, which were previously invisible.

Another form of motivation that is widely used in the practice of foreign and domestic companies is the use of flexible work schedules. A recent technology in motivating staff is grading. This is the formation of a structure of positions according to which salaries are calculated. This is where it comes down to creating a tool to measure the value of each position in the organization.

So, there are a large number of methods for motivating staff that make it possible to create a developed motivation system in a company. The use of each method of motivation or their combination depends on the specific conditions in which the enterprise operates[272].

Modern methods of personnel motivation:

Economic methods of motivating personnel provide, in addition to wages, cash payments (bonuses) based on work results or special individual rewards as recognition of the value of a particular employee. This method is the most common in our country.

The dominant ones are:

- cash payments for achieving certain goals;

- bonuses, allowances and incentive payments;

[272]Johnson M. D., Hollenbeck J. R., Humphrey S. E., Ilgen D. R., Jundt D., Meyer C. J. 2006. Cutthroat cooperation: Asymmetrical adaptation to changes in team reward structures. Academy of Management Journal, 49: 103-119.

- special rewards to encourage a healthy lifestyle (for example, for quitting smoking);
- present;
- additional payment for length of service;
- free lunches will help create employee loyalty and show gratitude for good work;
- accrual of bonuses, and subsequently exchange them for something.

In other countries, namely the USA, England, France and others, managers are rewarded not only with cash bonuses, but also with shares and property rights.

Social and psychological methods of work motivation are also of great importance for creating a favorable psychological climate in the team. This includes:

- sharing the company's success with employees. These can also be monetary payments, because when staff know that they helped and contributed to achieving the goals of the enterprise, they are more responsible for their work;
- participation in innovation. Employees feel trusted and valued, especially when ideas are accepted;
- business trips to other cities and countries as a reward;
- good workspace, equipment, comfort;
- parties. If they're fun, they can be a great motivational tool, giving people the opportunity to get to know each other better and have a little fun.

Social and psychological methods of motivating staff work include the following elements[273]:

- creating conditions under which people would feel professional pride in their involvement in the assigned work and personal responsibility for its results;
- the presence of a challenge, providing everyone at their workplace with the opportunity to show their abilities, cope better with the task, and feel their importance. For this task there must be a certain amount of risk, but also a chance of success. Workers may be given the right to sign documents in which they participated;
- high appreciation, which can be personal and public. The essence of personal assessment is that particularly distinguished employees are mentioned in special reports to the management of the organization and are personally greeted by the administration on the occasion of holidays and family dates. Public assessment provides for the possibility of declaring gratitude, awarding valuable gifts, certificates of honor, badges, entering the Book of Honor and the Honor Board, conferring honorary titles, titles of the best in the profession, etc.;

[273] Watanabe, S., Kanazawa, Y. (2009).A Test of a Personality-Based View of Intrinsic Motivation. Japanese Journal of Administrative Science, Vol. 22, No.2, 117-130.

- socio-psychological methods include higher goals that inspire people to effective and sometimes selfless work. The satisfaction that arises when they are achieved influences behavior in similar situations in the future;

- morally stimulate such psychological aspects as creating an atmosphere of mutual respect, trust, caring for personal interests, encouraging reasonable risks, tolerance for mistakes and failures, etc.;

- providing equal opportunities to everyone, regardless of position, contribution, personal awards, eliminating areas prohibited for criticism. One of the forms of incentives that, in essence, combines those discussed above. We are talking about promotion in a position, that gives both higher wages (economic incentive) and interesting and meaningful work (organizational incentive), and also reflects recognition of the merits and authority of the individual by getting into a higher status group (moral incentive).

Organizational and administrative methods include[274]:

- career growth. Even if there is a low promotion in your career, this will give a good boost.

- professional growth. The professional growth factor can be perfectly used within a large company, where there is the opportunity to move from one area of activity to another.

- flexible work schedule.

- team creation.

The system of motivation and stimulation of labor is a critical aspect of managing personnel in a modern enterprise. It involves various strategies and mechanisms designed to encourage employees to perform at their best and contribute to the overall success of the organization.

Scientists have identified approaches to the creation and characteristics of personnel motivation systems (Table 2).

None of these approaches to creating a system of motivation for enterprise personnel is used in its pure form. It is necessary to select the main ideas of each approach and adapt them to the conditions and characteristics of the company’s activities.

[274] Atamanchuk G.S., Motivation of work in industrial enterprises: author's abstract. dis. ...cand. ekon. Sciences National acad. Sciences of Ukraine, Institute of Economics. Prmislovosti, Donetsk, 2010, 489.

Table 2. Approaches to personnel motivation systems

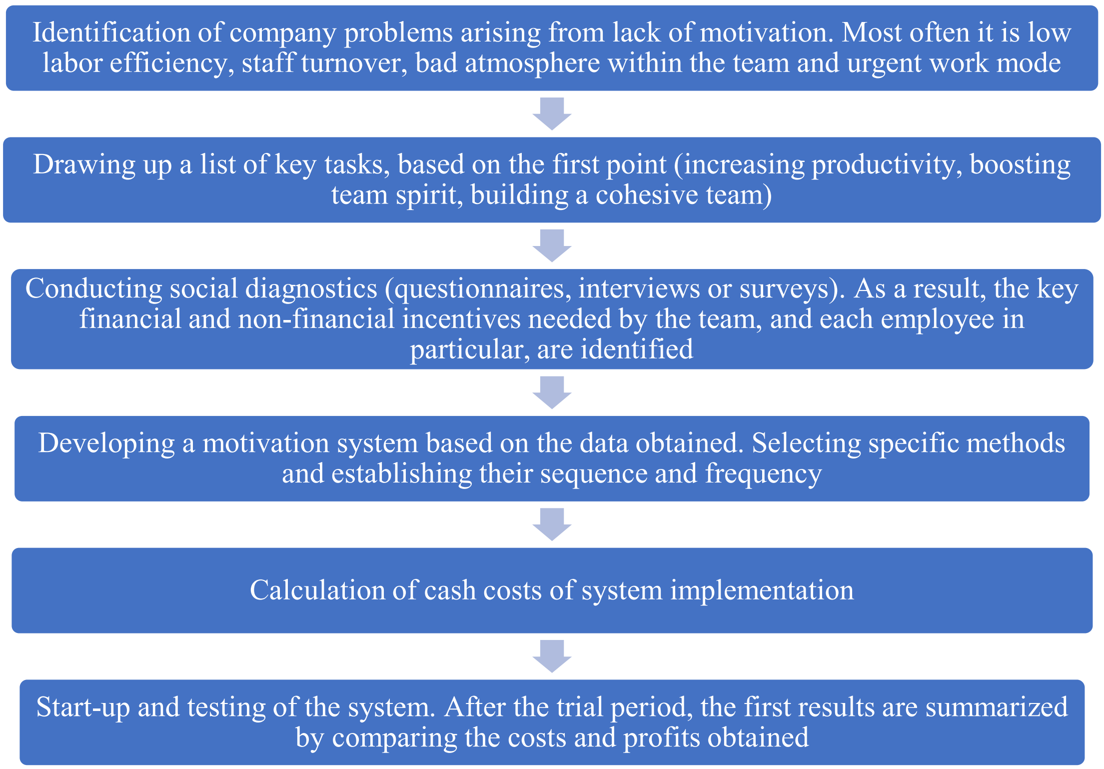
Approaches	Essence
Administrative and technologic[a]	This approach is based on the distribution of complex work activities into separate operations, determining time and wages for each operation. Accordingly, under such conditions there is no need to develop a complex motivation system. But the implementation of the administrative-technological approach the level of employee motivation
Resource-scarce	Methods of negative motivation for "parasitism" were most actively used, which was the reason for the development of a motive among workers to participate in work activities, regardless of the final quantitative and qualitative results of labor
Software-industry	Provides for differentiation of motivation systems depending on the industry sector of the enterprise
Mental	The positive side of the mental approach is the possibility of using national traditions to apply modern methods of management, work organization, and staff motivation. But it slows down the development of market relations in their pure form, when they are freed from all national restrictions
"Patriarchal"	Similar to the mental approach. The difference between them lies in the prioritization of the application of different types of incentives, depending on their carriers
Organizational	Considering that one of the most important motives when using this approach is the motive of achievement, it can be assumed that in the process of the employee realizing his power ambitions, which should be aimed at maximizing the results of his work, he will receive approval from managers
Social-behaviora	It is based on the theory of small groups and consists in the formation of brigades, small teams as part of the work collective. However, the implementation of this approach will be appropriate provided that the priority needs of the employee are social
Corporate	The positive consequences of applying a corporate approach to the construction and development of enterprise personnel motivation systems are: focus on the development of all employee abilities; emphasis not only on enhancing work activity, but also organizing employee behavior; satisfaction of needs
Anthropocentric	The basis becomes the complex of needs of the staff, and not the resources available to the organization, the nature of the relationship between the manager and the employee, traditions, etc. With this approach, motivation systems are focused on significant investments in the employee to improve his abilities and improve the quality of life. The anthropocentric approach today most meets modern requirements

Source: Compiled by the author based on[275]

[275]Nikolaeva I.I., Foreign experience in personnel motivation, Human progress 2018 (7).

The development and implementation of a personnel motivation system consists of the following steps (Fig. 2).

Figure 2. Steps to develop and implement a staff motivation system



Source: Compiled by the author based on[276]

The features of the labor motivation system are:

- promoting, the formation and achievement of socially significant goals of the enterprise and thereby maintaining a balance between economic goals and the social responsibility of the enterprise;

- focus on creating a system of economic incentives for work, that is, the level, differentiation, structure and dynamics of personnel costs;

- gradual transition from individual to democratic management style;

[276]Abramov V.M., Motivation and stimulation in the minds of the transition to the market, Kiev 2005.

- performing the function of communication between the management and owner of the enterprise and its employees to create and maintain mutual understanding.

So, let's name the components that an effective system of staff motivation includes[277]:

- the remuneration system should depend on the contribution of the employee, the department in which he works, and on the final result of the enterprise's activities;
- social guarantees, which include payment of sick leave; job security; insurance programs; financial consulting;
- provision of benefits, including housing construction, interest-free loans for personal needs, vouchers to recreation centers, family cash benefits, subsidies for transportation costs;
- personnel rotation, which provides the employee with promotion, professional and career growth, enrichment in the content of work;
- improvement of working conditions;
- formation and development of moral qualities of the individual and moral climate in the team

The use of a labor motivation system should allow the enterprise to achieve its goals. Thus, the better the staff motivation system is coordinated, the more actively employees achieve results aimed at meeting the needs of the enterprise, since they feel like equal partners in the socio-economic processes of the enterprise.

3.2. Current state and features of further development of the hotel industry in Ukraine

Сучасний стан та особливості подальшого розвитку готельного господарства України

Готельні підприємства є невід'ємною частиною туристичної галузі України. Гостинність – це одна з найбільш динамічних галузей української економіки. Складовими туризму є засоби розміщення, транспорт, роздрібна торгівля, гастрономія, страхування, культура і мистецтво, архітектура та дизайн, екскурсії, сервіс, рекламна індустрія. Функціонування готельного сектора створює нові робочі місця, приносить доходи в бюджет, формує позитивний туристичний ландшафт окремих регіонів країни та в цілому, відображає сучасне та майбутнє української готельної індустрії, але є проблеми,

[277]Nikolaeva I.I., Foreign experience in personnel motivation, Human progress 2018 (7).

які роблять українські готелі менш конкурентоспроможними в порівнянні з західними. Готельний бізнес в Україні нестабільний і пов'язаний зі значними ризиками. Є потреба в модифікації та вдосконаленні, яка вимагає швидкого реагування зі сторони представників сфери гостинності.

Незважаючи на труднощі, спричинені війною, готельна індустрія України продовжує приваблювати туристів. Готельні комплекси відіграють важливу роль у задоволенні найрізноманітніших потреб – від ділових поїздок і тимчасового проживання до відпочинку та туризму. Готельний бізнес відіграє важливу роль у підтримці економіки країни та наданні необхідних послуг у важкі часи. Нині готелі отримують дохід від внутрішніх туристів і від іноземців, які працюють в Україні. Більше заробляють заклади, розташовані в західній частині країни. Звісно, у цьому секторі є свої складнощі, але багато компаній і підприємців продовжують вести бізнес в Україні. Зустрічі, переговори та конференції вимагають відповідного розміщення та конференц-залів. Готельні комплекси пропонують зручні умови для ділових мандрівників, надаючи необхідну інфраструктуру та послуги. Ще одна важлива причина – закриття кордонів. Зупинка міжнародного туризму через війну змусила українські готельні підприємства звернути увагу на внутрішній ринок. Оскільки багато українців вважають за краще проводити відпустку і подорожувати всередині країни, готелі стали популярними місцями відпочинку.

Готельна індустрія є висококонкурентним ринком, і для досягнення успіху власники та менеджери готелів мають знати про ключові показники, які вимірюють ефективність їхнього готелю. Є багато таких показників, але на нашу думку, двома найбільш важливими показниками, які готельєри використовують для оцінювання їхньої продуктивності, є ADR (середньодобова ставка) та RevPAR (дохід на доступну кімнату). ADR є мірою середньої ставки номера готелю за день, тоді як RevPAR є мірою доходів готелю на доступну кімнату. Обидва показники важливі для розуміння фінансового здоров'я та успіху готелю.

Незважаючи на війну, рівень заповнюваності готелів під час повномасштабного вторгнення перевищив показник 2021 року навіть у деяких регіонах показники 2019-2020 років. Найбільше зростання було зафіксовано у Львові, де рівень заповнюваності зріс до 55%. У Буковелі, з розширенням карантинних обмежень по всьому світу, заповнюваність готелів також збільшилася, досягнувши 80-85%. Попит на засоби розміщення в Києві також зростав, але весною 2022 року багато київських готелів були закриті, а ті, що працювали, мали дуже низьку заповнюваність (10-20%). Однак ця тенденція не поширилася на п'ятизіркові готелі столиці, в яких в цей період розміщувалися журналісти, дипломатичні представництва та міжнародні делегації, із середньою заповнюваністю майже на 10% більше, ніж в аналогічному 2021 року. У той же час на Заході України в цей період різко зріс попит на послуги розміщення на тлі переміщення населення з районів, де йшли бойові дії. Багато готелів були повністю заброньовані ще кілька місяців вперед, тому середня заповнюваність у Львові, наприклад, зросла до 80%.Також у Києві і Львові були високі показники ADR та RevPAR (рис. 1,2,3) [6]

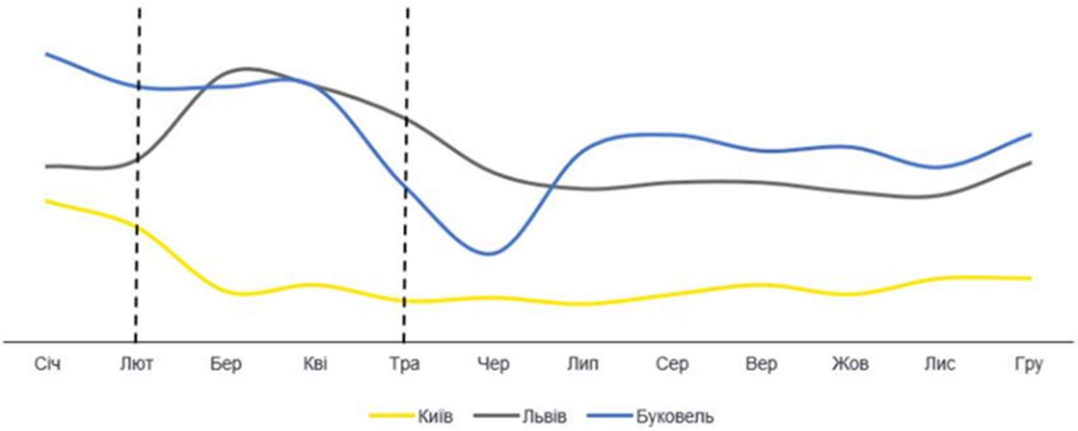


Рисунок 1. Динаміка середнього рівня заповнюваності готелів Києва, Львова та Буковеля (*Джерело: аналіз та дані EY, STR, Hotel Matrix*)

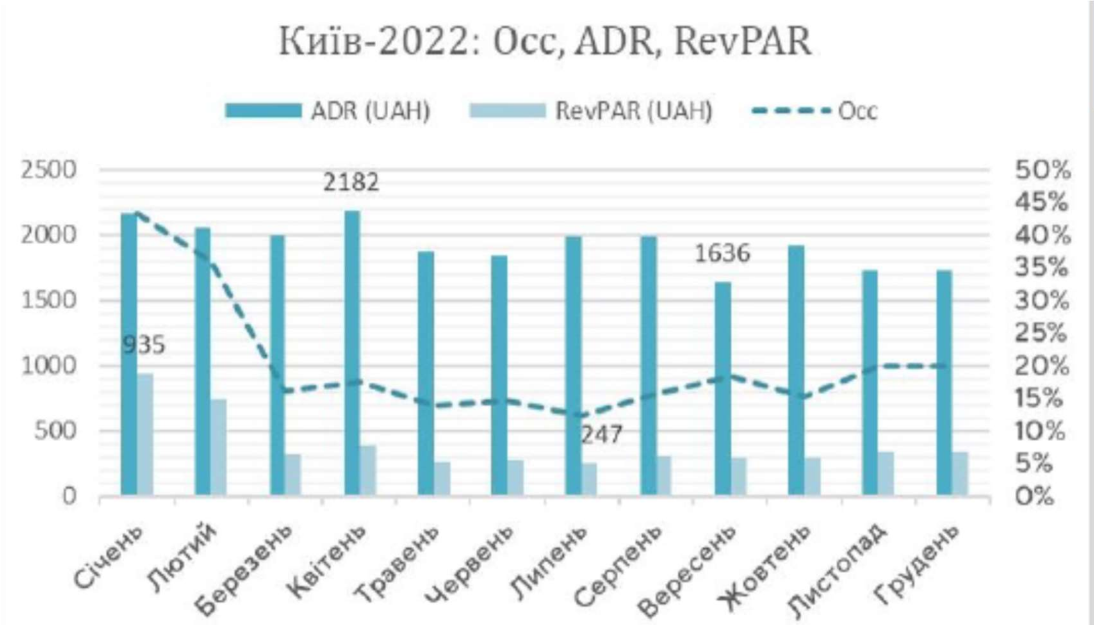


Рисунок 2 Результати діяльності готелів у Києві за 2022 р. по місяцях

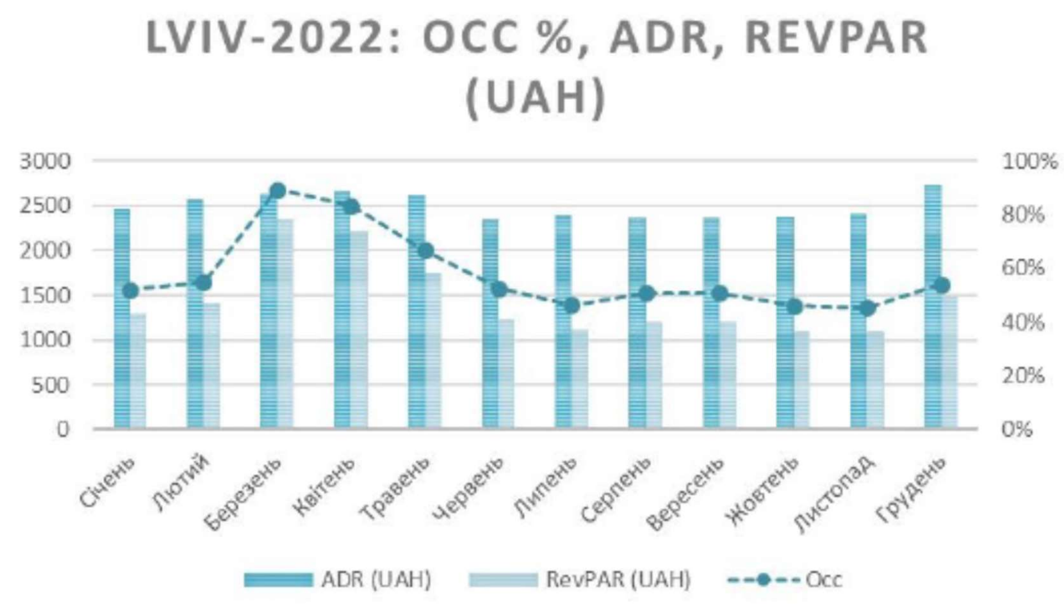


Рисунок 3 Результати діяльності готелів у Львові за 2022 р. по місяцях

З рисунка 3 бачимо, що у листопаді та грудні 2022 року у Львові показники наблизилися до рівня 2021, що говорить про спад попиту від вимушених туристів, в той же час зростання у грудні місяці може бути викликане забороною виїзду за кордон державних чиновників, що створило додаткові умови попиту для відпочинку в Західному регіоні України. За даними Державного агентства розвитку туризму, через війну надходження від туризму до державного бюджету впали майже на 34%. За даними Hotel Matrix, весною 2022 року в Києві не працювали близько 70% готелів. Середня завантаженість готелів у місті Києві в той період становила 22%, а середня вартість номера – 2081 грн/доба. Також не обійшлось і без руйнування готелів та туристичної інфраструктури. Більшість готелів, які були зруйновані або пошкоджені після початку повномасштабного вторгнення, були розташовані в районах, близьких до зон бойових дій, або в районах, де вони безпосередньо відбувалися. (зокрема в містах Харків, Чернігів, Херсон, в Київській, Сумській, Одеській областях тощо).

Якщо розглядати 2023 рік, то можна відмітити такі тенденції. [3]

Згідно з даними Державного агентства розвитку туризму (ДАРТ) у 2023 році такі області України, як Вінницька, Волинська, Житомирська, Закарпатська, Івано-Франківська, Київська, Кировоградська, Львівська, Полтавська, Рівненська, Тернопільська, Хмельницька, Чернівецька збільшили податкові надходжень від туризму і навіть перевищили рівень 2021 року.

Цільова аудиторія гостей значно диверсифікувалася в порівняння з першим і другим роками війни: іноземні журналісти, представники неурядових організацій, представники дипломатичної спільноти, ділові поїздки, стажування та освіта, лікування, транзитні поїздки, візити родичів, особисті справи. Потенційний гість шукає раціональність та одночасно враження від споживання. Крім того, термін бронювання значно скорочується до 1-2 днів, що ускладнює планування заходів. Змінився реальний підхід. Раніше гори асоціювалися в основному з зимовими курортами. До війни готелі в Буковелі були відкриті в основному взимку і частково влітку. Однак літній сезон 2023 року в регіоні перевищив успішний зимовий період, а середня ціна проживання була близька до зимового тарифу. Зараз найбільш швидкий розвиток в секторі апарт-готелів і сервісних апартаментів. Ця концепція полягає в наданні послуг довго/короткострокового проживання та додаткових послуг незалежно від сезону, охоплює велику аудиторію гостей. Конфіденційність гостей – це те ж саме, що відчуття власного будинку, рівень комфорту, функціональності апартаментів та сервіс підвищують цінність і конкурентну перевагу. Ще одним сучасним трендом, який набирає обертів в Україні, є не тільки сучасність і врахування екологічних чинників в дизайнерських рішеннях, а й технічне оснащення, яке проявляється в побутовій автономії гостя, розумній і зручній організації життєвого простору, високоякісних і професійних послугах і забезпеченні великої додаткової площі: коворкінг-простору, бару, місць для відновлення тощо. [4] Також у 2023 році відмічалось збільшення інвестицій у готельну нерухомість, особливо це стосується західного регіону країни. Тренди, які були характерні для 2023:

1. Стабілізація ринку готельних послуг в Україні – протягом року спостерігалася менша мінливість попиту та вирівнювання рівня заповнюваності;
2. Заповнюваності закладів розміщення в західних областях країни від 50 до 9%.
3. Низький рівень заповнюваності готелів Києва лише до 35%.
4. Діяльність національних операторів більш активно спрямована на регіони (обласні центри та популярні зони відпочинку та рекреації).
5. Розвиток системи бронювання Airbnb значно збільшило число користувачів цієї системи, сприяючи зростанню попиту на оренду квартир і одночасно підвищуючи зручність і безпеку бронювання. Це, в свою чергу, призвело до поступового зниження попиту на інші види розміщення (готелі та хостели).
6. Вітчизняні туристи часто приїжджають в заміський комплекс на вихідні або планують більш короткі і бюджетні поїздки, вважаючи за краще економити на відпочинку в цілому.

7. Низький рівень відвідування країни іноземними туристами, проте дещо вищий ніж у 2022 році.

8. Після початку війни основний дохід готелю від оплати послуг проживання. Спостерігається зниження доходів від надання послуг харчування та особливо від проведення заходів.

9. Відчувається нестача кваліфікованих кадрів.

За даними HotelMatrix, середнє завантаження готельного ринку України у 2023 році досягло 30,79%, і це на 3,45% більше у ніж 2022 р., але й на 15,37% менше по відношенню до постковідного 2021. У 2023 році на ринок вийшли заклади різного формату, накштал глемпінгів, апарт-готелів тощо (табл.1).

Таблиця 1

Готелі, відкриті в 2023 році

Назва готелю	Локація	Номерний фонд
Optima Collection (Reikartz) Ніжин	Ніжин	25
Aristo Boutique Hotel	Львів	15
Optima Рівер Миколаїв (після відновлення)	Миколаїв	25
Ibis Kyiv Beresteiska	Київ	158
Radisson Hotel City Centre Odesa	Одеса	90
Didukh	Буковель	18

Також на сьогодні є ще проєкти, ось деякі з них: New Secret Brand by AMA, готель в селі Поляниця. Введення в експлуатацію заплановано на перше півріччя 2027 року; розпочато будівництво автентичного котеджного містечка PÓTAY в Яблуниці, відкриття якого планується навесні 2025; апарт-готель WOL у центрі Вінниці, який планується відкрити наприкінці 2025-го року. [5]

Згідно дослідження Ribas Hotels Group у найближчі два роки на готельному ринку України планується поповнення номерного фонду 6670 номерів в готелях і апартаментах, та 3097 будинків у котеджних містечках.

Крім того, через війну частина українських готельних мереж була змушена розширити свою діяльність на міжнародному ринку. Наприклад, Reikartz розвивається в Казахстані, Узбекистані та Грузії, Premier Hotels відкриває об'єкти в Угорщині, а Ribas Hotels займається розвитком проєктів в Індонезії (о.Балі), Польщі та Молдові.

На початок 2024 року в Україні функціонувало 2017 готелів, серед них Optima Hotels (64 готелі), Ribas Hotels Group (21) та Premier Hotels and Resorts (11). Що стосується іноземних мереж лідерами є Accor 9 готелів та Radisson – 5. Міжнародне представництво в регіонах майже відсутнє: серед

22 транснаціональних готелів в м. Київ розташовані 14 (або 64%), Львові 4 (або 18%), м. Одеса – 2 (або 9%), м. Трускавець –1 (4,5%), курорт Буковель – 1 (4,5%). Частина готелів відмовилася від іноземного управління («Aloft», «Four Points By Sheraton Zaporozhye» від «Marriott», «Брістоль Одеса» від «Starwood Hotels»).

Структура готелів така: міжнародні – 1,1%; національні мережеві – 5,1%; готелі різних форматів – 80,3%; мотелі – 9,6%; хостели – 3,9%. В структурі готельного ринку України за останні два роки спостерігаються зміни, відбувається скорочення певних засобів розміщення, а саме: туристичних баз, таборів, кемпінгів (-33,5%); пансіонатів з лікуванням (-22,5%), оздоровчих заклади (-83,3%), санаторіві-профілакторіїв (-85,5%), бальнео- та грязелікарень (-11,1%), баз та пансіонатів відпочинку (-24,2%). Кількість готелів (+9,1%), мотелів (+10,7%), хостелів (+28,7%) в динаміці, навпаки, збільшується, навіть незважаючи на військову агресію росії та бойові дії. Крім того, через війну відновився інтерес до морально застарілих великих (200-400 номерів) санаторіїв/пансіонатів/будинків відпочинку часів радянського союзу, за можливість організації лікувальної інфраструктури на їх базі для реабілітації поранених. У найближчі роки очікується відновлення діяльності цих закладів, зростання попиту та притоку інвестицій.

Середній рівень завантаження готелів в Україні в першій половині 2024 року становив 34-38%, в західних регіонах (у Львівській, Івано-Франківській, Закарпатській областях) – 60-70%. Загальною рисою як для 2023 так і 2024 року є те, що більшість бронювань здійснюється в останній момент.

Згідно останніх досліджень, після закінчення війни туристичний потік в Україні може зрости до 14,5 млн. осіб. Таким чином, нинішній обсяг номерного фонду не зможе задовольнити попит, потенційна потреба у номерному фонді може становити +30-40% від нинішньої кількості.[2]

В діловому сегменті ринку спостерігався стабільний попит на проведення конференцій та корпоративних заходів.

Літній готельний сезон 2024 року показав більш стабільні результати порівняно з попереднім роком в основних регіонах, особливо в Одесі та Карпатах. Середня завантаженість готелів в Карпатах становила близько 65,1%, що є оптимальним результатом для гірських курортів влітку. Варто відзначити поступове зростання середньої вартості номера в цьому році по регіону, наприклад, в готелях готельної групи «Ribas» від 5500 гривень на добу в окремих готелях. Що стосується поточної концепції, то особливим попитом користувалися готелі і котеджні містечка з басейнами. Варто відзначити, що гості все частіше починають звертати увагу на концептуальні моделі, роблячи акцент на нових емоціях і оригінальних формах відпочинку.[1]

Нинішній літній сезон в Одесі підтвердив повернення туристів до відпочинку на морі. Заповнюваність готелів, особливо розташованих недалеко від моря, була на рекордному рівні. У вихідні дні практично неможливо знайти вільний номер в міському готелі, а середня заповнюваність готелів в місті досягає 75%. Натомість минулого літа середнє завантаження становило близько 40%. Великий попит на курорти підтверджує тенденцію до короткострокових, але частих поїздок. Багато гостей кілька разів поверталися до Одеси протягом літа і вважали за краще короткий уїк-енд для відновлення сил замість тривалої відпустки. Істотно змінився і характер бронювання: 30% номерів в Одесі було заброньовано заздалегідь, в той час як інші місця були заброньовані за кілька днів до поїздки.

Готелі в ділових містах зберегли стабільний рівень заповнюваності в корпоративному сегменті. Особливо слід зазначити, що навіть протягом серпня, що традиційно є місяцем відпусток, завантаження бізнес-готелів перевищила 60% через велику кількість корпоративних заходів. [1]

Таким чином, Україна має потужний потенціал розвитку готельного господарства, який намагається максимально використовувати, не зважаючи на те, що на її території триває війна, і майже немає місць де можна на 100 % почуватися в безпеці. Український готельний ринок продемонстрував стійкість навіть у найважчі часи. Туристична індустрія країни відновлюється завдяки внутрішньому туризму, в тому числі, завдяки, тимчасово переміщеним особам і переселенцям. Зростання чисельності працюючих в Україні міжнародних волонтерських місій також вплинуло на рівень заповнюваності готелів. Після закінчення війни експерти галузі очікують на активізацію туристичних потоків до 14,5 млн. осіб, що вимагатиме збільшення наявного номерного фонду країни. За прогнозами до 2026 року очікується нормалізація заповнюваності номерного фонду – стабілізація терміну перебування, скорочення проживання у друзів і родичів на користь оренди хостелів і квартир, пожвавлення іноземного туризму і відновлення попиту на готелі.

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3.3. Improving hotel management during martial law

The hotel industry is one of the most important components of the wider service industry, serving customers in need of accommodation. It is closely related to the tourism and hospitality industry.

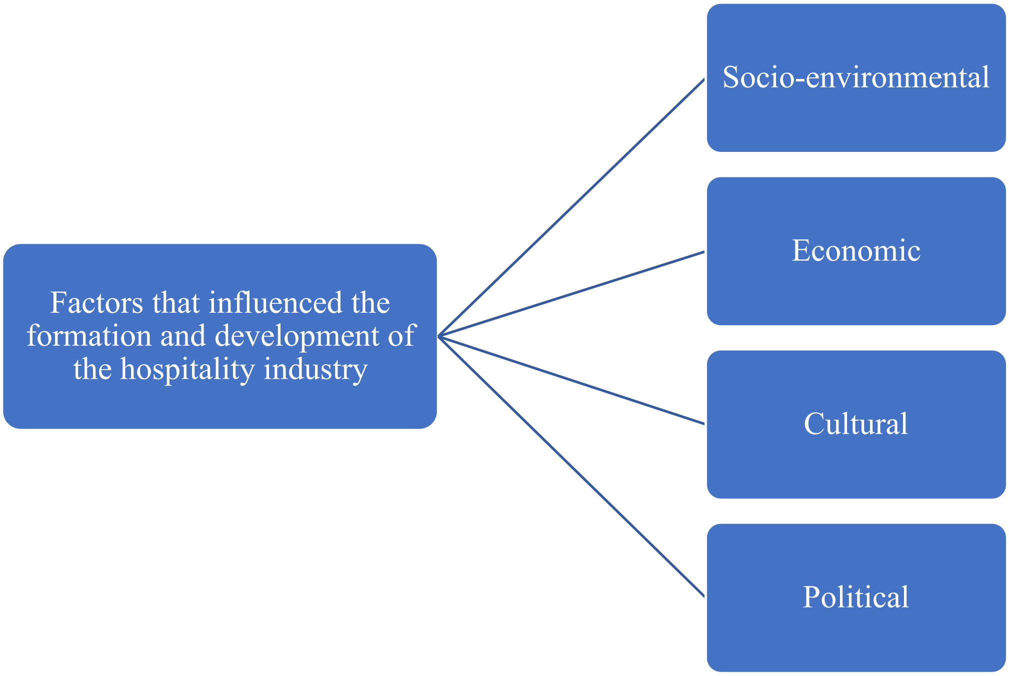
The word "hotel" comes from the French hôtel, which is the French version of a townhouse. The word "hotel" was first used by the 5th Duke of Devonshire to describe a London residence around 1760[278]. Historically, in Britain, Ireland and some other countries, townhouses were the residences of the nobility and aristocracy in the capitals of large cities.

However, hotels as we know them today only emerged in the 18th century, and the hospitality industry has its roots in ancient Greek and Roman cultures. Hotels were built near hot springs, in resort towns and on routes popular among officials. Similar places were found along caravan routes in the Middle East[279]. Their purpose was almost identical. The goal was to provide housing and food for the travelers of the day. The main clients of the first “hoteliers” of that time were mainly wealthy people, merchants and politicians.

The word “hospitality” usually refers to both the location of accommodation, the availability of food and entertainment for tourists, and the presence of traditions of receiving guests in different countries of the world[280]. The main factors that influenced the formation and development of the hospitality industry can be seen in Fig. 1.

[278] Bazhenova, S., Pologovska, Yu., & Bykova, M. (2022). Realities of tourism development in Ukraine at the current stage. Scientific Perspectives, 5(23), 168–180.
[279] Zeid, A. (2019). Post-conflict tourism landscapes: between the legacy of conflict and the hybridization of tourism activities. Open edition journals, 15.
[280] Doe, A., & Johnson, B. (2022). Managing Hospitality: A Comprehensive Approach. New York, NY: Academic Press.

Figure 1. Factors that influenced the formation and development of the hospitality industry



Source: Compiled by the author based on[281]

Some scholars believe that the word "hotel" comes from the word "hostel", which means "a place for travelers to stay overnight." A hotel can also be defined as "an establishment whose principal business is the provision of accommodation services to travelers and the provision of food, drink and entertainment for a fee." [282]

The WTO has developed a guideline definition of the term "hotel". A hotel is a classic type of accommodation establishment that provides regular or occasional accommodation for tourists and has certain characteristics[283]:

- number of rooms exceeding a certain minimum number of rooms;
- a set of basic services such as cleaning of rooms and bathrooms, daily making of beds and room service;
- a certain set of additional services.

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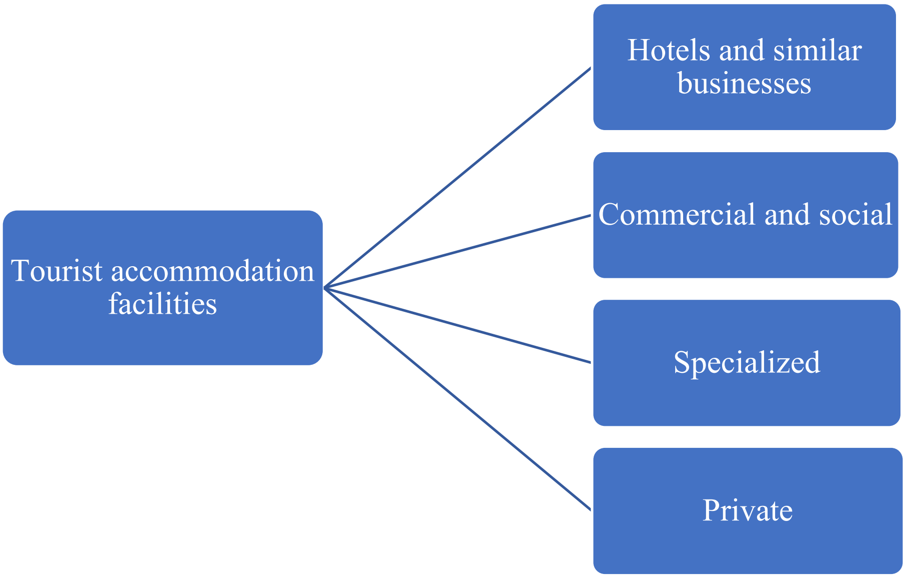
[281] Radivilova, T., & Shcherbak, T. (2015). Factors influencing the development of rural tourism in Ukraine. Visnyk of Lviv National Agrarian University. Economics, 22, 138-142.
[282] Walker, D., & Hall, M. (Eds.). (2021). Tourism and Hospitality Management: Theory and Practice. London, UK: Sage Publications.
[283] Thompson, R. (2017). The Evolving Goals of Hotel Management in the Digital Age. Journal of Hospitality Technology, 8(3), 112-125.

In addition, according to the WTO, all hotels should be divided into classes or categories in accordance with the specific facilities and characteristics of the services provided. [284]The WTO has proposed a standard classification of accommodation establishments (Figure 2), which places hotels and similar establishments into one of four broad tenant groups.

Figure 2. Classification of accommodation facilities according to WTO recommendations



Source: Compiled by the author based on[285]

The essence of accommodation services lies, firstly, in the provision of special premises (hotel rooms) for use, and secondly, in the provision of services directly by hotel staff: receptionists who receive and register guests, maids who clean hotel rooms, etc. .

Hotel rooms are an important element of the accommodation service and contain multifunctional spaces for guests to relax, sleep or work. Since hotel rooms are primarily used during the evening and night hours, their most important function is to provide a place to sleep. Other features will be important depending on the

[284] Roberts, S., & White, L. (2016). Strategic Objectives in Hotel Management: Aligning Goals with Market Dynamics. Tourism Management, 42, 78-92.

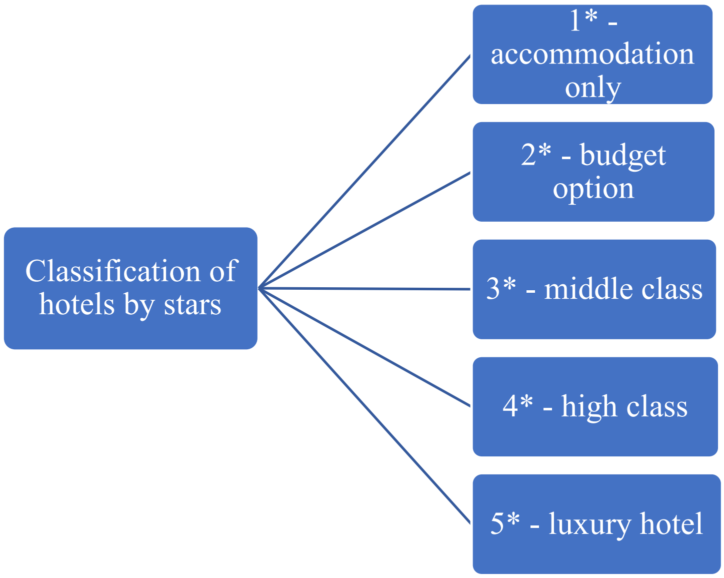
[285] Novikova, I., & Bohdan, L. (2013). Marketing strategies for promoting tourism products in Ukraine. Bulletin of Zaporizhzhya National University. Economics Sciences, 1(21), 201-206.

purpose of the hotel and the needs of the guests[286]. For example, the most important function of a room in a business hotel is to provide work space such as a desk, telephone, computer, etc.

Hotels have different categories of rooms, which differ in size, furniture, equipment and amenities[287]. Accommodation, food and other services in the hotel business complement each other, and in many cases are interrelated and are perceived by guests as a single whole. The way these services are organized and combined into a single complex determines the type of establishment.

As you know, different types of hotels offer different quality of service and different room prices. Therefore, to make it easier to assess the level of a hotel, a star classification system was introduced (Fig. 3).

Figure 3. Classification of hotels by stars



Source: Compiled by the author based on[288]

Features of hotel star classification or the meaning of stars in hotels[289]:

[286] Thompson, R. (2017). The Evolving Goals of Hotel Management in the Digital Age. Journal of Hospitality Technology, 8(3), 112-125.
[287] Garcia, M., & Rodriguez, P. (2018). Functions of Effective Hotel Management: A Case Study Approach. International Journal of Tourism Research, 25(4), 301-315.
[288]
[289] Johnson, A., & Brown, K. (2020). Achieving Success in Hotel Management: A Comprehensive Approach to Goals and Objectives. New York: Wiley.

- 1* – accommodation only: a minimum of services included in the cost of accommodation; Daily cleaning is not a requirement; rooms for 2-3-4 people and the same type of rooms. In the room: bed, chair, mirror, bedside table, wardrobe. Bathrooms may be located in common areas.
- 2* – budget option: the price includes daily room cleaning. Hotel guests can choose a single or family room. The rooms have a shower or bath. Rooms may have a minibar, and breakfast may be served to hotel guests.
- 3* – middle class: wet cleaning is included in the price. There is a large selection of triple rooms consisting of singles, doubles (twin beds or one double bed), smoking rooms and other amenities. Standard rooms have a refrigerator or minibar and a TV. The hotel usually has a swimming pool, laundry, gym with exercise equipment, meeting rooms, restaurant, currency exchange and tour desk.
- 4* – high class: in addition to the services offered in 3-star hotels, guests have access to a spa center, massage room and conference rooms. The rooms have a minibar, telephone, safe, hairdryer, bathrobe, cosmetics and orthopedic mattresses, and cleaning is carried out once or twice a day.
- 5* – luxury hotel: hotel services are luxurious. Tourists can stay in an apartment or villa, enjoy maid service, a private pool or play golf with their own instructor on world-class courses. Additional services may be included in the price or paid separately. The hotel offers taxi call, luggage delivery, butler service, nanny service and a children's room for children's development. .

Although it is not well known, some hotels go beyond five-star status. There are many 7 star hotels in the world. Although global hotel ratings are limited to five stars, the owners have accepted a seven-star rating[290]. This is done in order to show that such hotels have a higher status and are superior to other hotel enterprises .

In addition to standard hotels, there are unusual ones[291]:

- Rotel is a mobile hotel, which is a carriage with single and double compartments in which sleeping chairs are located (with three position regulators). Each compartment is equipped with ventilation and individual lighting. In addition, there is a changing compartment, a washbasin and a toilet. At the rear of the carriage there is a kitchen and a refrigerator (Fig. 4). Rotels come in two types: for mass tourism and luxury. Additional carriages are connected to luxury class hotels, where there are bars, restaurants, discos, and gyms.

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[290] Kadnichanskyi, D., & Kadnichanska, M. (2020). Military tourism: terminology and classification issues. In Geography, economy and tourism: national and international experience, 132-135.

[291] Smith, J. (2019). The Essence of Hotel Management: Understanding Goals, Functions, and Objectives. Journal of Hospitality Management, 15(2), 45-58.

Figure 4. Rotel

Source: [292]

Figure 5. Flotel

Source: [293]

- Botel is a new type of small hotel on the water (from the English "bot. - boat"). A yacht club has been created in Odessa "Poseidon", trying to develop yacht tourism and organize the construction of boats.

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[292] URL: https://fgritb.knukim.edu.ua/, дата доступа 17.02.2024.

[293] Ibidem.

- Flotel – "resort on the water" (Fig. 5). This is considered the most exciting innovation in the hotel industry in the last 100 years. The fleet provides beginners with a wide range of services: fishing, boats, underwater sports, diving towers, swimming pools, etc.

Increased interest in water recreation has contributed to the emergence of a new form of tourist accommodation - "houses on the water", that is, floating houses with a useful area of up to 50 m, located on platforms about 12 m long, like a catamaran with outboard engines. The leaders in the construction of "houses on the water" are companies from the USA, Spain, and Switzerland.

- Flytel – "flying hotel" or airtel (Fig. 6). The first flytel was built in Oklahoma. It is equipped with a landing area for aircraft and a telephone connection to a weather station. There are few such hotels, because this is a very expensive type of vacation.

Figure 6. Flytel

Source: [294]

In the global practice of the hotel industry, chalets and bungalows should also be highlighted. A chalet (from the French word "chalet") is a village house in the mountains (Fig. 7). Chalets as a type of hotel first emerged in Switzerland. A bungalow

[294] Ibidem.

is a rural house in the form of a light building with verandas, which is most often found in tropical countries (Fig. 8).

Figure 7. Chalet

Source: [295]

Figure 8. Bungalow

Source: [296]

[295] Ibidem.

[296] Ibidem.

The variety of forms and types of tourist accommodation is growing every year. Thus, in the American city of Key Largo in Florida, an underwater hotel named after the science fiction writer Jules Verne was built. At a depth of 9 m, tourists can admire the beauty of the sea. The world's first floating hotel with 200 rooms has opened in Singapore. Specialists from the Finnish company Värtsilä have designed a trimaran - a floating recreation center for 2 thousand tourists, which looks like an artificial island that can be towed to warm tropical seas and anchored. And in the north of Sweden in winter, the Arctic Hall is not empty for a single day - a hotel made of snow and ice, with an area of 600 m2 with a conference room, bar, restaurant, cinema hall, art gallery and chapel.

So, a hotel is an enterprise that provides temporary accommodation and services for guests. Hospitality is an important component of the hotel industry and is manifested through the quality of service and comfort for guests. Hotel classification can be done according to various criteria, but star rating is one of the most common classification systems used in many countries.

The essence of hotel management is to effectively manage all aspects of a hotel's operations to achieve its goals and ensure guest satisfaction.[297] There are many aspects of hotel management, including operations management, financial planning, marketing, guest services, human resource management, process management and quality management[298].

The Hotel Manager is responsible for the following tasks[299]:

- orientation of the hotel to market demands and needs, specific consumer requirements and organization of the offer of those types of services that are in demand and can provide the hotel with the planned benefits of increasing the efficiency of service provision and reducing costs;
- ensuring economic independence and freedom of decision-making;
- constant adaptation of goals and programs to market conditions;
- the need to use modern information infrastructures with multivariate calculations using computer technology to make optimally informed decisions.

The goal of hotel management is to constantly overcome current and future risks and dangerous situations, which requires a certain amount of financial resources and a certain degree of freedom and independence for management in business

[297] Martinez, G., & Davis, M. (2017). Aligning Goals with Customer Expectations in Hotel Management: A Study of Service Quality. Journal of Hospitality Marketing & Management, 15(2), 89-102.
[298] Kolesnikov, O. V. (2011). Fundamentals of Scientific Research. Center of Educational Literature, Kyiv.
[299] Patel, K., & Smith, D. (2018). Functions of Hotel Management: A Review of Contemporary Practices. International Journal of Contemporary Hospitality Management, 22(1), 55-68.

activities in order to quickly respond and adapt to changing conditions. The ultimate goal of management is to ensure the profitability (profitability) of the hotel's activities through the rational organization of the service process, including the management of the production of hotel services, the development of a technical and qualification base and the effective use of human resources while simultaneously increasing the competence, creativity and professional training of each employee.

Management is called upon to create the necessary conditions for the normal operation of hotels, based on the fact that profit is not the raison d'être of a business, but the result of its activities, which is ultimately determined by the market. Profit creates a reliable guarantee for the further activities of the hotel[300]. This is due to the fact that only profit and accumulated profit in the form of various reserves can limit and overcome the risks associated with the sale of services on the market. It is known that market conditions are constantly changing: changes in the competitive environment, changes in the conditions and forms of financing, changes in the economic conditions for the development of tourism and the country as a whole, changes in the conditions under which hotel services are sold on the market.

In this context, hotel management includes the following tasks (Figure 9).

There are different approaches to organizing hotel management (Fig. 10):

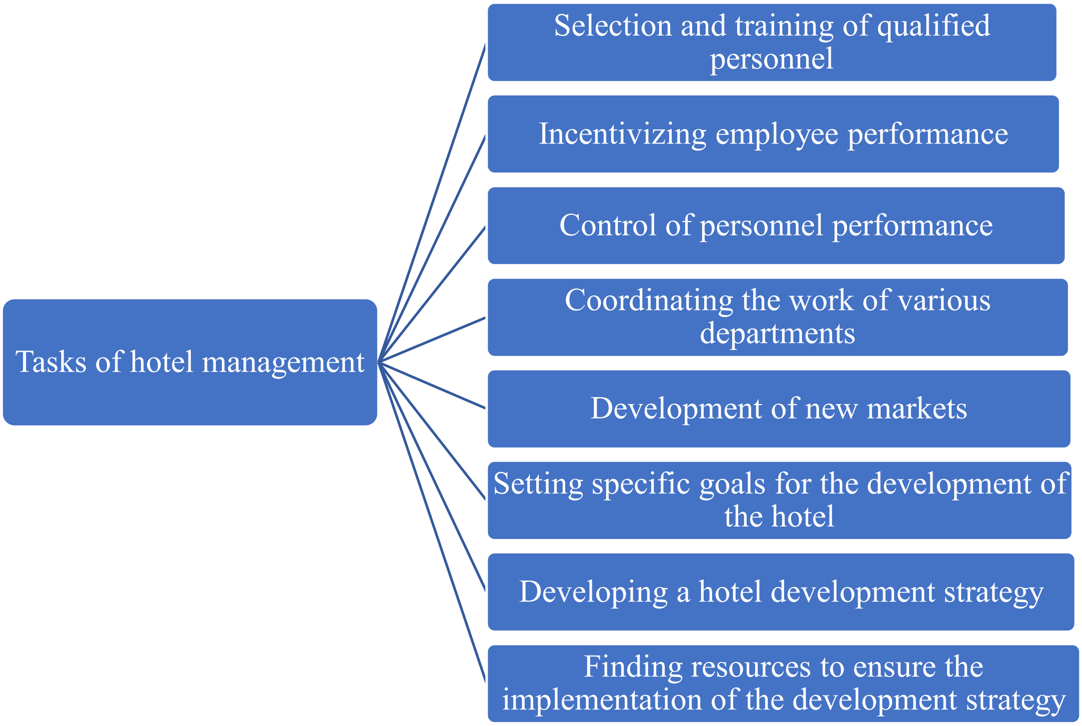
- the process approach considers management as a series of interrelated and continuous management functions;

- a systematic approach is based on the fact that the hotel is one component of elements that depend on each other. Such as people, organizational structures, tasks and technologies aimed at achieving different goals in a changing environment;

- the situational approach is based on the fact that the use of various hotel management methods is determined by the situation. Since hotels are influenced by many internal and external factors, there cannot be a single approach to management.

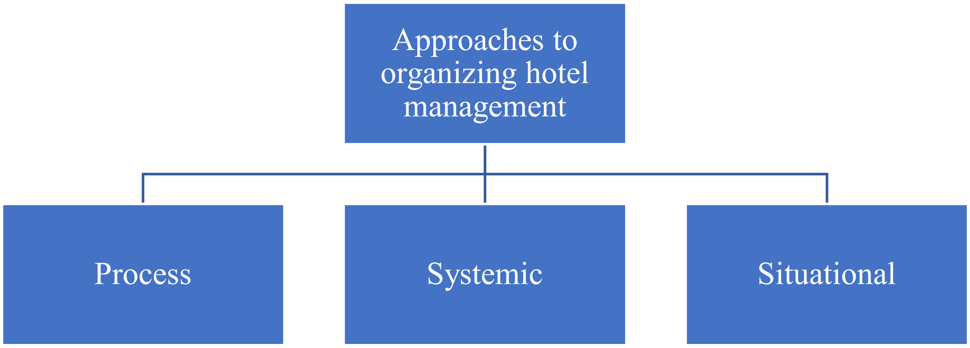
[300] Lee, C., & Kim, S. (2022). Understanding the Essence of Hotel Management: Integrating Goals, Functions, and Objectives. International Journal of Hospitality Management, 40(2), 201-215.

Figure 9. Hotel management tasks



Source: Compiled by the author based on[301]

Figure 10. Approaches to organizing hotel management

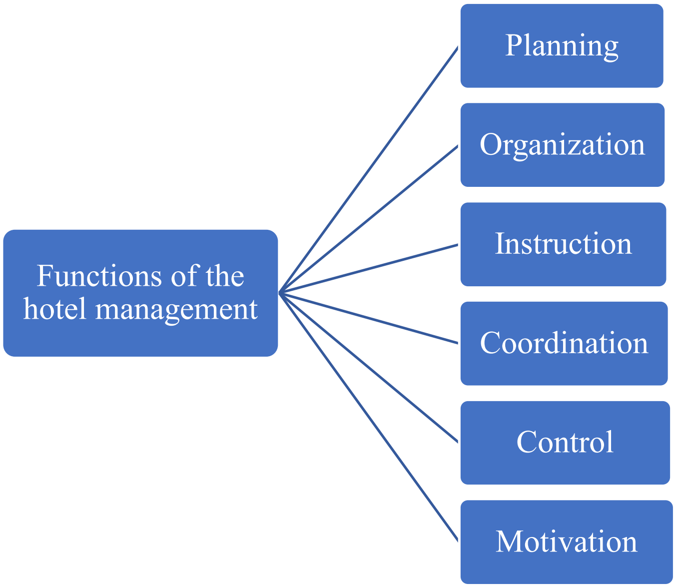


Source: Compiled by the author based on[302]

[301] Bilousova, O., & Petrenko, I. (2021). Competitiveness of the hotel and restaurant business in the conditions of economic instability in Ukraine. Scientific Bulletin of National Mining University, 2, 214-221.
[302] Tkachenko, V., & Chumak, V. (2017). Investment attractiveness of the hotel business in Ukraine. ScienceRise: Economics, 4(2), 23-27.

Management is viewed as a process, a series of interrelated, sequential management functions. Each management function is also a process because it consists of a number of interrelated activities. So, the hotel management process is the sum of all functions (Fig. 11).

Figure 11. Hotel management functions



Source: Compiled by the author based on[303]

- Planning: This function involves defining the hotel's goals and strategies and developing a plan of activities and programs to achieve the goals. This includes budgeting, scheduling, planning work procedures and marketing activities.

- Organization: This function establishes the structure of the hotel organization and distributes responsibilities and authority to each department and employee. It also includes building a team, developing procedures and policies, organizing work processes, and establishing communication systems.

- Coaching: This function provides guidance and direction to hotel employees to achieve their goals. This includes motivating workers, setting performance standards, monitoring task completion, and developing workers' skills and competencies.

[303] Ustenko, M., & Dorosh, N. (2018). Sustainable development of tourism in Ukraine: challenges and prospects. Scientific Bulletin of Polissia, 3(11), 213-218.

- Coordination:[304] This function involves ensuring interaction and cooperation between various departments and employees of the hotel to achieve common goals. It includes establishing communication channels, organizing meetings and conferences, resolving conflicts and coordinating work processes.

- Controlling: This function monitors and evaluates the implementation of plans and programs, monitors the quality of service, solves problems and coordinates activities to achieve desired results.

- Motivation: planning and organizing work, the hotel manager decides what, when and how exactly each person or department should do. If these choices are made effectively, managers will be able to implement their decisions by applying the basic principles of motivation, i.e. encouraging oneself and others to take action to achieve personal and organizational goals. Thus, motivation is a function associated with the process of mobilizing the activities of individuals and work groups in order to increase the efficiency of personnel and is a system of measures aimed at providing moral and material incentives in accordance with the quality and quantity of work performed.

The above hotel management functions are interconnected and work in parallel to ensure the efficient functioning of the hotel business.

So, hotel management is critical to the success and profitability of hotels. The essence of hotel management is to effectively manage all aspects of a hotel's operations to achieve its goals and meet the needs of guests. The goals of hotel management include guest satisfaction, financial sustainability and profitability, effective marketing strategies, human resource management and quality service delivery[305]. The functions of hotel management include planning, organizing, directing, coordinating and controlling. Planning involves developing strategies and action plans. Organization involves the creation of structures and the distribution of responsibilities. Management includes instructing and directing employees. Coordination involves interaction and collaboration between departments. Control involves monitoring and evaluating results and coordinating activities. Motivation involves encouraging a person to work. The goal of hotel management is to achieve success and profitability in the hotel business through effective management of finance, marketing, human resources and quality of services. This includes budget planning, marketing strategies, human resource management, quality management and staff training[306]. Managing a hotel is a complex process that requires a multi-

[304] Roik, O.R., & Nedzvetska, O.V. (2022). Ways of development of the tourist sphere of Ukraine during the war period. Scientific Bulletin of Kherson State University, 46, 11–15.
[305] Enz, C. (2005). Hospitality Strategic Management: Concepts and Cases (2nd ed.). Hoboken, NJ: Wiley.
[306] Pomaza-Ponomarenko, A.L. (2022). The development of tourism in Ukraine in the war and post-war periods. Scholarly notes of TNU named after V.I. Vernadsky, 33(5).

faceted approach and management skills. The starting point is to meet the needs of guests and achieve the desired results for the hotel company.

The impact of war on the tourism industry is an important area of research that has both theoretical and practical implications. Conflicts and wars have significant economic, social and cultural consequences that can have a negative impact on the tourism industry, economic performance, social development, etc. Understanding the theoretical basis of this impact is essential for developing effective mitigation strategies. The development of tourism depends on the ability to create new jobs, increase GDP and reduce poverty. However, wars can significantly reduce tourism flows, suspend investment and delay infrastructure development, which can lead to a decrease in the number of jobs created and economic growth in certain regions and the entire country.

The impact of war on tourism is also related to risk and crisis management theory. This theory suggests that wars can pose significant challenges to the tourism industry and require urgent responses from both the industry and government. Effective risk and crisis management strategies in the tourism industry should be developed and evaluated to mitigate the impact of war on tourism activities. Additionally, the impact of war on tourism can also be studied from a social responsibility perspective[307]. Tourism is a key driver of the economy of many countries and plays a very important role in their development. The industry therefore has a responsibility to support local communities, protect the environment and promote peace and stability. The impact of military situations and conflicts on tourism can significantly undermine these responsibilities and lead to negative social and environmental consequences.

War and any military aggression have a negative impact in the short term or at the moment when it occurs. Although there are moments in the long term when war can have a positive impact in history and in the tourism sector, for example, the history of these settlements, studying and getting acquainted with military-historical monuments, when after the war, places of hostilities attract additional tourists, since these places have their own history and territorial component, according to which the development of military and dark tourism is possible.

The theoretical foundations for studying the impact of war on the development of tourism activities in Ukraine can be characterized by certain positions. One of the key theoretical positions is the economic component, which considers the impact of war on the economy of the region. This component highlights the potential economic losses that may arise as a result of the conflict, including reduced tourism income, loss

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[307] Nosyrev, O., Dedilova, T., & Tokar, I. (2022). Development of tourism and the hospitality industry in the strategy of post-conflict recovery of the economy of Ukraine. Socio-economic problems and the state, 1(26), 55–68.

of jobs, damage to infrastructure, etc[308]. The economic dimension can be used to examine the potential for economic recovery of the tourism industry in the post-war period through policies that support the development of tourism infrastructure, marketing strategies and investment in the industry.

Another theoretical component relevant to the study is that of social psychology, which looks at the impact of conflict on tourists' perceptions and attitudes towards a destination. Social psychology theories suggest that negative perceptions and stereotypes may develop following conflict, which may increase the negative impact of conflict on the tourism industry. This component highlights the importance of promoting positive destination perceptions and overcoming negative stereotypes during post-war reconstruction.

The next relevant component is a political science perspective that examines the role of political factors in the influence of war on the tourism industry. This component highlights the role of political instability, conflict resolution efforts, and government policies in shaping the impact of conflict on the tourism industry. The political science component can also be used to explore the potential for policy intervention to support the recovery of the tourism industry in regions affected by military aggression.

Theoretically, the study of the impact of war on tourism is based on the theory of tourism development. According to this theory, tourism development is associated with economic, social and cultural factors that enhance tourism's ability to create new jobs, increase GDP and reduce poverty. However, war can significantly reduce tourism, stop investment and infrastructure development, which will lead to a decrease in the number of jobs and economic growth of the country.

Research on the impact of war on tourism is an important topic because conflicts affect tourism development and can have a significant economic impact on a country. Theoretical studies of the impact of war on tourism are also based on the theory of risk and crisis management[309]. According to this theory, war could pose significant challenges to the tourism industry and require a crisis response from industry and government. Research could examine the effectiveness of risk and crisis management strategies in the tourism sector, and the role of international organizations such as the World Tourism Organization (UNWTO) in supporting and

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308 Motsa, A., Shevchuk, S., & Sereda, N. (2022). Prospects for the post-war recovery of tourism in Ukraine. Economy and Society, 41.

309 Korchevska, L. (2022). The state, features and prospects of tourism in the war and post-war periods. In Management of the development of the hospitality sector: regional aspect, 337–341.

rebuilding tourism infrastructure in countries affected by wars and crises should also be considered[310].

The theoretical framework for the impact of war on tourism is based on theories of tourism development, risk and crisis management, and social responsibility. Understanding these theories is essential to developing effective strategies to manage the impact of war on tourism. In addition, this understanding can inform policies that promote peace and stability, protect the environment, and support local communities. Based on certain perspectives, it can be said that research into the impact of the war on the development of tourism activities in Ukraine can provide valuable information about the economic, social and political factors shaping the impact of the conflict on the tourism industry and the potential for policy intervention to support the recovery of the tourism industry in the post-war period.

[310] Vazhynskyi, S.E., & Shcherbak, T.I. (2016). Methodology and organization of scientific research: academic. manual: SDPU named after A. S. Makarenko, Sumy.

Part IV

TRANSPORT AND LOGISTICS SYSTEMS IN TODAY'S CONDITIONS

ТРАНСПОРТНО-ЛОГІСТИЧНІ СИСТЕМИ В УМОВАХ СЬОГОДЕННЯ

4.1. Research on liberalization of the railway freight transportation market

The study of liberalization of rail freight transport is relevant in scientific communities. Since Ukraine is at the stage of liberalization of railway transportation, an analysis of global experience is valuable[311]. That is why we will carry out a study of the existing scientific heritage on the topic of liberalization of railway freight transport among published publications in international scientometric databases.

Data collection involves the following sequential stages:

- definition and selection of keywords. Search keywords – “liberalization” and “railway”;
- extracting articles from WoS;
- creation of a database of articles in EndNote (RP-112).

At this stage of the study we use the ATLAS.ti software version 22.0.5 to store, classify and evaluate the data of this analysis[312]. ATLAS.ti makes it possible to identify and systematize large databases – in our case, a large selection of scientific publications. Using the program's tools, we proofread and in the process code, record and highlight quotes, evaluate their importance and visually present the results[313]. We apply Word Cloud to the database of articles - a very common visualization tool when viewing text content, where the font size of a keyword reflects its frequency in the text. The most commonly used terms are liberalization, railway transport, transport, market, competition, freight transportation, infrastructure, analysis, deregulation, management and others[314].

The next step is to perform filtering. In accordance with the topic, we narrow the search using the keywords “liberalization”, “railway freight market”, “railway freight transportation” - we get 54 publications, 8 of which are in the public domain[315]. We also highlight familiarization with annotations and keywords as a separate stage (Table 1).

[311] Kopitko, V. I., & Saxon, O. Yu. (2017). Marketing and logistics security of the market transportation in the minds of the reform of transport transport. Problems of Economics of Transport, 13, 69-75.

[312] Engelhardt, J. (2018). The railway sector in the European Union's transport policy. Kraków: edu-Libri Publishing House.

[313] Brumercikova, E., & Sperka, A. (2020). Problems of Access to Services at Railway Stations in Freight Transport in the Slovak Republic. Sustainability, 12, 8018.

[314] Pietrzak, K. (2015). Rail freight transport in Poland: competition and competitiveness. Szczecin: Maritime University of Szczecin.

[315] Panchenko, N. (2020). Development of environmental marketing in travel transport. Current technologies of commercial activity and logistics, 5.

Table 1. WoS publications on the topic of liberalization of rail freight transportation

Title	Authors	Year	Journal
Liberalization of Rail Freight Transportation in Europe: Challenges and Opportunities	J. Smith, A. Johnson	2018	Transportation Research Part A
Impact of Rail Freight Liberalization on Market Competition	L. Davis, M. Brown	2020	Journal of Transport Economics and Policy
Rail Freight Transport Liberalization: A Comparative Study	K. Wilson, H. Taylor	2019	International Journal of Transport Management
Regulatory Framework and Rail Freight Liberalization	P. Martinez, S. Anderson	2021	International Journal of Transport Management
Economic Effects of Rail Freight Transport Liberalization	R. Lee, D. Harris	2022	Transport Policy

We will carry out content analysis of publications.

Martynenko M. (Martynenko M.) examines the liberalization of the rail freight market as a crucial mechanism for fostering sustainable transportation development and mitigating the environmental impact of transport. The article investigates the liberalization of railway transportation in several European countries - Germany, France, Spain, Italy, and Belgium. The study analyzes the railway infrastructure charging systems in these countries, which are based on national transport policies. It concludes that the liberalization efforts in the studied countries have not yet achieved the anticipated outcomes. The key factors influencing the choice of transport mode for clients include reliability, safety, delivery times, transportation costs, and the provision of additional services.

Simons A. (Simons A.)0 explores the liberalization of the rail transport market using the examples of six countries - Spain, France, Germany, Switzerland, Italy, and the Netherlands. The article evaluates the potential effects of open access competition on a European scale. It is observed that several years are required post-legal market opening to effectively regulate open access competition. This delay can be attributed to factors such as deficiencies in the legal framework, technical barriers (particularly the different standards across Europe, especially regarding signaling systems), and the capital-intensive nature of the rail industry. This experience provides insights into the potential impact of open market access, though this publication is not used for further analysis due to its focus solely on passenger rail transportation, which falls outside the scope of our research on freight transport.

Rosenfeld L. and Petersen J.0 analyze the interplay between two interconnected sectors - railways and manufacturing in the Midwest United States. The liberalization of rail freight transport, modifications in tariff policies, and the resultant increase in competitive pressure have significantly influenced technological adoption. It was found that elevated tariffs prompted manufacturers to implement new, more efficient production technologies. In response to rising transportation costs, manufacturers also made substantial changes to their production processes and logistics strategies.

Zaybek G. (Zeybek H.)[0]conducted an analysis of the current situation in the Turkish railway freight transport market on the eve of liberalization. The purpose of this analysis is the need to prepare the traditional state-owned operator for the new reality that awaits it when competing with new participants in the liberalized market. This paper uses an empirical study to evaluate the perceptions of different stakeholders and identify their concerns regarding rail freight transport[316]. The survey focuses on the views of a group of stakeholders on how service should be improved, the range of services needed, critical customer factors, and identifying the strengths and weaknesses of rail freight transportation. This survey determined that to achieve growth and long-term viability, customers want to see significant improvements in what matters most to them - competitive pricing, responsiveness to customer needs, service reliability and travel time.

Kurosaki F.[0]The study compares three models for introducing competition into the rail freight market using examples from three countries: the UK, India and Japan. The models adopted by each of the three countries are briefly explained, and the

[316] Gromova, O. V. (2010). Marketing principle for managing passenger transport. Bulletin of Economics of Transport and Industry, 30, 207-208.

advantages and disadvantages of each are indicated. The comparison among the three countries shows that a certain type of competition is not applicable to another country as the background and characteristics of the railway transport market differ from country to country, but the experiences of other countries need to be studied as they are essential for successful railway reform.

Brumercikova E.[0]The publication examines the problems of access to infrastructure, in particular railway stations, after the increase in the number of carriers that arose due to the liberalization of the rail freight market. Using the Saaty decision-making method, a problem was identified - the insufficient infrastructure capacity of Slovakia. Four important indicators have been selected for carriers: railway stations where you can use the track parking service, rail scales, shunting services, and mobile workshop services. At the end of the article, the order of access to these services is compiled according to the order of importance for railway enterprises.

Ivanov A. and Petrova K.0 contribute to the discourse on the relationship between rail freight transport, market liberalization, and competitiveness through an integrated, multifactorial approach. The contradictions between the high expectations surrounding railway market liberalization and the stagnation of the rail freight transport sector in the Baltic States are exposed. The study analyzes these countries using 12 key attributes. Subsequently, a cluster analysis was conducted, which not only highlighted the high correlation between the examined attributes but also illustrated the complexity of these relationships. It is thus demonstrated that liberalization measures alone do not lead to increased productivity in rail transport.

Garcia L.0 argues that rail freight transport continues to suffer from doubly imperfect competition. On one hand, there is intermodal competition from the balance between road and rail transport. On the other hand, intramodal competition among railway operators remains imperfect[317]. Using the Lorenz curve and Gini coefficient, the market structure is shown to be dominated by a few large companies. Among various entry barriers, the significant capital investment required to enter the rail transport market is particularly emphasized.

Müller R. and Schmidt H.0 discuss the impact of rail freight transport liberalization on market dynamics and efficiency. They analyze the experiences of Scandinavian countries, where liberalization efforts have been met with mixed results. By employing econometric modeling and regression analysis, the study

[317] Zharska, I. O. (2008). Formation of a marketing system for the commercial transport enterprise in the current minds of Ukraine: Author's abstract (Dissertation). Dnipropetrovsk National University of Railway Transport named after acad. V. Lazaryan, Dnipro.

highlights the persistent high market concentration and the slow entry of new competitors. The findings suggest that while liberalization has led to some improvements in service quality and cost efficiency, it has not significantly enhanced overall market competitiveness.All of the above scientific works correspond to our research topic and highlight important categories: liberalization of the rail freight market in the context of a sustainable transport system; cross-influence of industries; market analysis before liberalization; stakeholder marketing (research of the positions of different stakeholders); models of railway liberalization: essence, methods, advantages and disadvantages; liberalization and infrastructure problems; competitiveness of railways; development of rail transport in Europe.

Summarizing the research conducted, we can conclude that the issue of liberalization of rail freight transportation is relevant among the global scientific community and is multifaceted in its study. However, the issue of using marketing and logistics mechanisms for the liberalization of railway freight transportation is not sufficiently covered, which actualizes the topic of the thesis research. An analysis of the world experience of liberalization is necessary as the basis for building a strategy for the successful liberalization of the country's railway market.

Logistics and marketing management is a kind of expression of the coupling and integration of two concepts, i.e. on the one hand - logistics, as a cross-sectional management concept oriented towards flows, and on the other - marketing, as a market-oriented concept of enterprise management[318]. Both management concepts mentioned above meet in the most sensitive place, which is the market, determining the company's strategy of operation on the sales and supply market[319]. This issue becomes particularly important when taking into account the contemporary conditions determining the development and integration process of logistics and marketing and the increase in their strategic importance in enterprise management and in the integrated chain and system of creating added value for the customer and the enterprise[320].

In this context, modern logistics and marketing can be treated as a dual concept and subsystem of an integrated enterprise management system[321]. This

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318 Dziadek, S., & Lipińska-Słota, A. (2001). Opportunities and threats for the functioning of transport, forwarding and communications enterprises in the conditions of the single European transport market. Katowice: AE in Katowice.

319 Marinov M, Ricci S (2012) Organization and management of an innovative intensive programme in rail logistics. Proc Soc Behav J 46:4813–4816

320 Koźlak, A. (2008). Transport economics. Economic theory and practice. Gdańsk: University of Gdańsk Publishing House.

321 Mendyk, E. (2009). Transport economics. Poznań: University of Logistics.

means treating logistics and marketing as important or even main management orientations and criteria in the enterprise, as well as their interpretation and location in a real sense, as important (equal) functional spheres and integrated processes in the enterprise (in the value creation chain). The outlined framework of the systemic concept of integrated logistics and marketing management seems to indicate the potential place of logistics and marketing as a management concept in the enterprise, and thus determine the scope and process of integration and integration into the enterprise management structure and value creation system[322].

Treating logistics and marketing as integrated subsystems of enterprise management means adopting a systemic orientation towards the strategic shaping of the logistics and marketing system of creating and delivering value on the scale of the enterprise and the integrated market system. In this approach, marketing covers all activities and instruments whose direct goal is to recognize, define and create market potential, effects and success of the enterprise[323]. Logistics, however, is mainly about creating and using efficiency potentials and systemic support for the company's market orientation, and its integration is focused on creating services for customers[324].

Both approaches are in a system of coupled possibilities for the effective use of potentials and abilities, contributing to achieving the required level of service, long-term customer satisfaction and loyalty, and an appropriate level of profit in the strategic dimension. The presented specification and structure of goals take into account the basic dimensions of their qualifications and hierarchy, i.e. market, enterprise and general social dimensions[325]. The group of integrated goals, emphasizing the market dimension (customer's point of view), includes goals related to creating demand and optimizing the supply offer (structure of benefits for customers) solving specific customer problems in marketing and logistics market segments, as well as goals related to achieving long-term satisfaction and customer loyalty[326].

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[322] Kotler P, Armstrong G (2012) Principles of marketing, Fifteenth edn. Pearson, New York.
[323] Fraszczyk A, Brown P, Duan S (2015a) Public perception of driverless trains. Urban Rail Transit 1(2):78–86.
[324] Dryomin, M. S. (2006). Marketing in the field of transport services (in the application of transport enterprises): Author's abstract (Dissertation). Kiev National Economic University named after V. Getman, Kiev.
[325] Agu, G. A., & Ogbuji, C. N. (2008). A survey of factors influencing patronage of road transport firms. Journal of Business Financ, 2(1)
[326] Karas, O. O. (2015). Marketing aspects of increasing the competitiveness of transport transport. Bulletin of the Azov State Technical University, 29, 98-107.

The basic marketing and logistics objectives considered from the perspective of the enterprise include shaping the optimal structure of added value and the level of costs along the marketing and logistic value creation chain, shaping the appropriate amount of profit in the long term, strengthening the competitive position of the enterprise on the market, etc[327].

The group of goals in the functional dimension includes manifestations of the basic functions and essence of modern marketing and logistics as management categories. From the customer's point of view, marketing goals related to the creation and forecasting of future customer needs and preferences, shaping the company's potential markets, creating an exchange ensuring long-term satisfaction of customer needs and wishes, and logistic goals related to the delivery of appropriate goods and information in the right quantity and quality, place and time and at appropriate costs for customers, optimizing the structure of logistics services for customers and shaping the level of customer service[328]. Taking into account the long-term interests of the company, marketing goals related to shaping optimal conditions for the exchange of goods and increasing market share were highlighted as the basis for the company's success, as well as logistic goals aimed at rationalizing the cost structure in the sphere of goods and information circulation, discovering and creating new potentials. efficiency and success of the enterprise, inherent in the system of flows, etc

The real phenomenon is the mutual interpenetration of marketing and logistics. The common area of these two functions is, above all, the market, which is the base and main driving factor of all activities. The main goal of marketing focuses on establishing a constructive dialogue with consumers in order to integrate them with the enterprise and build lasting relationships with them. The result of these activities is to offer them the optimal level and quality of service while minimizing operating costs. This means that the sphere of distribution is the junction of logistics and marketing

Marketing management at railway transport enterprises involves a strategic approach to planning, executing, and overseeing marketing activities tailored to the unique characteristics and operational needs of railway transport. This encompasses a broad range of activities, including market research, service development, pricing strategies, promotion, and customer relationship management. Below is an outline of

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[327] Ponomarenko, V. S., & Shtunder, I. V. (2017). Marketing Management in the Railway Transport Sector of Ukraine. Economic Bulletin of the National Technical University, 55(2), 34-42.

[328] Kucherov, S. S. (2018). Strategic Marketing in the Railway Industry: Challenges and Opportunities. Transport Economics and Logistics, 20(4), 50-59.

the key components involved in marketing management at railway transport enterprises:

Market Research and Analysis[329]:

Customer Needs Assessment: Identifying and understanding the needs and preferences of different customer segments (commuters, long-distance travelers, freight customers).

Competitive Analysis: Analyzing competitors in the transport sector (other railways, airlines, buses, logistics companies) to identify strengths, weaknesses, opportunities, and threats.

Market Trends: Monitoring trends in transportation, technology, and consumer behavior to adapt services and marketing strategies.

Service Development

Service Design: Developing and enhancing passenger and freight services based on customer insights and technological advancements (e.g., high-speed trains, improved cargo handling).

Route Planning: Optimizing routes and schedules to meet demand efficiently and enhance connectivity.

Quality Management: Ensuring high standards of safety, punctuality, cleanliness, and customer service.

By studying the problems of marketing management, we can draw conclusions about the activation of diffuse processes of marketing concepts. It should be noted that today the use of marketing tools is determined individually for each area of activity of a particular enterprise. The study showed that many scientists are involved in marketing management at railway transport enterprises[330]. The research carried out is based on scientific publications posted in the databases "Author's abstracts of dissertations" and "Scientific periodicals of Ukraine" of the National Library of Ukraine named after V. I. Vernadsky and Google Academy. As a result of summarizing the information received, a chronology of the application of the marketing concept at railway transport enterprises is presented (Tab. 2).

[329] Booms, B. H., & Bitner, M. J. (1982). Marketing services by managing the environment. Cornell Hotel and Restaurant Ad-ministration Quarterly, 23(1), 35–40.
[330] Ivanov, D. S. (2016). Digital Marketing Trends in the Ukrainian Railway Sector. Marketing and Management of Innovations, 3(5), 77-85.

Tabela 2. Chronology of the application of the marketing concept at railway transport enterprises

Stage	Period	Key Contributions and Findings
1st	2006-2009	Proposed improvements for the marketing system of railway transport: continuous industry analysis, effective interaction, speed of service registration, quality improvement, introduction of related services, and price volume assurance.
2nd	2010-2011	Emphasized marketing and logistics principles, use of marketing tools to study demand and consumer behavior, consumer value, and social and ethical marketing.
3rd	2012-2013	Development of marketing principles, methods for assessing marketing effectiveness, balanced marketing indicators for tourism, and logistics tools in marketing management.
4th	2014	Introduction of marketing and logistics concepts, development of a marketing mechanism through logistics tools, and communication policy development for competitiveness and quality assurance.
5th	2015	Expansion of marketing and logistics approaches, defining marketing's role in competitiveness, marketing activities, service and pricing policy, and long-term contracts for cargo transportation.
6th	2016-2017	Focus on innovative marketing tools, international and domestic marketing research, railway tourism development, optimization of freight flows, and marketing strategy formation based on systemic and situational approaches.
7th	2018-2019	Use of marketing research in managing consumer value, trust marketing, stakeholder marketing, and traditional marketing tools (4P concept).
Current	2020-March 2022	Development of new marketing types, systematic approach, quality improvement of transport and logistics services, relationship marketing, theoretical studies, and environmental marketing.

Source: Systematized by the author based on [331]

The increased interest of the scientific community in the development of research in the field of marketing management of railway transport logistics is

[331] Petrova, N. V. (2022). Railway Transport Enterprises: Adapting Marketing Strategies in a Digital Era. Journal of Marketing Research and Case Studies, 11(4), 44-52.

facilitated by liberalization processes in the transport sector of Ukraine[332]. Liberalization of the railway transportation market makes it possible to speed up the solution of many critical and unresolved problems of the industry, increase the competitiveness of the Ukrainian railway, and integrate it into the single EU transport space. The results of the conducted studies on the development of the use of the marketing concept in the activities of railway transport prove that in order to solve these problems it is advisable to conduct marketing research, on the basis of which to look for ways to solve current problems[333].

As studies of the evolution of the application of marketing concepts at railway transport enterprises show, there are no clear boundaries for identifying its stages[334]. The research carried out by scientists in previous periods is developed and improved in subsequent periods along with the development of new research. Improving the concept of marketing management in railway transport occurs throughout the entire process of evolution and is aimed at solving problems that are relevant in a particular period and are a requirement of the time, determined by the current operating conditions of railway transport.

4.2. Aspects of warehouse logistics management at enterprises of the agricultural sector of the economy

In modern conditions of dynamic development of markets and agricultural technologies, rationally organized logistics is one of the most important factors in ensuring the competitiveness of the agro-industrial complex and effectively meeting consumer needs. Domestic and foreign experience shows the effectiveness of logistics methods and approaches in solving scientific and practical problems of various sectors of the national economy. Despite the rather short period of development of logistics as a science in the field of economics, the concept of logistics for managing economic processes in an increasingly competitive business environment has become an important focus for all successful organizations. At the same time, knowledge in the field of logistics is constantly changing and updated, and the scope of its application in enterprises is gradually expanding.

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[332] Levchenko, A. M., & Tkachenko, P. Y. (2018). The Impact of Marketing Innovations on Railway Transport Performance in Ukraine. Innovative Marketing, 14(2), 87-95.
[333] Gryshchenko, T. V. (2021). Analysis of Marketing Strategies in Ukrainian Railways During Economic Transformations. Ukrainian Transport Journal, 18(2), 92-104.
[334] Stepanenko, Y. V. (2019). Enhancing Customer Satisfaction through Effective Marketing Management in Railway Services. Journal of Transport and Logistics, 9(3), 60-69.

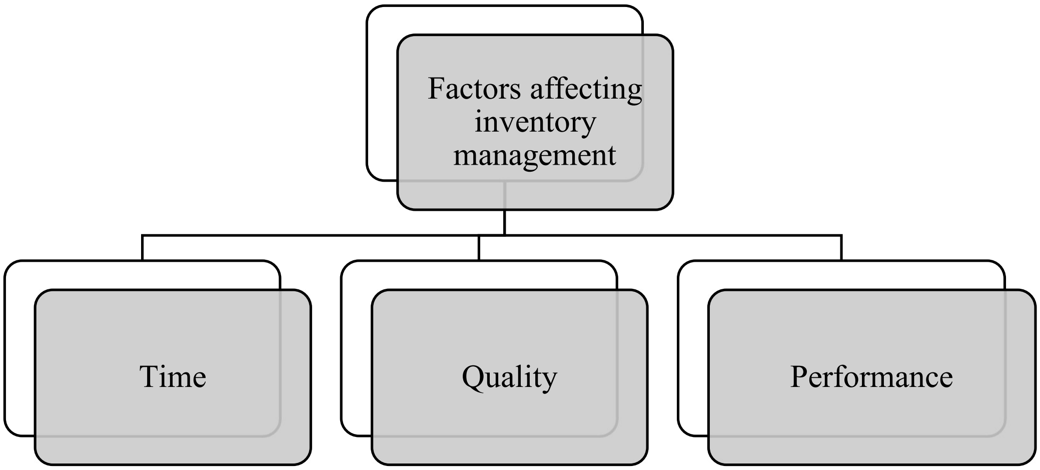
Almost all large or medium-sized manufacturing or trading companies have a warehouse for storing any products. Organizing a warehouse is an important step in business development[335].

Paying attention to other operations - sales, production, financial calculations - managers often lose sight of the fact that cost minimization can be achieved throughout the entire promotion of the product if the entire process is not organized as a single whole. Warehousing operations are one of the most important parts of product pricing. Underestimating the importance of these operations leads to increased costs for processing or processing the goods[336].

Logistics in the agro-industrial complex is the process of planning, organizing, monitoring and managing business operations related to the delivery of agricultural products from producer to consumer, as well as the distribution of resources for their production. Logistics systems are based on transport and warehousing. This applies to local (domestic) and foreign trade operations for export and import[337].

The study identified the main factors influencing the nature and extent of inventory management (Fig. 1):

Figure 1. Factors influencing the nature and extent of inventory management



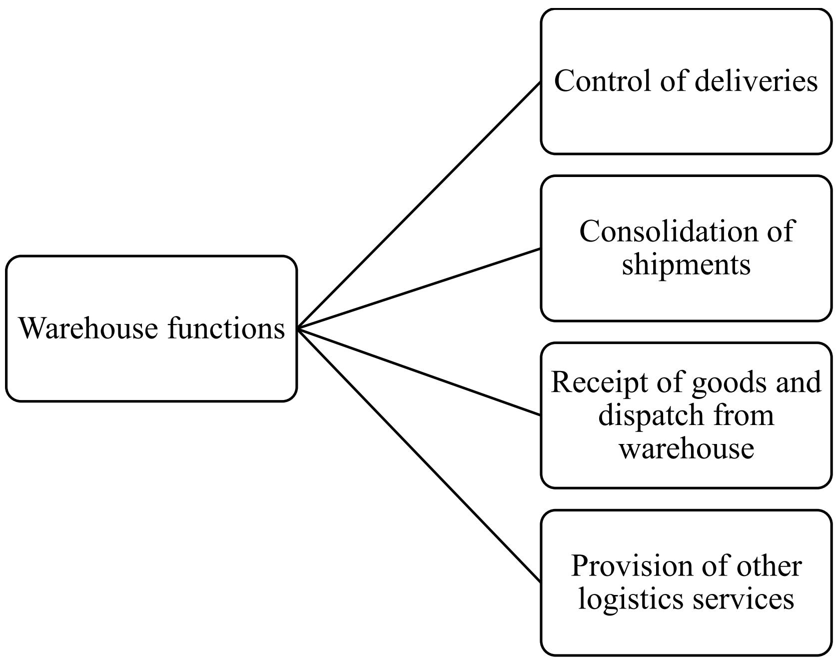
Source: Compiled by the author based on[338]

[335]Girna O.B., Kolos M.O., Logistics solutions in warehouse activities of cold logistics, Market Infrastructure 2020 (46), 30-35.
[336]Rokicki R., Wicki L., 2010: Transportation and storage in agriculture as an element of logistics, Knowing Tomorrow - Science, Logistics in Agribusiness 1 (138).
[337] Fertsch M., Fundamentals of Logistics, Institute of Logistics and Warehousing, Poznań 2006.
[338]Sedikova I.O., Vechtomova L.V., Investigation of the logistics potential of grain saving enterprises, Economic analysis 2015 (2), 130-135.

- Time is one of the most important elements of effective warehousing. In this regard, it can be concluded that the best warehouse operations are those that are designed to reduce every element of delivery time.
- Quality is as important as punctuality. In the warehouse user market, the central objective is to approach the technically maximum possible warehouse productivity.
- The purpose of using warehouses is to increase asset productivity. The three important elements here are overall cost reduction, asset reuse and circularity.

Any well-organized warehouse performs several functions (Fig. 2):

Figure 2. Warehouse functions



Source: Compiled by the author based on[339]

- Control of supplies (formation of assortment). There should be no shortage or excess inventory: both will increase business costs.
- Consolidation of lots (combining small lots into large lots), ensuring simultaneous delivery to different, even small, customers. This function is actively used by companies working with several clients simultaneously.

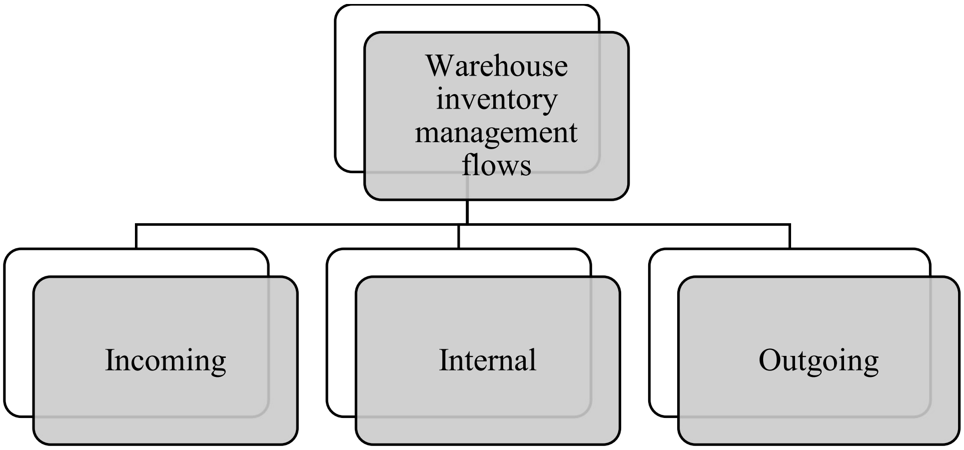
[339]Koval V.V., Kostetska K.O., Bondar V.A., Management of the formation of logistics enterprises of the grain market in the minds of inclusive growth, Bulletin of the National University of Water and Natural Resources 2020 (3), 79-87.

- Receive goods from the warehouse and send them from the warehouse. This function most closely links warehouse logistics with transport. This also includes: processing of goods, quantity control, quality control, preparation of relevant documents.

- Providing other logistics services: unpacking, packing, assembly, product finishing, etc.[340]

There are several main flows in a warehouse, all of which must be managed (Fig. 3):

Figure 3. Flows during inventory management in a warehouse



Source: Compiled by the author based on[341]

- incoming flow: goods arriving at the warehouse must be unloaded, the quantity must be checked and accompanying documents must be drawn up;
- internal goods flow (movement of goods in a warehouse): cargo needs to be moved, sorted, processed, and warehouse documents are processed;
- outgoing: products leaving the warehouse must be packaged, unloaded and accompanying documentation drawn up[342].

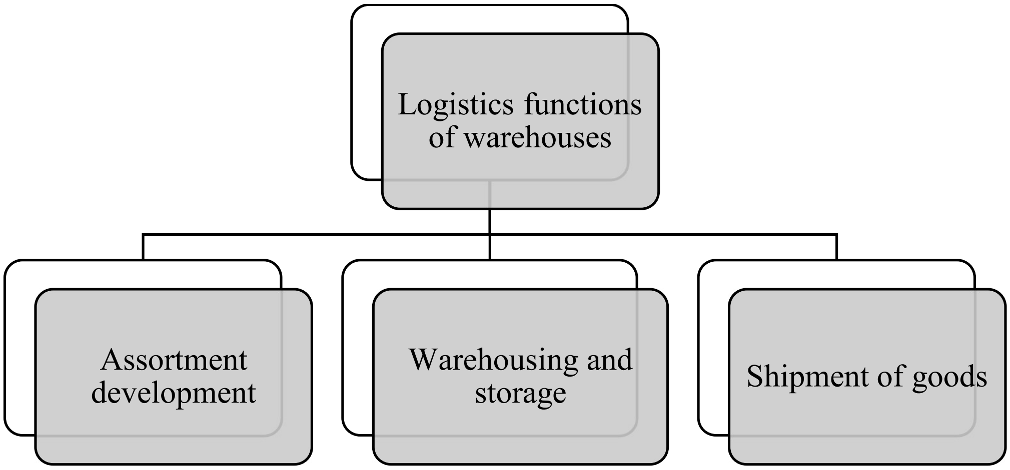
The main purpose of warehouses, from the point of view of logistics, is the accumulation of stocks, materials, raw materials and other resources, their storage for a certain time in order to ensure an uninterrupted and rhythmic supply to consumers. The most important logistics functions of warehouses are as follows (Fig. 4):

[340] Ketova N.P. (2005), Regional aspects of development agroindustrial sphere: Common trends and specific features. Forecasting problems, 4, 85-95.
[341] Kalchenko A. G., Logistics: assistant to KNEU, Kiev 2012.
[342] Baran J., Maciejczak M., Pietrzak M., Rokicki T., Wicki L., 2008: Logistyka. Wybrane zagadnienia, Wydawnictwo SGGW, Warszawa.

- development of an assortment of goods for companies and a commercial assortment for customers on order. The formation of an assortment (production and trade) occurs according to the following scheme: several types of resources (goods) are delivered to the warehouse, where orders are collected into the required assortment and the specified volume for shipment to production;

- warehousing and storage should be considered as a process of compensating for the time difference between production and consumption, that is, creating and maintaining inventories; - preparing goods for shipment, organizing delivery to customers.[343]

Figure 4. Logistics functions of warehouses



Source: Compiled by the author based on[344]

Providing services to clients (consumers) includes the following:

1. Preparation of goods for sale (cutting, packaging);
2. Installation of appropriate equipment;
3. At the request of the consumer, the warehouse can perform preliminary processing of goods (cargo);
4. Freight forwarding services[345].

[343]Kyurcheva L. M., Grigorenko O. V., Kyurchev S. V., Technology of processing and conservation of agricultural products LLC "Vidavnichy Budynok MMD", Melitopol 2013.
[344]Ibidem.
[345]Szymanska E., 2014: Logistics Costing with enterprise management, SGGW Publishing House, Warsaw.

The work on creating a warehouse logistics system can be divided into stages[346]:

- determine the number and area of warehouse premises;
- determining the location of the warehouse;
- determination of the storage system and cargo management methods;
- formation of technological equipment of the warehouse;
- formation of information support for warehouse operations;
- training of personnel;
- launching the warehouse;
- systematic monitoring of the storage status of products in the warehouse.

The area of warehouses and their number influence the future profitability of the enterprise. When inventory runs low, transportation costs begin to rise, downtime occurs, and order fulfillment times are disrupted. Too much inventory leads to higher maintenance costs. The decision should be made carefully, taking into account:

- transportation costs (more storage - less transportation costs);
- costs of maintaining inventories (the more inventory, the more expensive the storage);
- costs of operating warehouses (more warehouses - more maintenance costs).

A decision can be made only after calculating all the options, their costs and comparison with the expected income. Due to the wide range of goods, numerous options for warehouse design, various technologies, various warehouse and mechanization equipment, the warehouse should be considered an integral part - a subsystem of the more general structure of the logistics system. It is also an integral part of the material flow supply chain[347].

Thus, the logistics process is an interconnected and interdependent set of logistics activities of an enterprise (functions and logistics operations), the sequential implementation of which is aimed at transforming “inputs” into “outputs” in order to maintain the value of use value[348].

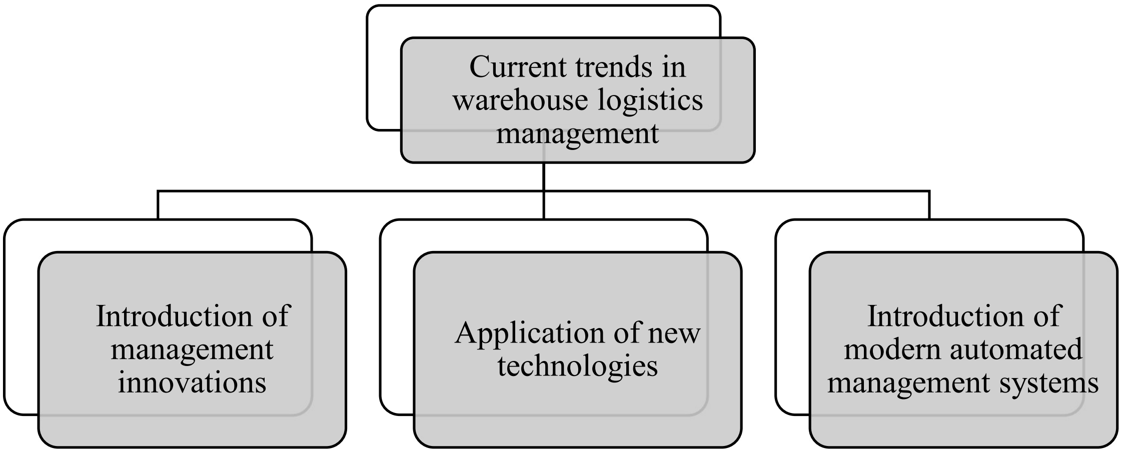
Warehouse logistics is one of the logistics subsystems that develops methods for organizing the storage, receipt, placement and accounting of goods in a warehouse. Warehouse logistics is the organization, design and management of warehouses; its tasks and functions are the fast and timely movement and delivery of goods to their destination. This requires a modern and reliable infrastructure in the form of a well-

[346]Klepacki B., 2011: Agrologistics - a new challenge for science and practice, Logistics 3, 12-13.
[347]Kemnpy, D. (2001). Logistic customer service. Warsaw: PWN.
[348]Dzhuga M. M., Logistics process in a warehouse: main problems of warehouse efficiency, Development Management 2014 (8.), 127-130.

equipped warehouse. The task of warehouse logistics is to organize inventory management in such a way as to minimize the costs associated with processing and storage[349].

The subject of study of warehouse logistics is inventory in the process of warehousing, processing and packaging. The main principle when creating a storage system is an individual solution that takes into account all factors and ensures the economic success of the warehouse. The goal of warehouse logistics is to develop a storage system with which goods can be optimally placed in the warehouse and managed efficiently.

Figure 5. Current trends in warehouse logistics management



Source: Compiled by the author based on[350]

- introduction of management innovations, such as outsourcing, benchmarking;

Among the current trends in warehouse logistics management, the following can be highlighted (Fig. 5):

- application of new technologies, such as cross-docking technology and radio frequency identification (RFID) technology;

- implementation of modern built-in automated warehouse management systems (WMS) and other information technologies.

The warehouse complex plays an important role in the work of a modern logistics company. The operational efficiency and developed infrastructure of the

[349]Dlugosz, J. (2006). Distribution logistics In: M. Ciesielski (ed.). Logistics in business. Warsaw: PWE.
[350]Kalchenko A. G., Logistics: assistant to KNEU, Kiev 2012.

warehouse complex have a direct impact on the smooth operation of the enterprise and its competitiveness in the market.

Warehouse premises in Ukraine are mainly divided into one of two main categories - either premises that are used by the owners for their own needs, or complexes intended for rental. In general, the development of the warehouse logistics market in Ukraine has its own characteristics, determined by the influence of many factors.

The warehouse real estate market today is directly divided into warehouse and logistics service complex. Traditional compositions are gradually losing their relevance. The list of services provided by logistics centers is constantly growing, and as competition grows, so does their quality. Entrepreneurs are looking for multi-format solutions and prefer a warehouse complex that includes production, a warehouse, as well as offices and parking lots. Taking into account the regional specifics, it should be noted that the commercial real estate market is no longer associated exclusively with Kiev and one or two other developed cities (Dnepr, Zaporozhye), and the implementation of commercial real estate in Ukraine is growing everywhere. This applies to the warehouse real estate sector, especially in transit cities such as Odessa, Kharkov and Lviv. After the war, it is planned to build logistics complexes near port (Nikolaev, Mariupol) and industrial (Krivoy Rog) cities[351].

In Western Europe, the level of saturation of warehouse real estate per capita is 15-17 times higher than in Ukraine. If we take into account the quality indicator, warehouse real estate in Western Europe meets modern requirements and is equipped with new equipment, while in Ukraine there is a huge shortage of high-quality warehouse premises (classes A and B)[352].

In the market of logistics services, namely warehousing, today 70% are converted warehouses, and only about 10% are highly professional logistics centers and new modern warehouses that meet modern requirements[353]. In modern conditions, preference is given to warehouse complexes, for which, in addition to access roads, infrastructure and heating, it is possible to provide customs services, accounting, qualified personnel, air conditioning in warehouses, etc.

To build a network of warehouses, it is important to use modern information technologies in warehouse management. However, the implementation of these technologies is acceptable and beneficial only for successful logistics companies.

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[351]Ivashkiv I. M., Analysis of the formation of logistics systems for the conservation of grain and grain crops in Ukraine, Economic Analysis 2014 (3), 26-39.
[352]Ibidem.
[353]Bowersox Donald J., Logistics: an integrated supply chain / translated from English. JSC "Olymp-Business", Moscow 2016.

Despite the development of diversification and the growth of modern export-oriented logistics capabilities of the agro-industrial complex, its institutional and professional development is still not without a number of limitations and problems (Table 2). Despite the insignificant share of the expected problems that require significant efforts to solve them, it is necessary to provide an integrated approach to solving this problem and identify priority areas for the development of storage at enterprises in the agricultural sector in Ukraine.

Table 2. Limitations on the development of agri-food logistics

Types of transportation	Limiting factors
Railway	state monopoly on services and state ownership of most vehicles; critical service life of most grain cars; low station capacity during peak hours in ports
Automotive	relatively high delivery costs; high wear and tear of equipment and high depreciation costs due to poor quality roads; inefficiency of long distance transportation
Water	low mobility and efficiency of transportation and limited transport zones; lack of a sufficient number of terminals; factory sites require repairs; risks of insufficient use of logistics capacities of ports and terminals; capital-intensive development of our own terminals and fleet; access to deep-water areas within the terminal is limited

Source: Compiled by the author based on[354]

Agri-food logistics in Ukraine now faces dual challenges: high transaction costs and insufficient capacity to support future growth. High costs reduce the competitiveness of the grain industry in Ukraine and reduce the income of farmers, which negatively affects investment in the industry.

The logistics system needs to modernize existing facilities and commission new ones, clearly develop a system for transporting grain from producers to port silos, rationally use silo capacities, increase storage capacity, build barges for transporting grain crops and develop railway transport. Such a mutual mechanism for developing

[354] Dolata M., The importance of infrastructure in the concept of sustainable and balanced rural development, "Studies and Works of the Faculty of Economic Sciences and Management" 2015, No. 40, vol. 2.owersox Donald J., Logistics: an integrated supply chain / translated from English. JSC "Olymp-Business", Moscow 2016.

partnerships between the agro-industrial complex of Ukraine and the transport system can become the key to effective warehouse logistics in the agro-industrial complex.

The current stage of development of logistics in Ukraine is characterized by complex socio-economic processes aimed at creating an effective market economy, and logically requires fundamental changes in economic policy. In particular, this applies to the agricultural sector, since it is this sector that is the basis of market reforms in all sectors of the economy. Considering the geographical location of Ukraine and the growing export potential, agricultural logistics should become one of the tools of a developed market economy. The current level of development of logistics, especially in the grain market, significantly slows down the development of the industry and does not allow uninterrupted delivery of products to potential buyers.

It should be noted that the use of logistics approaches in the management of Ukrainian enterprises is a relatively new direction in agriculture; such approaches arise only in connection with the activities of integrated farms. However, most domestic enterprises (from small agricultural producers to large agricultural enterprises) have fully realized the role and high efficiency of logistics. Therefore, it is time to develop scientific methods and models for supply chain planning for the movement of agricultural products within the country and for their export.

The logistics process in a warehouse can be considered as the management of logistics operations related to the processing of goods (operational management) and the coordination of related services, which to a certain extent ensure the efficient operation of the warehouse. The main operations that take place in the warehouse of agricultural enterprises in accordance with the logistics process include[355]:

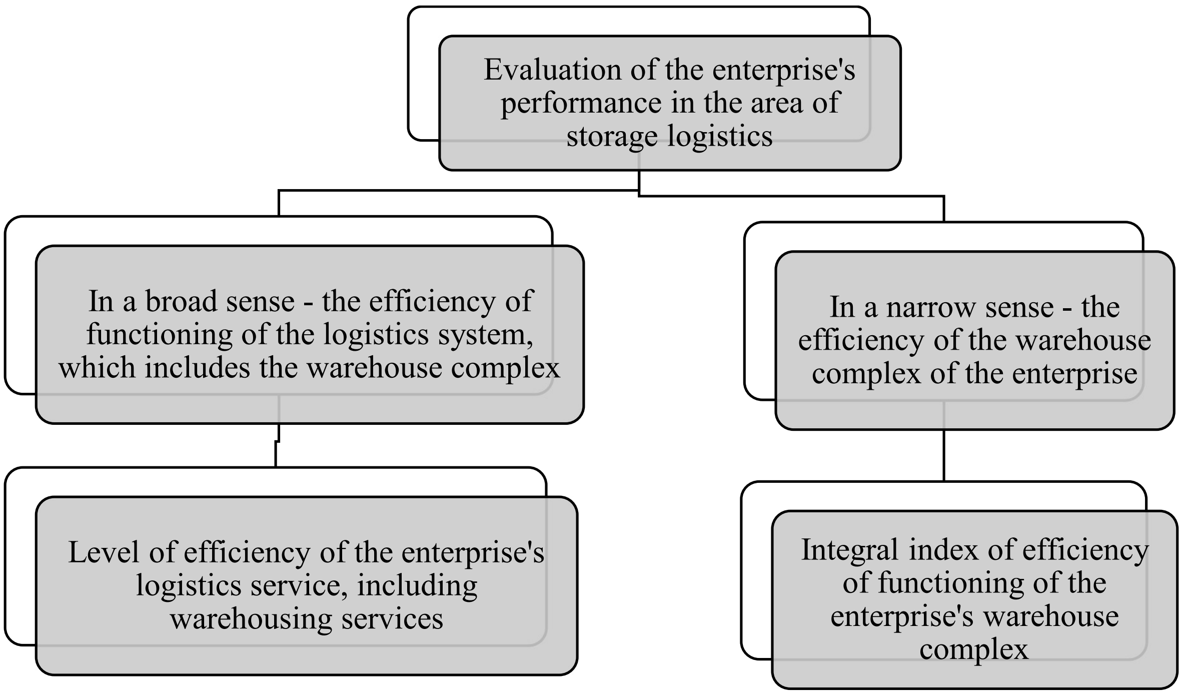
- compliance with storage requirements;
- supply control;
- unloading and acceptance of cargo;
- transportation and unloading of goods in the warehouse;
- warehousing and storage of goods;
- fulfilling customer orders;
- transportation and delivery of orders;
- collection and delivery of empty cargo (containers, containers, etc.);
- control over the execution of orders;
- information support of the logistics process;
- providing customer service (service provision).

[355] Kizyn M., Problems in picking in warehouse processes, "Logistics" 2006, no. 2.

The logistics approach to managing the flow of materials in a warehouse is based on managing the entire cargo processing process within a single organization and management system. An effective system for managing the logistics process in a warehouse involves quickly adapting storage conditions to changes in demand. Demand should be the primary factor in choosing a methodology for creating an accurate control system description (modeling).

Assessing the effectiveness of a company's activities in the field of warehouse logistics can be viewed from two sides: in the broad sense of this concept, that is, improving the quality of the logistics system, including the warehouse complex, and the efficiency of the warehouse complex in the narrow sense. To assess the effectiveness of warehouse operations, it is advisable to use characteristics that allow assessing both the quality of customer service and the efficiency of the logistics system of the entire company (Fig. 6).

Figure 6. Assessing the efficiency of an enterprise in the field of storage logistics



Source: Compiled by the author based on[356]

[356]Kalchenko A. G., Logistics: assistant to KNEU, Kiev 2012.

The logistics services efficiency index is used as a criterion for assessing "broad" efficiency. The level of logistics efficiency is influenced by such logistics costs as:

- cost and weight of the product;
- assortment and nomenclature available;
- special requirements for storage, processing, transportation (vulnerability of finished products to damage and corresponding requirements for the organization of warehouse logistics).

For many warehouses, the compactness of the product, that is, the ratio of the weight of the product in the package to the volume of the container, is an important parameter that affects costs: prices and services are inversely proportional to the compactness of the container of the finished product, so enterprises try to maximize the compactness of the finished product[357].

An integral criterion that takes into account the efficiency of technological warehouse processes, the use of warehouse space, the quality of service in the warehouse and the efficiency of the warehouse is the integral criterion of "narrow" warehouse efficiency. The set of criteria for each logistics function or business process may be different, and for a general assessment of the logistics system, including a warehouse complex, the indicators presented in Table 3 can be calculated.

Table 3. Efficiency indicators of logistics functions (business processes)

Index	Characteristic
Profitability of logistics activities	The ratio of profits from logistics activities and logistics costs
Lead time	Ratio between the number of orders completed on time and the total number of orders
Order fulfillment security level	The ratio of the number of orders in which there was no loss or damage to the total number of orders
Complexity of logistics functions	Ratio of the number of integrated logistics services to the total number of logistics services
Cycle efficiency	Operation time in total operating cycle time (transportation, storage, reloading time)

Source: Compiled by the author based on[358]

[357]Gozdek A., Kuciaba E., Transportation in the age of artificial intelligence, [in:] A. Gozdek (ed.), Mobility and sustainable transport. Searching for solutions, Scientific Publishing House of the University of Szczecin, Szczecin 2021.

[358]Lisyuk V.M., Tarakanov M.L., Logistics factor in the creative function of manufacturing sectors, Bulletin of Socio-Economic Research 2010 (39), 98-102.

Storage logistics performance should be viewed from a performance perspective with a strategic objective in mind. Acting as a tenant's customer, the company is primarily interested in the quality of storage of goods, throughput and the cost component associated with the work.

If the company is an owner who independently uses (or partially rents) warehouse space for its own needs, then other issues will be of interest - efficiency of space use, rational load on manual work, equipment, etc. And the third option, when the warehouse mainly performs a speculative function, that is, it is built for renting out premises[359].

Carrying out a systematic assessment of the efficiency of a warehouse complex is a kind of control over the company’s activities in the field of warehouse logistics, since the assessment results allow managers to find bottlenecks in the system, identify areas with system reservations and take timely actions and management decisions. In order to determine the integral level of efficiency of warehouse logistics and determine the reserves for its increase, methodological foundations have been developed for assessing the effectiveness of enterprise activities in the field of warehouse logistics for companies operating in the logistics services market.

4.3. Basics of organization of the logistics system for product distribution at enterprises

In today’s era of public consumption, an indicator of an economically developed state or any business unit is the effective circulation of goods, which has developed over time from the process of simple exchange of goods into a set of complex stages aimed at the speedy delivery of products from production to the consumer[360]. The management of this process, namely its material, information and other flows in the post-production period, is currently handled by distribution logistics, or sales, commercial or distribution logistics.

Logistics distribution is an important part of the logistics system, as it ensures the most efficient organization of distribution of manufactured products. Kisly V.M., Belovodskaya O.A., Olefirenko O.M. and Smolyanik O.M. define distribution logistics as the process of managing the commercial, channel and physical distribution of finished

[359]Fechner I., The place of the logistics center in the nomenclature of logistics infrastructure, "Logistics" 2008, no. 3.
[360] Christopher, M. (2016). Logistics & supply chain management. Pearson UK.

products and services in order to meet consumer demand and make a profit[361]. According to E.V. Krikavsky, distribution in supply chains is the interaction between product movement, distribution and sales; an important component of the distribution process is the process of distribution of goods, which includes two areas of activity: marketing and logistics[362].

Distribution of goods is an activity for the purpose of generating income, based on planning, control and organization of the distribution of finished goods on the market and their transfer for sale. At the same time, distribution should be understood as the process of designing and creating a sustainable system of distribution, sorting, sales, and acceptance of appropriate resources along the physical movement of products from producer to consumer[363].

In general, the essence of distribution logistics is that it covers all links in the chain along which finished products move in the post-production period: marketing, transportation, warehousing and others, where the driving force in distribution planning is precisely the consumer's interest. That is, new material values are not created, and the main emphasis falls on the provision of services.

Distribution logistics is closely related to product sales. It is believed that the implementation of the sales function is carried out with proper provision of six correspondences: cargo, quality, quantity, time, costs, destination. However, today the world is very changeable and new trends emerge every day in the circulation of goods, so logistics must respond to these factors as quickly as possible[364]. To achieve the necessary results to satisfy consumer demand, which today is not limited solely to the physical receipt of goods, but also carries high consumer expectations and requirements for high-quality service, it is necessary to carry out a set of measures to plan the most profitable and fastest cargo delivery routes, to rationalize methods packaging of goods, to provide cost-effective and best storage for preserving the quality characteristics of the goods. That is why, as a result of an integrated approach to the implementation of various functions of distribution of goods, distribution was included in the structure of the functional management of organizations and enterprises.

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[361]Krikavsky E.V., Chukhrai N.I., Chornopiska N.V., (2006). Logistics: compendium and workshop Kiev.

[362]Krikavsky E.V., Kosar N.S., Chubala A., (2009). Marketing policy of the subdivision: head. Compendium of the Faculty of the National University "Lviv Polytechnic", Lviv.

[363]Monczka, R. M., Handfield, R. B., Giunipero, L. C., & Patterson, J. L. (2015). Purchasing and supply chain management. Cengage Learning.

[364] Bowersox, D. J., Closs, D. J., & Cooper, M. B. (2013). Supply chain logistics management. McGraw-Hill Higher Education.

It is important to distinguish between the concepts of classical sales and distribution logistics: in the sphere of distribution, the material flow has the form of finished products; new material assets are not created here, but specific and complex types of activities are performed, acting as services. Therefore, distribution is a service provider of a very special product. A manifestation of its specificity is the intangible nature of the product. As a result, a unique supply model arises in the goods market - a product-service.

Distribution logistics performs tasks at the macro and micro levels. At the level of state and global markets, such tasks are[365]:

- Determination of the general distribution scheme of material flows.
- Selection of the optimal location of distribution centers and warehouses.
- Determination of the cost-effective number of warehouses and distribution centers.

Among the tasks at the enterprise level (micro level) are:

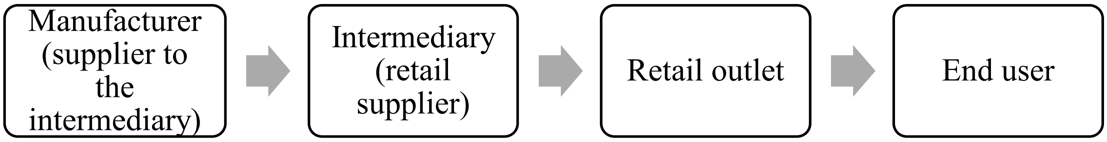
- Formation of an optimal product portfolio.
- Dynamic study of demand and its characteristics.
- Timely identification and forecasting of consumer desires.
- Concluding cooperation agreements for the supply of products with customers.
- Rational choice of forms and ways of promoting goods.
- Improving storage conditions for inventories.

In today's competitive and rapidly changing conditions, logistics becomes noticeable where no marketing techniques are any longer effective, because consumers, among the diversity of the entire assortment, are increasingly less likely to notice the differences between competitive brands. In other words, brand loyalty is a factor of customer satisfaction, which fades into the background, for example, if there is a product of a favorite brand on the counter, obviously it will end up in the customer's basket, if not, there will be a substitute product at the checkout, because no one will wait for the beloved one brand. 75% of consumers make purchasing decisions at the point of sale based on the available assortment.

However, this does not mean that marketing is losing its role in business; on the contrary, the connection between distribution logistics and marketing should be considered an inextricable process. The task of marketing is to identify and stimulate demand. Logistics is designed to satisfy the demand created by marketing at minimal cost. Figure 1 shows a typical chain of demand for a product.

[365]Simchi-Levi, D., Kaminsky, P., & Simchi-Levi, E. (2014). Designing and managing the supply chain: Concepts, strategies, and case studies. McGraw-Hill Education.

Figure 1. Chain of formation of demand for a product



Source: compiled by the author based on[366]

Analyzing in more detail Fig. 1, let us stop at the stage of the buyer arriving at a retail outlet, provided that the product he wants is not in stock. Conventionally, there are 3 options for the development of events (Table 1).

Thus, according to those given in table. 1 examples, if the goods are not delivered to the retail outlet on time, sales will fall, and, consequently, the profit of both the manufacturer and the intermediary[367]. That is why timely delivery of goods in sufficient quantities is an advantage over, for example, interesting advertising of goods. Availability of goods is one of the indicators of the efficiency of distribution logistics organization, which has several components:

- informing the buyer about products or services;
- convenient placement of access points with goods;
- speed of provision of goods or services;
- safe, flexible and reliable delivery.

In the literature one can find a definition of distribution logistics as marketing logistics, since logistics uses marketing tools in sales, and marketing implements logistics tactics and strategies. Therefore, both areas are guided by common postulates, tools and concepts, in particular, distribution channels should be remembered.

[366]Harrison, A., & van Hoek, R. (2008). Logistics management and strategy: Competing through the supply chain. Pearson Education.

[367] Rushton, A., Oxley, J., & Croucher, P. (2010). The handbook of logistics and distribution management. Kogan Page Publishers.

Table 1. Predicted consumer actions in the absence of goods at the point of sale

Option for the development of the event	Consumer actions	Consequences in the distribution chain
1	1. Visit another store. 2. Visit the store with availability all subsequent times.	1. The retail outlet changes the supplier (intermediary) or gives part of its volume to another intermediary. 2. The manufacturer loses sales, or the dealer splits the volume between him and another supplier.
2	1. The consumer buys a substitute product. 2. At a retail outlet, the sale of original goods decreases, and the volume of purchases of substitute goods increases.	1. Retail changes the supplier (intermediary) or gives part of its volume to another intermediary. 2. The manufacturer of the original product has a decrease in sales volume, since the intermediary's purchasing plan has decreased. Either the intermediary finds another manufacturer, or divides the volume in half.
3	1. The consumer is waiting for the product to be delivered. 2. The product will not be delivered in the next few days.	See options 1 and 2
4	1. The consumer is waiting for the product to be delivered.	1. The retail outlet and the intermediary change or expand the number of suppliers to increase product volume.

Source: compiled by the author based on[368]

[368]Krikavsky E.V., Kosar N.S. Chubala A., (2009). Marketing policy for the subdivision: head. Compendium of the Faculty of the National University "Lviv Polytechnic", Lviv.

Distribution channels (distribution network channels) are all organizations that act as intermediaries or sales participants, taking over or helping to transfer ownership of a product to another person; this is the path along which goods move from the supplier to the final consumer[369]. Distribution channels together constitute the distribution network.

The use of distribution channels is in a certain way outsourcing, which provides the following advantages to manufacturers:

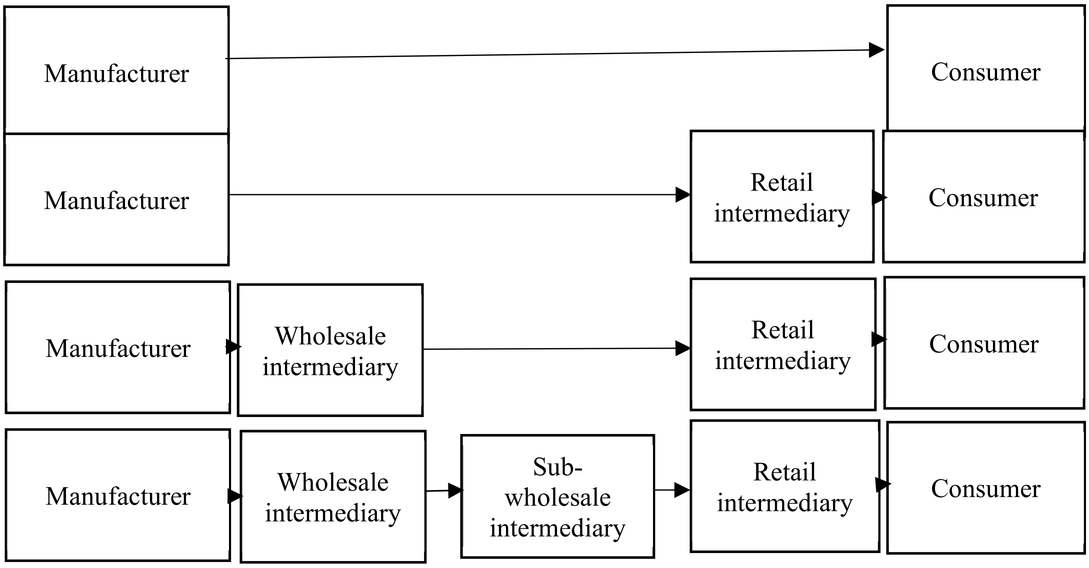
- reducing the amount of work on distribution of products and saving financial resources for this purpose;
- the possibility of investing saved funds in the main production;
- selling products in more effective ways;
- high efficiency in ensuring wide availability of goods and bringing them to target markets.

When forming distribution channels, it is important to be guided by justified intermediation. Intermediary services are appropriate if their cost is lower than the company's funds when performing similar work on its own. It should also be noted that the lengthening of supply chains by the number of intermediaries causes more difficulties in the coordination of the functioning of all links in promoting finished products to the consumer.

In general, in distribution logistics, channels can be characterized by the number of levels that comprise them. The level of distribution of logistics flow is the participants of the logistics system performing distribution functions, transforming material flows in the process of moving them to their final destination. According to the traditional approach, distribution channels are horizontal. They consist of an independent manufacturer and one or more independent intermediaries (Fig. 2).

[369]Lambert, D. M., & Stock, J. R. (2013). Strategic logistics management. McGraw-Hill Higher Education.

Figure 2. Levels of horizontal distribution channels



Source: compiled by the author based on[370]

As can be seen in Fig. 2, each channel member is a separate enterprise seeking to ensure maximum profit. The maximum possible profit of an individual channel member may come at the expense of the maximum possible profit of the system as a whole, because no member of the channel has complete or sufficient control over the activities of other members.

There are also vertical (marketing) distribution systems (VMS), which over time began to replace traditional channels. They consist of a manufacturer and one or more intermediaries, acting as one single system. One of the channel participants, as a rule, either owns other participating companies or provides them with certain privileges. Such a participant can be a manufacturer, wholesale or retail intermediary. Vertical channels emerged as a means to control channel behavior. They are economical and eliminate duplication of functions performed by channel members. There are three main types of IUDs: corporate, contract and managed. Each of them

[370]Fleischmann, M., van Nunen, J. A., & Gräve, G. (2004). Integrated production and distribution planning in the supply chain. European Journal of Operational Research, 149(3), 539-549.

uses different ways to form a management system and delegate authority within the channel.[371].

In a corporate system, coordination of efforts is achieved through the fact that all levels of the distribution channel belong to the same owner. Contractual ones consist of independent enterprises, united by transaction, carrying out various production and distribution activities, the purpose of which is to increase sales or save costs that each enterprise could not achieve separately. Coordination and conflict management are based on formal agreements between all participants. Contractual channels include voluntary associations of trade organizations financed by wholesalers; cooperative retail trade; franchise organizations.

Managed vertical systems coordinate the successive stages of production and distribution of goods. Such coordination is carried out thanks to the size and power of one of the participants in the system, usually the owner of a well-known trademark. A manufacturer of a popular brand product can ensure close cooperation between retailers of that branded product.

When forming logistics channels for distribution of goods, first of all, you need to decide on its structure (number of levels, composition of channel members). A necessary condition for the possibility of choosing a distribution channel is the presence of a large number of intermediaries in the market.

Intermediaries in the processes of material distribution are forwarding and transport companies, distribution companies, terminals, cargo distribution centers, companies for sorting, packaging and packaging of finished products, cargo processing and other enterprises. Banks, financial companies, clearing and settlement centers are financial institutions that perform supporting functions in distribution chains, as well as dispatch centers, communications companies, insurance companies, standardization, licensing and certification institutions, etc.

The core of intermediation in distribution are trade intermediaries, who, in addition to the direct functions of exchange (purchase and sale) of goods, can also perform other above-mentioned functions, such as transportation, forwarding, insurance, cargo handling, inventory management, credit and financial services, pre-sales and after-sales services and etc. Resellers are classified according to who the intermediary is working on behalf of and at whose expense[372].

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[371] Ballou, R. H. (2006). Business logistics management: Planning, organizing, and controlling the supply chain. Pearson Prentice Hall.

[372]Gudehus, T., & Kotzab, H. (2012). Comprehensive logistics. Springer Science & Business Media.

Table 2. Types of resellers in distribution chains

Type	Signs	Work principles
Dealer	On your own behalf and at your own expense	The dealer becomes the owner of the product after full payment for the delivery
Distributor	On someone else's behalf and at your own expense	The manufacturer gives the distributor the right to sell its products in a certain territory and for a certain period. Distributors usually occupy a position between the manufacturer and dealers
Commissioner	On your own behalf and at the expense of others	The commission agent is not the owner of the product. The commission agent is an intermediary only for the principal (manufacturer), and not for the end consumer, whose money is transferred to the account of the commission agent
Agent, broker	On someone else's behalf and at someone else's expense	Agents are intermediaries who act as representatives or assistants of another person (principle). Brokers are intermediaries in concluding transactions that bring together counterparties. Brokers do not own the products and do not manage the products

Source: compiled by the author based on[373]

Most often, to increase the efficiency of product sales and in order to save money, companies use multi-channel product distribution systems. Each manufacturer, based on marketing research of the sales markets for its products, determines the structure of possible distribution channels, their connection with specific categories of consumers and with each other.

According to the monetarist approach of L. Mises, the future is recognizable using the theory of probability, and average indicators in the future will not deviate significantly from the current ones. Monetarists believe that in conditions of uncertainty, money acts as a connecting chain between the current and future states

[373]URL: http://surl.li/dcvvt, accessed 27/12/2023.

of the economy. Contrary to J. Keynes, L. Mises said that uncertainty is caused precisely by human capabilities, their exhaustion and limitations, which does not allow the creation of permanent laws and creates a series of random events[374].

Table 3. The concept of uncertainty in accordance with the interpretations of scientists

Approaches	J. Keynes	F. Knight	L. Mises
Interpretation of the concept of uncertainty	The future is not subject to knowledge, since some of the information has not been created	Uncertainty is the absence of a distribution of probabilities and corresponding outcomes.	Uncertainty is a consequence of the limitations of human capabilities
Economic consequences	Uncertainty leads to increased cyclical waves	The emergence of institutions that reduce risks from uncertainty and the possibility of making profits	Uncertainty is the possibility of free choice, which is a prerequisite for innovation and progress.
Need to eliminate	Uncertainty is dangerous for the economy and must be eliminated	Uncertainty does not need to be eliminated: it is a condition for making profits	Uncertainty should not be eliminated: it is a condition for the existence of human freedom of choice

Source: compiled by the author based on a study of scientific literature

According to the findings in table. 3, we consider the theories of F. Knight and L. Mises closer to the present, because the elimination of uncertainty in the modern world, which J. Keynes considers appropriate, is unrealistic and ineffective, given the level of progress of technologies and ideas capable of generating income and values, in fact, uncertainty .

Also, uncertainty is usually interpreted in the literature as the result of a combination of external turbulence, not under the control of the organization, and

[374]URL: http://surl.li/dczqo, accessed 27/12/2023.

internal cognitive limitations caused by a lack of information, awareness or clarity of decision-making. On the other hand, uncertainty is an integral part of risk or one of the prerequisites for its occurrence, but not identical concepts[375].

Uncertainty is common in supply chains. Sometimes it arises due to inconsistency between participants in the logistics chain (in the quality of materials or delivery times), and sometimes under the influence of external sources, when the delivery time and quantity of materials are affected by crises, wars, weather conditions, human factors associated with time variability receipt of materials or quantities required by customers. In essence, uncertainty can manifest itself in various forms, including variability, lack of information and/or ambiguity in the communication setup between supply chain participants.

As we can see, uncertainty has been widely studied in the economic literature since the last century, but it has only recently become the subject of empirical research in the context of supply chain management. H. Bond, for example, writes about two views on uncertainty in logistics systems[376]:

- Supply chain uncertainty refers to the decision-making process in the supply chain in which the decision maker does not know exactly what to decide due to the lack of visibility into the supply chain and possible actions.

- Supply chain uncertainty refers to changes in the balance and profitability of the supply chain caused by potential and unpredictable events, requiring a response to restore balance. The event could be an unexpected order, a late delivery from a supplier, or a breakdown of critical production equipment.

American mathematician Naseem Nicholas Taleb considers hard-to-predict, unexpected and accumulating events in his "black swan" theory.[377]. According to the criteria proposed by the author of the theory:

- the event is unexpected;
- the event produces significant consequences;
- after the occurrence, the event has a rationalistic explanation, as if expected.

According to the author, all significant events, research and discoveries, for example, the emergence of the Internet, terrorist attacks, world wars (we can include the COVID-19 pandemic, the war in Ukraine) are "black swans". The main idea of the theory is to develop resilience to negative events and be able to take advantage of positive events without trying to anticipate uncertainty.

[375]Ford Matthew W. (2015), Supply chain quality management and environmental uncertainty: 4 Contingency perspective, The Quality Management Journal (22 (4)), 54–65.
[376]URL: http://surl.li/eaqss, accessed 27/12/2023.
[377]Taleb NN: The Black Swan: The Impact of the Highly Improbable, 2017.

Over the past few years, we have seen how logistics is changing in conditions of uncertainty - crisis, pandemic and war. In 2020, the onset of the pandemic forced companies to sharply shift their focus from innovation and business restructuring to increasing flexibility in supply chains to enable rapid response to unexpected events. During the lockdown, for example, there was a tendency to accumulate inventory (in case of another lockdown), accordingly, the demand for warehouse services increased, while the total space remained the same - an increase in warehouse stocks of vital goods (food, spare parts, components, medicines) increased by 10–12%[378]. Accordingly, changes began at the macro level, namely, an increase in interest rates by an average of 5-7%[379].

In 2022, businesses are once again faced with unknown supply chain conditions—namely, war. According to the results of a study by the Gradus Research group, since the beginning of the military aggression in Ukraine, the activities of 86% of companies have been stopped or limited, of which 48% were working partially or almost not working. Only 13% of enterprises are still operating, a small proportion of businesses (6%) are operating at a larger volume than before the war[380].

Although the pandemic had already seen business localization and supply chains moving closer to manufacturing countries or markets to adapt, military actions in some cases made this impossible. Absolutely contrary to trends during the coronavirus, manufacturers are forced to abandon the accumulation of finished products in warehouses. The more goods are stored in warehouses, the more frozen assets the company has; In addition, there are high risks of attack on warehouse premises and partial or complete loss of products.

Significant problems also include limited assortment due to closures, destruction of production facilities, loss of suppliers, blocking of ports, congestion and destruction of railway infrastructure and roads. The main feature of distribution logistics - service and consumer desire in uncertain conditions - has receded into the background.

In addition, there is a significant slowdown in distribution chains due to additional reviews at checkpoints, curfews, and sudden changes in routes due to the threat of shelling. It should also be noted that the location of distribution centers and warehouses has changed: some enterprises had to completely change the map of the location of product storage areas, rent premises with worse and more expensive storage conditions in safer regions.

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[378]URL: http://surl.li/ddate, accessed 27/12/2023.
[379]URL: http://surl.li/ddatt, accessed 27/12/2023.
[380]Udalov A. A., (2013), Improved methods for analyzing material and production reserves of commercial organizations, Kharkiv.

Of course, military operations on the territory of Ukraine have created conditions of uncertainty for international supply chains. The imbalance between supply and demand, added to by the risks of the last two years of the pandemic, could lead to high inflation in the world. The IMF estimates that this could be around 5.7% and 8.7% for advanced and developing economies respectively, and recent research suggests that only 12% of global companies are sufficiently prepared for the coming supply chain shocks.[381]

As we can see, although both a pandemic and a war are crisis environments for the functioning of supply chains, the distribution of products in both conditions is still significantly different. Therefore, in conditions of uncertainty, it is necessary to promptly and quickly adjust activities and change short-term forecasts, rather than plan universal strategies for several years in advance, taking into account only risks and methods of insuring them.

According to research[382], when managing the logistics activities of an enterprise, it is advisable to take into account many risks, which can be conditionally systematized into two groups: exogenous and endogenous. Exogenous risks are:

- political, associated with an unstable political situation;
- institutional, related to the insufficiently effective operation of legislative and regulatory documents regulating the processes of procurement, sales, commercial and transport activities;
- market - unpredictability of market conditions and inflexibility of existing logistics systems with respect to changes in the market environment, in particular demand;
- financial and economic – caused by instability in the context of macro- and microeconomic indicators of enterprises' activities;
- environmental risks in the context of negative impact on the environment due to violation of the conditions of transportation and storage of products; lack of a concept for industrial waste management.

Endogenous risks include:

- economic risks (decrease in profitability levels, decrease in the balance of export-import operations in the transport sector, insufficient organizational and economic support);
- technological (insufficient use of innovative technologies in industrial enterprises);

[381]URL: http://surl.li/ddatt, accessed 27/12/2023.
[382]Simatupang, T. M., & Sridharan, R. (2002). The collaborative supply chain. International Journal of Logistics Management, 13(1), 15-30.

- risks associated with ineffective policies for organizing the logistics system and stockpiling, transport and sales policies;
- information (insufficient use of modern information and communication technologies and electronic platforms as tools for information support for organizing logistics activities and managing relationships with consumers);
- environmental (insufficient use of environmentally friendly technologies in industrial production).

Thus, in an unstable environment, it is advisable to manage the risks of the logistics activities of enterprises. To do this, it is necessary to implement an algorithm consisting, for example, of such stages as SWOT analysis - a system for identifying risks, their specifics and features, studying factors influencing the occurrence of risks, analyzing the amount of damage; identifying the most significant risks, ranking according to the level of their influence using the expert method and rating risks using a risk assessment scale; transfer of risks when concluding contracts for supplies, storage, transportation, sales, including risk diversification; reserving funds to cover unforeseen expenses, liability insurance for forwarders when transporting products and cargo insurance.

4.4. Global supply chains management in the context of international business

With the development of production and commercial activities in the context of scientific and technological progress, logistics processes began to play an important role for MNCs.[383] With proper organization of logistics activities, production costs are reduced. Therefore, logistics is an important link in the enterprise, thanks to which the competitiveness of enterprises increases.

Logistics is the organization, planning and management of materials and raw materials, as well as information, in order to reduce costs and increase productivity in production. Processes are a certain sequential change in operations that achieve a certain result. .

Logistics processes are organized processes in production, thanks to which a MNC achieves its goals. These processes relate to the receipt of goods, storage and transportation of materials and raw materials entering the MNC[384]. With an increase in the number of warehouses and raw materials, MNCs require the introduction of the

[383] Christopher, M. (2016). Logistics & Supply Chain Management. Pearson Education Limited.
[384] Tang, C. S. (2006). Perspectives in supply chain risk management. International Journal of Production Economics, 103(2), 451-488.

latest technologies. Thus, this will optimize the size and time of the workforce, will also increase the quality of the work performed, reducing the human factor, thereby reducing production costs. Currently, much attention is paid to quality and provision of a high level of services, which is necessary for logistics .

Logistics and logistics processes, due to their increasing influence on the economic sphere, accompany a person at every stage of his development. Logistics is an industry associated with the search for new opportunities in MNCs, such as increasing material flows, increasing efficiency and reducing costs for the production of goods and services[385]. At this stage, logistics is considered as the main source of increasing the competitive advantages of MNCs. Proper storage of raw materials and materials in warehouses reduces transportation costs; properly formed routes reduce traffic jams and pollute the environment less.

Innovative inventions have been invented and implemented to improve the logistics system. They improve individual logistics processes, thereby improving the entire system of logistics processes. This includes routing and planning, as well as software for managing logistics processes.

Logistics processes are an important component of international trade and the functioning of international capital. Scientific and technological development, in particular the increase in labor productivity and automation of production processes, has a significant impact on the evolution of the means of production[386]. The First Industrial Revolution, which brought with it the mechanization and rationalization of production processes, was an outstanding step in the development of logistics, helping to improve the interaction between producers and consumers, improve the level of service and reduce the delivery time of goods. New manufacturing processes and approaches to product development have created the need to find efficient logistics methods that reduce costs and maximize profits[387]. To achieve these goals, it was necessary to use not only improved mechanisms, but also new logistics methods, such as planning, inventory control and transportation of goods . In accordance with this, changes in logistics processes made it possible to maximize production volumes and expand the range of products (Fig. 1).

Until the 1960s, logistics functions were performed as a series of fragmented, uncoordinated movements of goods and information between different business structures. For example, order processing was often the responsibility of the

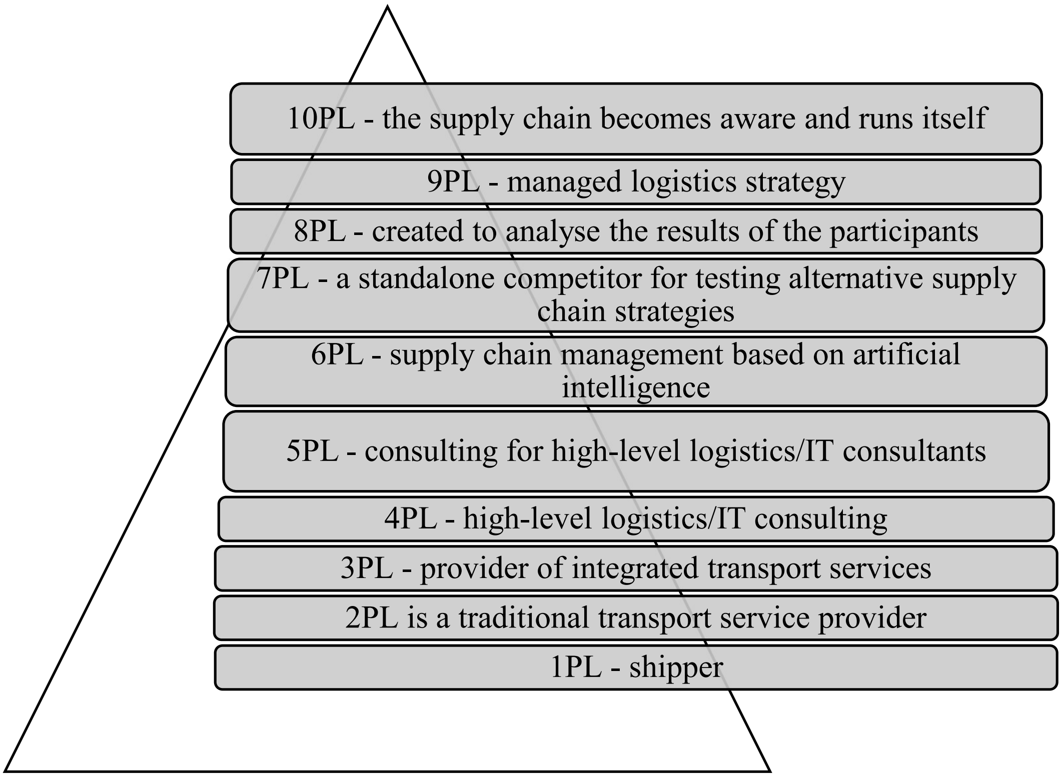
[385] Zisliy, V. (2017). Logistics: theory and practice: navch. Pos_bn. Center for Educational Literature, Kiev.

[386] Hult, G. T. M., & Ferrell, O. C. (2017). Global supply chain management: Leveraging processes, measurements, and tools for strategic corporate advantage. Pearson.

[387] Lee, H. L., & Whang, S. (2001). Decentralized multi-echelon supply chains: Incentives and information. Management Science, 45(5), 633-640.

accounting department, transportation was often the responsibility of the marketing department, while the storage of raw materials and unfinished goods was usually the responsibility of production. This fragmentation created an obstacle to the efficient flow of goods into the production system, through production processes, and out of the production system into the MNC, often leading to loss of productivity, waste, and conflict within the company[388].

Figure 1. Evolution of logistics from 1PL-10PL



Source: Compiled by the author based on [389]

In this regard, there is a need to develop logistics systems that provide an effective and integrated approach to managing the flow of goods and information within the supply chain. In the 70s, the first computerized logistics management systems began to appear, making it possible to manage information flows, ensure planning accuracy and control logistics costs (Table 1).

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388 Korogodova, O. O., & Omelyanchuk, R. O. (2023). Infusion of trends in the technological development of Industry 1.0-5.0 into international logistics processes. Current trends in the development of financial and innovation-investment processes iv in Ukraine, 2023(1), 121-144.
389 Marchenko, V. M., & Shutyuk, V. V. (2018). Logistics: Pidruchnik. Vidavnichiy house “Artek”, Kiev.

Table 1. Types of logistics operators and their definitions

Logistics type	Definition	Logistics role/authority
1PL	1PL offered standardized services through its own or external resources as a carrier, warehouse operator, etc.	Full responsibility for all circuits
2PL	Individual or system service with own or external resources as international freight forwarders. 2PL – traditional transport service provider	Partial responsibility for all circuits
3PL	Served their clients with their own or built-in resources as contract logistics. A 3PL delegates partial or complete control of the supply chain to companies. 3PL – integrated logistics service provider	Service through outsourcing
4PL	4PL resources, capabilities, and technologies are provided by one's own or another organization to create, design, or launch supply chain solutions. 4PL – work with high-level logistics / IT consulting	Conclusion of a subcontract when hiring a company to perform work
5PL	Negotiator for larger/oversized volume (airlines or shipping companies). 5PL – high-level logistics / IT consultant, outsourcing	Service through outsourcing
6PL	6PL belongs to the realm of artificial intelligence, which is also called AI-driven supply chain. 6PL – supply chain management driven by artificial intelligence	Service through outsourcing
7PL	Autonomous competitor designed to test alternative supply chain strategies	Service through outsourcing
8PL	8PL created a committee responsible for analyzing competitors' performance. The committee reviews industry practices to propose interventions that bridge the gaps	Service by Committee
9PL	9PL organizes and coordinates logistics processes from initial delivery to final consumption. 9PL is designed to identify crowdsourcing solutions that meet last mile delivery requirements	Service through crowdsourcing solutions
10PL	10PL uses artificial intelligence to organize, control and direct the work of other participants in the supply chain. With 10PL, there is no longer any need for human intervention, and with the help of technology, information is received instantly and AI controls the entire supply chain	Lack of ownership and control in logistics

Source: Compiled by the author based on[390]

[390] Omelyanchuk, R. O., & Korogodova, O. O. (2023). The evolution of international logistics processes: from fragmentation to integration. International scientific and technical science and technology: principles, mechanisms, effectiveness, 2023(1), 13-14.

With the emergence of first party logistics (1PL), which offered standardized services through its own or external resources such as carrier, warehouse operator, etc., the level of development of international trade has undergone positive changes. As the business grew, 1PL transformed into 2PL by appointing a subcontractor to handle logistics operations[391]. At the third level of logistics services (3PL), the functions of partial or complete supply chain management are transferred to companies. Due to rapid changes in the logistics landscape, the 3PL has transformed into a 4PL as an independent general contractor. The goal of fourth party logistics is to provide maximum transparency in all processes, facilitating the demonstration of real-time information, as well as the consolidation of customer and supplier information that is collected independently from all supply chain partners[392].

Fourth party logistics (4PL) is an integrator that manages all aspects of the supply chain. Going beyond physical logistics, 4PL can include elements of IT, procurement and finance. While outside observers may argue that the difference between a 3PL and a 4PL is negligible, for a company looking for relevant services and support for a growing business, the difference can be huge. For example, both logistics integrators will rely on the latest IT technologies to optimize supply chain communication and accuracy[393]. However, a 3PL will likely have in-house technical systems to track units throughout the supply chain and include this service in the overall cost of supporting them, whereas a 4PL may provide high-level data analytics to help the client make business decisions for long-term growth .

5PL organizations are almost entirely virtual. They do not have a physical presence, but are a web-based system that provides information to a chain of participants under its control. Individual participants manage different supply chains in the network based on real-time information received from the 5PL. The goal is to achieve best-in-class solutions in logistics services such as transport, forwarding, warehousing, etc. The development and coordination of specific supply chains and their transformation into supply networks involves the formation of virtual corporations. These dynamics include expanded distribution channels, streamlined operations, more efficient transportation methods, improved warehousing

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391 Fawcett, S. E., Ellram, L. M., & Ogden, J. A. (2014). Supply chain management: From vision to implementation. Pearson Higher Ed.

392 Cai, J. X., Jun, M., & Yang, Z. L. (2016). Optimal financing and ordering policy in a supply chain with capital constraint. International Journal of Production Economics, 177, 52-62.

393 Arvis, J.-F., & Turku, L. O. (2023). Trade Logistics in the Global Economy. School of Economics Uni, The World Bank, Washington.

technology and stronger IT[394]. Issues related to the technological forces behind changes in logistics are rapidly evolving, mainly due to the widespread adoption of e-commerce. Fifth party logistics (5PL) reflects the development of full logistics integration across many outsourcing providers. 5PL provides a fully integrated logistics solution covering the entire supply chain from end to end with the help of multiple external service providers. Critical to success in achieving this is the effective integration of IT and computer systems to provide real-time visibility and control of the entire supply chain, no matter how many different suppliers are involved.

Thus, with the development of technologies in Industry 4.0 logistics, new functions have appeared: ensuring process transparency, searching for optimal transport solutions, optimizing and integrating technologies into the product supply chain, which in many cases has become more customized. With the advent of Industry 4.0, a new wave of technological changes in production has occurred, making it possible to improve logistics processes and increase their efficiency. One of the key innovations was the virtualization of production processes, which allows you to monitor the operation of equipment and production lines in real time. In addition, the use of the Internet of Things allows you to collect huge amounts of data on the state of production, which allows you to quickly respond to problems and improve processes. Intelligent transport systems and autonomous vehicles have become important components of logistics processes in Industry 4.0[395]. For example, smart logistics allows you to effectively manage transport and optimize delivery routes, which reduces costs and delivery time.

The newest levels of logistics that are emerging and will emerge in the conditions of Industry 4.0 can be classified as follows: 6PL logistics or sixth party logistics - logistics that involves the use of artificial intelligence in the management of logistics networks. This type includes the entire supply chain and pays attention to the analysis of large amounts of data using AI. 7PL or seventh party logistics is a level of logistics in which autonomous operations will be able to independently create and test alternative logistics networks and select the best network. 7PL type logistics manages several providers, thereby increasing the efficiency of logistics process management.

8PL or eighth party logistics – with the help of artificial intelligence it will be possible to analyze the results of competitors, etc. This concept is more complex

[394] Pierre, A. D., & Richard, D. S. (2017). International Logistics: The Management of International Trade.

[395] Ivanov, D., & Sokolov, B. (2013). Control and system-theoretic identification of the supply chain dynamics domain for planning, scheduling and coordination. European Journal of Operational Research, 224(2), 313-323.

because while managing other providers, the logistics provider handles most of the processes, including inventory management, freight and customs clearance. 9PL or ninth party logistics – suggests the emergence of crowdsourcing management in logistics[396]. The 9PL provider is responsible for managing the entire chain of activities and processes from production to consumption. 10PL or tenth party logistics suggests that at this level, logistics supply networks are likely to be self-aware and able to operate completely independently, without human intervention in logistics processes.

As a result of technological innovation, logistics has undergone significant changes and received significant benefits. Thanks to process automation, it has become easier to track and manage inventory, distribute goods in warehouses, which has increased the speed and efficiency of services[397]. Digitalization and the use of automatically processed information reduces work time and reduces the human factor in production, and the use of analytical data allows MNCs to increase process efficiency, reduce costs, build forecasts and adjust delivery routes.

Providing information and the ability to remotely manage temperature, humidity, location of goods provides a significant advantage and improves the accuracy and speed of delivery, and the use of analytical and predictive capabilities of artificial intelligence provides reliability, accuracy, automated optimization and support in solving complex problems associated with logistics processes.

The creation of a global logistics system is the result of three main factors: technological innovation, infrastructure investment and institutional evolution[398]. The introduction of new technologies that change approaches to product development, production, logistics and consumption is pushing humanity to a new stage of development. The fourth industrial revolution reflects technological progress and is based on digitalization, automation, personalization, integration between IT management systems and production systems via the Internet.

The development of logistics is influenced by Industry 4.0, requiring the introduction of new technologies, integration and digitalization of information to speed up and improve the tracking of logistics processes[399]. Reducing the cost of time, as well as human and financial resources, together with reducing the impact of

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[396] Simchi-Levi, D., Kaminsky, P., & Simchi-Levi, E. (2008). Designing and managing the supply chain: Concepts, strategies, and case studies. McGraw-Hill.

[397] Chopra, S., & Meindl, P. (2015). Supply Chain Management: Strategy, Planning, and Operation. Pearson Education.

[398] Seuring, S., & Müller, M. (2008). From a literature review to a conceptual framework for sustainable supply chain management. Journal of Cleaner Production, 16(15), 1699-1710.

[399] Goldsby, T. J., & Martichenko, R. (2005). Lean Six Sigma Logistics: Strategic Development to Operational Success. J. Ross Publishing.

negative social and environmental effects, greatly facilitates the ability to provide real-time information and also helps to optimize routes. The creation of technological support allows companies for which this service is not an element of competition to share part or all of their distribution chains[400]. Artificial intelligence in logistics is being used to replace human labor in warehouses, create routes and create demand forecasts, which helps ensure the amount of inventory needed and the distribution of products to reduce costs and delivery times. .

Customization of products and services using Industry 4.0 technologies also has a significant impact on logistics processes. Omnichannel logistics reduces time costs and increases the number of possible suppliers[401]. Automation and robotization solve problems with labor shortages, avoid human error and the risk of cargo loss due to unpredictable situations, and also ensure transparency. Using Industry 4.0 tools, you can combine on one resource all the necessary information that robots will use when determining the quantity and location of products in the warehouse. Connecting robots to a resource will significantly reduce time, costs and completely automate the logistics of MNCs.

Another important element of Industry 4.0 for logistics is the introduction of 5G telecommunications, which will significantly reduce delays on the Internet and allow an increase in the number of cost-effective services due to the speed of data collection, that is, tracking routes and improving their paths in real time. This will also facilitate the collection of data on the need to optimize warehouses and scheduled transport maintenance. Consequently, technological changes within Industry 4.0 optimize the functioning of logistics processes .

Technological development has a significant impact on international logistics processes. Industrial revolutions revolutionize people's lives by introducing large-scale investments in transport infrastructure, significantly improving product quality and the ability to deliver goods to end consumers[402]. The driving force behind industrial digitalization is globalization and the increasing level of integration of timely and small-scale production into the global economic space. These changes

[400] Sarkis, J., Zhu, Q., & Lai, K. H. (2011). An organizational theoretic review of green supply chain management literature. International Journal of Production Economics, 130(1), 1-15.
[401] Pagell, M., & Wu, Z. (2009). Building a more complete theory of sustainable supply chain management using case studies of 10 exemplars. Journal of Supply Chain Management, 45(2), 37-56.
[402] Fawcett, S. E., Magnan, G. M., & McCarter, M. W. (2008). Benefits, barriers, and bridges to effective supply chain management. Supply Chain Management: An International Journal, 13(1), 35-48.

require integrated and automated solutions in global value chains, especially in the supply and logistics sector.

In the context of globalization of the 20th-21st centuries over the past 50 years, these processes have been intensifying due to institutional changes, innovations in logistics and cost reduction as part of the formation of global value chains. As a result, consumers of products receive better goods, companies pay taxes, which is reflected in the increased economic activity of national economies[403]. This trend is further strengthened by changes in the conditions of the Fourth Industrial Revolution, which makes it possible to transition in international logistics processes from Logistics 3.0 to 4.0[404].

The transport and logistics sector has undergone significant changes for a long time under the influence of industrial revolutions. The development of logistics and global supply chain concepts dates back to the 1950s. In the 21st century, the volume of goods sold and the length of transport routes in the chain have increased significantly. The length of cargo transportation in Logistics 3.0 was significantly less than in Logistics 4.0. Although, using the example of China for 1970-2000, 0.78-1.68 million km is quite a long distance.

The emergence of Logistics 3.0 is driven by the introduction of automated flow line conveyor systems to perform tasks provided by workers using programmable logic controllers (PLC). Human intervention in production and logistics activities remained a mandatory element of the process[405]. The provisions of Logistics 3.0 consist in the implementation of solutions for automating the management of technological processes of modern production and technological transport complexes. Thus, with the development of Logistics 3.0, the volume and length of cargo transportation increased. The global logistics automation market size was estimated at US$41.51 billion in 2019. And by 2027, the logistics automation market will be worth US$91.7 billion, growing at a CAGR of 11.5%, driven by the growing adoption of Industry 4.0 in the manufacturing industry..

The beginning of the Fourth Industrial Revolution as an era of smart machines, storage systems and production facilities that can autonomously exchange information, run processes, use cobots to control robotic machines without human intervention, contributes to the emergence of Logistics 4.0, which became a response

[403] Vachon, S., & Klassen, R. D. (2008). Environmental management and manufacturing performance: The role of collaboration in the supply chain. International Journal of Production Economics, 111(2), 299-315.
[404] Lummus, R. R., Vokurka, R. J., & Alber, K. (2017). Supply chain flexibility: Building a new model. International Journal of Production Research, 55(12), 3440-3452.
[405] Liu, M., Zhang, Y., Gao, P., & Guo, J. (2019). Research on the transformation path of traditional supply chain based on platform collaboration mode. Complexity, 2019.

to the digital transformation of the economy. Thus, the most significant advantage of Logistics 4.0 is the introduction of integrated, digitized and automated business solutions in the new reality. Logistics 4.0 uses the achievements of Industry 4.0, which consist in the widespread use of digital technologies, the use of network communications, cheaper and faster integration of economic ties; deepening the degree of automation, everyday use of cloud software by all economic agents, robotization and cobotization in the production and transportation of products; mass introduction of intelligent devices; growth in the volume of international logistics processes; accelerated development of globalized market participants.

The main difference between Logistics 3.0 is that it existed at the start of the process of introducing digital technologies, thus characterizing the evolution of traditional industrial automation, while the progress of Logistics 4.0 is represented by the process of a qualitative change in management towards the construction of new business models, as well as the creation of new ways of developing projects, the availability of complete and reliable digital data, the introduction of intelligent devices into the operation of the production management system in real time. Thus, globalization challenges create the basis for the wider use of digital technologies in international logistics processes. Logistics 4.0 means a significant increase in the size and volume of transporting goods over long distances using the latest technologies and facilitating human work, as well as reducing the impact of the human factor in production activities and further international logistics processes in global value chains .

Technological development plays a significant role in improving all types of production and commercial activities of companies. Progress in the processes of automation, digitalization and robotization poses new challenges for economic agents, since not only the design of goods is changing, but also the methods of production and delivery. For transnational companies (MNCs), this is not only cost reduction, but also the opening of new opportunities and process reengineering[406]. MNCs stimulate the main metamorphoses of the creation and development of new technologies that have a significant impact on the economies of countries. Innovations aimed at reformatting production and improving the delivery processes of MNCs have the greatest development[407].

With the development of Industry 1.0 and the invention of the first steam engine, a significant breakthrough occurred at that time. Manual work began to be

[406] Mangan, J., Lalwani, C., & Butcher, T. (2016). Global logistics and supply chain management. John Wiley & Sons.
[407] Ferdows, K., Lewis, M. A., & Machuca, J. A. D. (2016). Rapid-fire fulfillment. Harvard Business Review, 94(11), 106-113.

automated, and transportation by animals gave way to machines responsible for transportation. The main modes of transport were ships and trains with steam engines. Increased worker productivity and faster delivery times helped increase production levels and reduce the time it takes to deliver materials to production and goods to consumers. This was the reason for the rapid development of companies engaged in certain types of activities.

With the advent of Industry 2.0, new technological systems began to be introduced, especially electrical technologies, which created more complex machines and increased production. The term "first party logistics" was relevant and used until the late 1970s, covering Industry 1.0 and 2.0. A first-party logistics provider (1PL) is a company or person that needs to transport cargo, goods, or products from one point to another. First party logistics only includes two parties[408]. There is a manufacturer or distributor delivering the goods, and then there is a retailer or customer receiving the goods (the customer). There are no other intermediaries in the entire process. Innovations were gradually introduced into the processes of production, distribution and consumption of products, so the number of new companies providing logistics services grew.

Industry 3.0 began with the development and implementation of computers. The creation of third-party logistics requires the use of electronics and information technology, which further leads to automation of production. Manufacturing has become a more self-sufficient process thanks to access to the Internet. More conveyor systems were also created, which helped perform engineering tasks, but the systems could not work completely without human control. With the advent of these innovations, companies have increased productivity by optimizing processes and implementing technological changes .

Industry 4.0 is the era of machines that can communicate, operate and control processes without human intervention. The new technological revolution has affected logistics processes. Manufacturers, saving money, tried to combine warehousing, provision of customs services, supply chain management, logistics IT software products, and tracking services. With the development of Industry 4.0, the introduction of third party logistics has made it possible to reduce costs and automate processes thanks to the Internet. Third party logistics (3PL) is the outsourcing of supply chain and logistics operations to deliver a company's products to the customer[409]. Logistics solutions offered by 3PLs include receiving, storage, packaging

[408] Schoenherr, T., & Swink, M. (2012). Revisiting the arcs of integration: Cross-validations and extensions. Journal of Operations Management, 30(1-2), 99-115.
[409] Monczka, R. M., Handfield, R. B., Giunipero, L. C., & Patterson, J. L. (2015). Purchasing and Supply Chain Management. Cengage Learning.

and delivery services. Some 3PL companies also provide other value-added logistics services: inventory management, kitting and assembly, layaway packaging, and others. For MNCs, the provision of such services may be of interest.

Despite the positive aspects of 3PL, this type of process organization has some weak aspects, namely: less control over inventory through multiple storage options and becomes more expensive for smaller quantity orders, and is not suitable for perishable and flammable products. Since the late 1990s and early 2000s, changes in logistics systems and ownership relationships have included privatization, deregulation, internationalization, rationalization, use of new technologies, integration and consolidation. Other critical changes evident during this period also include the development of third-party logistics (3PL) and fourth-party logistics (4PL) providers, more complex partnerships, and the growing intermodal movement of goods.

At a global level, achieving greater supply chain resilience will undoubtedly mean reorganizing both logistics and production platforms. In this regard, 3PLs are expected to continue to grow as ongoing process outsourcing to these operators provides enormous efficiencies and greater flexibility, and in an increasingly unpredictable world, flexibility is quickly moving up the list of priorities. This flexibility that 3PLs offer is based on scale, both in terms of geographic coverage and volume of inventory. We note that to create operations of this scale, there is significant mergers and acquisitions (M&A) activity in the sector, so many 3PL platforms today have large enough geographic footprints to offer the agility and flexibility needed to quickly maneuver supply chains .

The geography of supply chains has a significant impact on the development of logistics services.[410] The clustering of 3PL firms is predictable, because everyone is trying to locate themselves as close as possible to markets and transport hubs. For a 3PL, being located near an airport is important because air cargo transportation is dependent on shipping and receiving times. Therefore, the main location of 3PL clusters are: central areas of cities, with main offices of companies, orientation towards the airport, towards the market, especially for the retail sector, because 3PL deals with incoming logistics, cross-docking, to the border, because such a location facilitates and speeds up customs procedures.

The evolution of 3PL, 4PL and the proposed 5PL has the potential to have a positive impact on firms through lower logistics costs, lower inventory levels and better responsiveness to customer demands. 5PL is essentially an outsourcing model

[410] Kaczmarek, M., & Zawadzka, D. (2018). "Technological innovations in supply chain management - comparative analysis of Polish and foreign companies." Zeszyty Naukowe Uniwersytetu Szczecińskiego. Ekonomiczne Problemy Usług, (137), 131-142.

that complements the logical progress in developing full logistics integration. The term “Industry 5.0” and “fifth party logistics” are relatively new. The main goal of the Industry 5.0 concept is to develop a new paradigm of industrial production, based not only on ensuring effective cooperation between people and advanced technologies, including artificial intelligence, but also on the sustainable development of society.

Automation and informatization of production processes will allow workers to focus on providing individual services to clients, which will increase productivity and profits of MNCs. At the same time, the main task of 5PL is to create an integrated logistics process management system that ensures effective coordination of all parts of the logistics chain. This will ensure optimal allocation of resources and optimize procurement processes. Harnessing synergies between human and technological resources, as well as continuous improvements in artificial intelligence, will improve operational efficiency[411]. The development of fifth party logistics will allow suppliers to help their customers adopt new technologies and ensure efficiency throughout the supply chain.

As Industry 5.0 develops, new opportunities are opening up for MNCs in the logistics industry and other areas. The introduction of the latest technologies will allow transnational corporations to maximize profits and create a unified network of transport routes, which will help reduce logistics costs and lower prices for goods.

4.5. Modern directions of optimization of transport logistics

The logistics activities of each company are characterized by constantly repeating processes, so management should be considered as a system cycle, which must also be constantly repeated. From the point of view of structural, procedural and functional approaches, closely related to logistics management, logistics can be considered as a cyclical process[412].

Logistics management is usually associated with the theory and practice of marketing management, namely the relationship between the production and distribution of products with real and effective consumer demand, stimulating sales through communication activities, flexible pricing and trade margins or discounts, finding new ways to generate income, etc. d. The cumulative economic effect can be

[411] Jabłoński, P., & Szcześniak, A. (2017). "The impact of technology on the efficiency of supply chain management in food industry companies in Poland." Logistics, (6), 5587-5597.

[412] Banon, A.R., Aragon & Sanchez, A. (2002). Explanatory Factors of Success Competitive. An Empirical Study on the SMEs. Management magazine Notebooks, 1, pp. 49-63.

formed through dialectical interaction and penetration into such corporate industries as logistics, marketing and management[413].

The concept of logistics is the basis of the need to identify and respond to the individual needs of consumers to direct existing resources in such a way that these needs are fully satisfied. The idea is that the greatest success can be achieved with those companies whose productive actions collectively meet customer expectations[414]. Since logistics responds to consumer needs related to the time and place of goods, it can be argued that logistics management is characterized by customer service management.

The certainty of the historical stages of development of logistics and logistics management is manifested in objective market trends: the degree of understanding of the possibility of the logistics approach and the level of development of the concept, method and model of logistics management; complexity of logistics management; level of development of technical procedures for processing and transmitting information[415].

It was the processes of intensive globalization that influenced the development of the theory and practice of logistics, which influenced the formation of various forms of specialized national or international logistics associations. These unions, in addition to divisions for the promotion of material flows, can create a research center, consulting service, information bank, training center, etc. With the help of logistics, the logistics activities of companies are combined into a full-fledged supply chain (from delivery to production and sales), controlled material and related flows, international logistics systems are being created, logistics technologies are being improved[416].

The globalization of the world economy and world scientific and technological progress have led to the current state of logistics development. The logistics management system at this stage is very complex. Scientists define strategic logistics management as a highly professional management activity with its own structural specialization in the field of logistics, aimed at the functioning of companies' logistics systems in conditions of environmental vulnerability, which should include strategic planning as a clearly defined process.

[413]Gomenyuk, M.O. (2021). Development of logistics based on the promotion of digitalization processes. Effective Economy, 2.
[414]Ganzhurenko, I.V., & Fedorova, V.O. (2020). Logistics activities in the marketing system for agricultural products. Ukrainian Journal of Applied Economics, 3, 282-288.
[415]Belu, M. & Ţarţavulea, R. (2009). The effects of the global financial crisis over the logistic and auto sector, The Romanian Economic Journal, 31, 19-29.
[416]Chapman, S., Lawrence, P., & Helms, M.M. (2000). Do small businesses need supply chain management? IIE Solutions, 8, 31-34.

To define the category “management of logistics activities”, it should be divided into two components: “logistics” and “management”. The continuous integration and development of the scientific or conceptual characteristics of marketing and production management underlay the emergence of logistics. Thus, the category “management of logistics activities of enterprises” can be described as a process or activity that is subject to certain goals, carried out in a logical sequence, organized according to a strategic and tactical plan, carried out continuously and involving the following processes: planning, organization, execution and control of finished products (speed, volume and adaptability of movement) for production, during the production process, as well as for consumers based on the formation of logistics systems for product distribution and logistics networks.

In particular, the following factors are characteristic of the management of logistics activities:[417]:

- this is one type of activity that is very different from other types of activity;
- the main form of logistics management is manifested in the influence of specific issues of company management on its objects - the logistics system;
- this is a type of activity that must be carried out constantly in time and space;
- this is a process that occurs in a certain order of some of its stages according to a structural and logical diagram;
- always obeys the set goals and must be characterized by a specific result;
- management activities require rational use of necessary resources and are carried out under conditions of risk and uncertainty.

Management theories and methods form the scientific basis for managing the logistics activities of companies. Modern theoretical foundations of logistics concepts are based on methods such as systems analysis, cybernetic approach, commercial research, and forecasting. Methodological approaches to managing the logistics activities of companies are “systemic, program-targeted, project-based, marketing, consumer-oriented, cybernetic, informational, humanistic, integration, network, as well as priorities; controls; restrictions; criteria and the like".

In addition, the methods of logistics management of companies appear in the form of linear programming; queuing theory; modeling; expert reports; transport matrices; inventory management theories; network models; mathematical optimization; market forecasting methods. In order to implement the logistics management methodology, it is necessary to take into account the scientific and theoretical foundations of such sciences as mathematics, economic and technical

[417]Hong, P., & Jeong, J. (2006). Supply chain management practices of SMEs, from a business growth perspective. Journal of Enterprise Information Management, 19, 292-302.

cybernetics, system analysis, project management, forecasting, general management, etc.

Modern concepts (strategies), which have become a global philosophy and the basis for the development of logistics management in companies, are relevant in today's conditions: Kaizen, Lean Thinking, Six Sigma, Blue Ocean Strategy, Balanced Scorecard. To gain a competitive advantage in the market, the urgent tasks are to search for an innovative model of business development and control, including the use of a logistics approach to activity management.

So, logistics management should be considered as a process of strategy formation, planning, management, control of the movement and storage of resources, inventories, finished products and collection of information to meet consumer needs.

The development of a theoretical justification for managing the logistics activities of companies today has the level of integrated logistics management due to the nature of modern company management, carried out at the following stages[418]:

- analysis and forecasting - through a system of analysis and diagnosis of the situation;
- formation of the concept of strategic logistics - through strategic planning and determination of strategic logistics goals or logistics strategies;
- specification of the strategic task in programs and each operational-tactical plan;
- implementation and control of the logistics plan - through organization, management and control of implementation.

An important place in the management of logistics activities of enterprises is occupied not only by the concept of logistics, but also by the logistics approach, namely functional, procedural and systemic.

A functional approach to controlling the logistics activities of enterprises is the organization of management at a logistics enterprise of certain objects that influence the formation of logistics costs. The organization of logistics processes and logistics functions provides a process-oriented approach to logistics management and leads to the determination of logistics costs, characterizes processes and tasks regularly performed in logistics with specific logistics costs and categories based on these costs.

The theoretical foundations of logistics management should be considered through the general theory of the system and its tools, that is, with the help of systems research, systems approach and systems analysis. A systems approach is an in-depth consideration of the object of study from a systems-analytical point of view. The main

[418] Lakatos P. & Németh G. (2013). Logistics performance assessment. In, Proceedings of the "Scientific Management" and Management Science Today International Scientific Conference, pp. 277-283, University of Szeged, Hungary .

goal of operational logistics management is to ensure (through coordination) uninterrupted interaction and penetration of logistics systems into the functional structure and management structure of the company. A detailed description of the tasks of the subsystems of logistics activities of companies is given in Table 1.

Table 1. Characteristics of the types of subsystems for organizing the management of logistics activities of enterprises

Types of subsystems	Characteristics of tasks
Supply subsystem	The goal is to increase operational efficiency by selecting a competent supplier, optimizing procurement processes, developing procurement management processes, applying standard work methods, searching for markets, developing procurement strategies and tactics
Warehousing subsystem	The goal is to improve the warehouse process through the introduction of warehouse technologies, improving the quality of warehouse services, standardization and rational placement of warehouse stocks
Transportation subsystem	Ensure the development of a rational supply scheme, transport routes, optimal loading of various vehicles, promote the unity of transport processes with production and storage processes
Production subsystem	Introduction of various inventory management methods, production planning, production support, invoicing of material flows, implementation of production cycles, improvement of quality characteristics of products
Distribution subsystem	Focus on systematic market monitoring, ensuring speed of orders and processing, increasing the level of logistics services, reducing the number of complaints and fines

Source: Compiled by the author based on[419]

Globalization processes have a significant impact on the global market environment and encourage companies to look for ways to improve their performance in the long term. One of the prerequisites for this is the use of logistics

[419]Chukhrai, N.I., & Girna, O.B. (2008). Development of logistics in the minds of E-economy. Bulletin of the National University "Lviv Polytechnic", 623, 272-278.

management.

In general, entrepreneurship is a series of interrelated elements (business, customers, suppliers, warehousing and transportation) that result in a logistics management system that manages integrated business processes to promote goods and services. The company's logistics management allows for better management of the company's financial resources in the service of the interests of producers and consumers.

A feature of logistics management is its relationship with each functional management subsystem (production, finance, human resources, information, investments, etc.) when searching for material resources, manufacturing and selling products. On the one hand, logistics management has a significant impact on the financial and economic position of counterparties in the market; on the other hand, market conditions pose new challenges for market players (new requirements for organizing the market for transport services, warehousing, communications, business processes, etc.).

Management of logistics activities of companies is presented in the following functional areas:

- optimization of the physical movement of material flows (development of a business development strategy in the direction of building supply chains, logistics and marketing management, computer modeling, integration of the logistics process through changes in organizational and operational research, multi-criteria optimization and adapted management methods);
- improvement of information processes (introduction of modern high-quality information technologies (hardware, software), automatic identification, electronic information exchange, introduction of new order processing technologies);
- optimal storage of inventories (synchronization of transport with inventory management, introduction of a modern inventory management concept, improvement of logistics services (thanks to reliability, quality and elasticity of supplies);
- synchronization of the infrastructure of logistics processes (through the coordination of consumer orders with the processes of transportation, storage and packaging of internal and external transport, coordination in the supply sector, the use of automatic identification systems, adaptation of information and packaging processes for the needs of logistics chains);
- optimal management of all logistics costs (analysis of cost structure, optimization of delivery times of transport services, optimization of storage costs, ABC-XYZ analysis of material flows, implementation of control methods, effective use of space-time potential).

According to the systems approach, all components of the logistics system are interconnected. And therefore, this approach is characterized by optimization of the logistics system as a whole, and not its individual elements. At the same time, different elements of the logistics system will be compatible at the same time.

Consistency is manifested in the following features: demand forecasting and analysis of actual product consumption; formation of customer service channels; inventory management and cost optimization in connection with irregular deliveries; establishing communication channels; minimizing storage costs for products; funds management; human resource training and development; optimization of the territorial location of production and storage facilities.

Due to the high level of computerization of the economy, the use of smartphones increases the resource efficiency of companies, especially in the following areas: vehicle monitoring; monitoring and control of drivers; cargo escort. The use of GPS monitoring technologies allows you to track rolling stock in real time and quickly respond to significant deviations from the plan. The online service Navizor.com allows you to analyze the territorial location of workplaces, create probable logistics routes for transporting materials and finished products, and also provide information on the quality of the road surface.

The use of automated logistics solutions in modern companies allows saving fuel and lubricants to support the production process and transport, as well as reducing working time. This improves product quality and reduces the likelihood of damage and loss during transportation.

Logistics management is aimed at optimizing the flow process in a managed system from the point of view of a single material chain by integrating certain parts, including technical, technological, economic, methodological management, as well as minimizing time and resources by optimizing financial flows. Therefore, managing the logistics activities of enterprises includes a targeted influence on the logistics flow by synchronizing the interaction of its various types and achieving synergy. The main subsystem of the "general enterprise management system, logistics management, is aimed at achieving both strategic and tactical goals of enterprise development"[420].

The general goal of managing the logistics activities of enterprises is manifested in the implementation and coordination of the economic interests of each direct and indirect participant in the business process and the most efficient use of the resources of the existing management system. The overall goal of the enterprise must be determined in accordance with the goals marked by the need to optimize and rationalize business activities, develop the infrastructure of the logistics system, taking into account the current legislation on the formation of a modern material and technical base and the active use of advanced information technologies.

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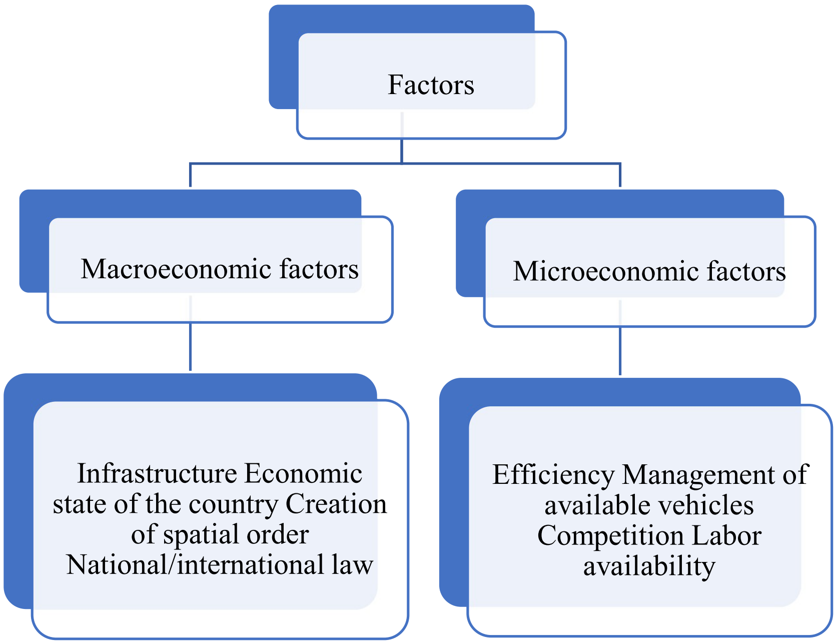
[420]Fertsch, M. (2006). Podstawy logistyki. Instytut logistyki i magazynowania.

The external environment of enterprises promotes increased competition and requires the search for new development niches[421]. One of these niches is logistics activity as an effective factor in ensuring the sustainable development of an enterprise. Increasing the level of competitiveness of an enterprise is realized through the organizational and economic mechanism for managing logistics activities, which is understood as a set of principles, tools, functions, methods and means aimed at reducing the level of costs for organizing processes of logistics activities and various logistics services, where special attention is paid to transport logistics.

Having analyzed and considered various definitions of the concept of "transport logistics", it can be argued that transport logistics is the process of organizing the supply chain, as well as optimizing transport systems, choosing the type and type of vehicles carried out through the planning process, monitoring all transport and other operations, which provides relevant information to cargo owners and is carried out with minimal gates. Since transport logistics includes an economic component, it is unconditionally influenced by various factors on a micro- and macroeconomic scale (Fig. 1).

Figure 1. Macro- and microeconomic factors influencing transport logistics



Source: Compiled by the author based on[422]

[421] Lean, H.H., Huang, W., & Hong, J. (2014). Logistics and economic development: Experience from China. Transport Policy, 32, 96-104.
[422] Szymonik, Andrzej. (2013). Ekonomika transportu dla logistyki i logistyki. Teoria i praktyka. Łódź.

The first group includes infrastructure, the economic state of the country, the creation of spatial order, national and international legislation. On the other hand, the second group includes: efficiency, management of existing vehicles, competition, labor availability, etc.[423]. Let's look at this issue from a more practical point of view.

At the macroeconomic level, transport and the mobility it provides are related to the level of production, employment and income in the national economy. In many developed countries, transportation accounts for 6 to 12% of GDP. Looking at a broader level, logistics costs can range from 6% to 25% of GDP. Additionally, the cost of all transportation, including infrastructure and vehicles, can account for half the GDP of a developed economy.

At the microeconomic level, transportation involves costs to producers, consumers and distribution. Therefore, the importance of specific transport activities and infrastructure can be assessed for each economic sector. Typically, higher income levels are associated with a larger share of transportation in consumption expenditures. Shipping on average accounts for 10% to 15% of household expenses, while it accounts for about 4% of the cost per unit of output in manufacturing, but this varies greatly depending on sub-sectors[424].

The transportation service incurs a number of costs such as labor, fuel, maintenance, administrative and other expenses. Logistics costs are divided into those costs that depend on the volume of services (variable costs) and do not depend (fixed costs).

Fixed (constant) costs are the costs of purchasing and maintaining roads, final structures and transport equipment.

Variable costs typically include liner shipping costs such as fuel, labor, maintenance, shipping, and others.[425].

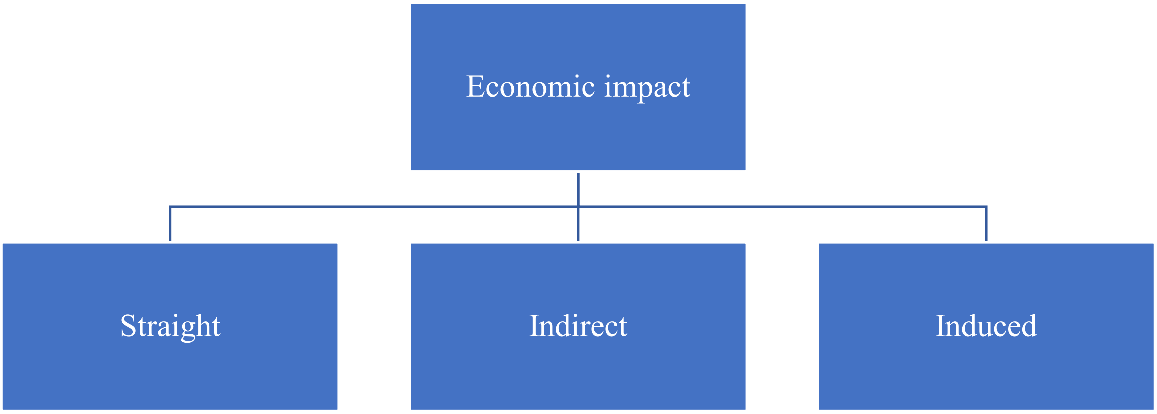
Having analyzed the data, we can conclude that transport logistics plays a significant role at both the macro- and microeconomic levels, and the optimization of transport processes will help increase revenues and reduce costs for both the state and an individual enterprise.

Transport logistics is also an important component of the economy due to the intensive use of infrastructure. The mobility of people and goods, as well as information and communication technologies, play an increasingly important role in the global economy every year and are indicators of the economic capabilities of a country.

[423]Waters, D. (2003). Logistics. Supply chain management Moscow, UNITIDANA. 503 p.
[424]Rodrigue, Jean-Paul, & Comtua, Claude. (2013). Geography of transport systems. New York.
[425]Christopher, M. (2011). Logistics and supply chain management. Pearson.

The relationship between the quantity and quality of transport infrastructure and the level of economic development is obvious[426]. High-density transport infrastructure and highly connected networks are usually associated with high levels of development. When transport systems are efficient, they provide economic and social opportunities and benefits, leading to positive multiplier effects such as better access to markets, employment and additional investment. When transportation systems lack capacity or reliability, their economic value is reduced, opportunities are reduced or missed, resulting in a lower quality of life. At the same time, the consequences of transport logistics can be different (Fig. 2).

Figure 2. Economic implications of transport logistics



Source: Compiled by the author based on[427]

Thus, from a general point of view, the economic consequences of transportation can be direct, indirect and induced. Let's take a closer look at each of the subspecies:

- direct impacts - the result of improved capacity and efficiency, when transport provides employment, added value, and increased markets. Overall demand in the economy is growing;

- indirect impacts – the result of improved accessibility and economies of scale.

[426] Hong, J. (2007). Transport and the location of foreign logistics firms: The Chinese experience. Transport Research Part A: Policy and Practice, 41(6), 597-609.
[427]Rodrigue, Jean-Paul, & Comtua, Claude. (2013). Geography of transport systems. New York.

Indirect value added and jobs result from procurement by local companies directly dependent on transport activities. Transport activities are responsible for a wide range of indirect value-added and employment effects through transport's linkages with other economic sectors (eg, office supply firms, equipment and parts firms, maintenance and repair services, insurance [428]companies, consulting and other business services);

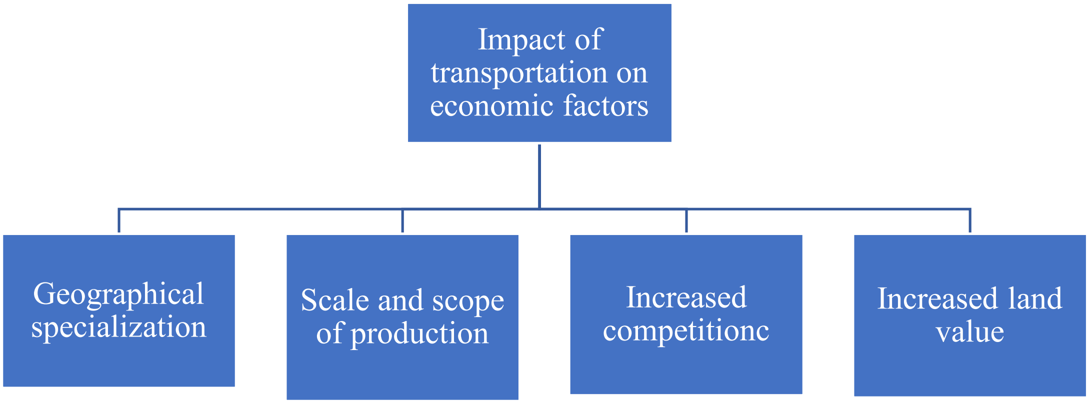
- induced influences - the result of the economic multiplier affects the reduction of prices for goods, goods or services and/or their variety. For example, the steel industry requires economically viable imports of iron ore and coal for blast furnaces and export activities for finished products such as steel booms and reels. Manufacturers, retailers and distribution centers transporting imported containerized cargo rely on efficient transport and seaports.

Economic growth is increasingly linked to the development of transport, namely infrastructure, as well as management expertise, which is critical for logistics. Thus, although transportation is an infrastructure-intensive activity, the assets must be supported by a set of capital assets: labor, management, and information systems. Decisions about the use and operation of transportation systems must be made in a manner that optimizes benefits and minimizes costs and inconveniences. Transport in itself is not a sufficient condition for development. However, the lack of transport infrastructure can be a limiting factor for development. Lack of transport infrastructure and regulatory constraints combine to impact economic development by increasing transport costs, making supply chain management unreliable. Poor transport services can negatively impact regional competitiveness and economic activity, and therefore negatively impact regional value added, economic opportunity and employment. Tools and activities are being developed to assess and compare the performance of national transport systems.

An efficient transport system with modern infrastructure contributes to many economic changes, most of which are positive. The main impacts of transport on economic factors are shown in Fig. 3.

[428] Berechman, J., Ozmen, D., & Ozbay, K. (2006). Empirical analysis of transportation investment and economic development at state, county, and municipality levels. Transportation, 33(6), 537-551.

Figure 3. Impact of transport on economic factors



Source: Compiled by the author based on[429]

Let's take a closer look at these factors:

- Geographical specialization – improved transport and communications facilitate the process of geographic specialization, which increases productivity and spatial interaction. A business entity strives to produce goods and services with the most appropriate combination of capital, labor and raw materials. Thus, a region tends to specialize in the production of goods and services for which it has the greatest advantage over other regions, as long as suitable transport is available for trade. Geographic specialization supported by efficient transport increases economic productivity. This process is known in economic theory as comparative advantage;

- scale and scope of production - an efficient transport system that offers the advantages of cost, time and reliability, allowing goods to be transported over long distances. This promotes mass production through economies of scale as large markets can be obtained. The just-in-time concept in supply chain management has further enhanced production and distribution productivity with benefits such as reduced inventory levels and better response to changing market conditions. Thus, the more efficient transportation becomes, the larger the markets that can be served and the greater the scale of production. This leads to lower unit costs[430];

- increased competition - when transport is efficient, the potential market for a given product (or service) increases, and competition also increases. A wider range of goods and services becomes available to consumers through competition, which tends to reduce costs and improve quality and innovation. Globalization has obviously

[429]Rodrigue, Jean-Paul, & Comtua, Claude. (2013). Geography of transport systems. New York.
[430]Ibidem.

been associated with a competitive environment that spans the world and allows consumers to access a wider range of goods and services;

- increased land value - land adjacent to or served by good transport services tends to have greater value due to the utility it provides. Consumers may have access to a wider range of services and retail goods, while residents may have better access to employment, services and social networks. Regardless of whether they are used or not, the accessibility conveyed by transportation affects the value of land. In some cases, due to the externalities created, transport activities can reduce the value of land, especially for residential activities. Thus, land located near airports and highways, near sources of noise and pollution, will be affected by a corresponding decrease in value[431].

In order to improve the organizational and economic mechanism for managing the logistics activities of an enterprise, it is advisable to develop and implement a set of measures for: managing relationships with suppliers based on the implementation of the SRM information system, the use of which will not only improve the strategy for selecting suppliers and reduce the time of supply cycles, but also procurement budgets and the cost of material resources, as well as optimize the cost structure for organizing logistics activities[432].

So, the economic essence of transport logistics as a type of logistics activity was determined, the influence of macro- and microeconomic factors on it was studied, the economic consequences of transport logistics and the influence of transport on economic consequences were considered, and it should be noted that transport logistics plays a significant role both in the state-owned enterprise sector , and at individual enterprises. Optimization of transport logistics will certainly lead to increased profits and minimization of costs.

[431]Rodrigue, Jean-Paul, & Comtua, Claude. (2013). Geography of transport systems. New York.
[432]Trushkina, N. (2020). Improvement of the organizational and economic mechanism for managing the logistics activities of an enterprise. International Scientific Electronic Journal, 4, 156–172.

4.6. Innovative energy-saving technologies in irrigated agriculture systems in the conditions of post-war reconstruction

The development and substantiation of promising energy-saving technologies for circular sprinklers involves the creation of new solutions aimed at significantly reducing energy consumption during their operation and improving energy efficiency. This includes a comprehensive approach to improving the design of sprinklers themselves, which will reduce their energy consumption and improve their functional characteristics. In addition, an important area is the introduction of automated control systems that allow for fine-tuning of machine operating modes, optimising irrigation processes in real time.

Particular attention should be paid to the integration of renewable energy sources, such as solar panels or wind turbines, which will significantly reduce dependence on traditional energy sources, reducing electricity costs and contributing to environmental sustainability. One of the key tasks is also to optimise the process of water distribution during irrigation, which allows for uniform and efficient watering of all areas of the field, reducing water consumption and increasing yields. All of this will help to increase the productivity of agricultural land, improve its ecological characteristics and reduce the negative impact on the environment.

Given the current challenges faced by Ukrainian agriculture, especially post- war recovery, energy efficiency and sustainable use of natural resources are becoming increasingly important. One important aspect is the modernisation of irrigation systems, as traditional irrigation methods often require significant energy consumption. This requires the introduction of innovative solutions, including energy-saving technologies. One of these technologies is the integration of solar energy into sprinklers, which can significantly reduce energy costs and increase the efficiency of irrigation processes. Ukraine's climatic conditions are favourable for the development of solar energy, as the country has a great potential for generating solar energy due to the high level of solar radiation throughout the country. Therefore, the use of solar panels to power sprinkler systems can be an important step towards reducing energy costs and contributing to the sustainable development of the agricultural sector in Ukraine.

Solar power plants play a key role in reducing dependence on traditional energy sources such as coal and natural gas, which is particularly relevant for the agricultural sector. Given this, the introduction of solar energy systems in agriculture is becoming an important step towards ensuring sustainable energy supply and reducing energy costs. One of the main elements of irrigation systems is circular sprinklers, which often have high energy costs. However, the use of a 15kW solar power plant as part of an irrigation system can reduce energy consumption by up to 15%.

The integration of solar panels with the sprinkler system allows for autonomous operation of the system, which significantly reduces dependence on external energy sources. This also contributes to a significant reduction in energy costs and increases the economic efficiency of agricultural production in general. One of the important results of this integration is a significant improvement in the accuracy of yield forecasting, which can be achieved through the use of stochastic methods. The forecasting error when using nonlinear stochastic relationships is no more than 0.5%, which is an extremely accurate result. By comparison, linear forecasting models that do not take into account variations in input data show much worse results: the error can be 9-12%, which significantly reduces their efficiency and practical applicability. Therefore, the application of a new methodology based on stochastic models allows for stable and accurate results, which is critical for effective agricultural management.

Yield forecasting is a key element for effective agricultural management, especially in a changing climate, which creates additional challenges for farmers. In this paper, we develop a stochastic method for predicting grain yields that takes into account such important factors as annual precipitation, irrigation volumes and other agroclimatic conditions. This method significantly improves the accuracy of yield forecasting, which is extremely important, particularly in dry years when climate instability can have serious consequences for production.

The stochastic model forecasting method allows us to effectively take into account nonlinear relationships between various parameters, such as precipitation, temperature fluctuations and other factors that affect plant growth and development. This makes it possible to obtain more accurate and stable results compared to traditional linear methods, which are usually unable to fully reflect the complex interaction of natural factors.

Numerous experiments conducted as part of the study confirmed that the use of irrigation significantly improves yields, especially in years with limited rainfall. This proves the importance of designing and implementing efficient irrigation systems that help to compensate for the negative impact of drought on agricultural production.

In addition, one of the most important components of modern agricultural technologies is the use of liquid mineral fertilisers, which provide plants with the necessary nutrients in conditions of water shortage. The liquid form of fertiliser has several significant advantages over traditional dry fertilisers, including easier application and faster absorption by plants, making it particularly effective in drought conditions. At the same time, liquid fertilisers help to maintain optimal conditions for the growth and development of crops by providing a more precise and even distribution.

The work involves the development and implementation of an innovative system for applying liquid mineral fertilisers directly through irrigation water, which significantly reduces fertiliser costs and increases the efficiency of their use by 20%. This system provides not only economic benefits, but also environmental benefits through precise dosing and efficient distribution of fertilisers over irrigated areas.

As part of the first stage of work, a system for preparing and supplying mineral elements was developed, which differs significantly from foreign analogues not only in price but also in its technical characteristics, including autonomy and mobility. This makes it possible to significantly reduce energy costs, especially for traditional fuels, by up to 24%. This approach reduces energy costs, which is an important element in the development of sustainable agriculture.

The topic "Innovative energy-saving technologies in irrigated farming systems in the context of post-war recovery" is aimed at further developing the idea of energy efficiency and sustainable development of the agricultural sector, which is extremely important for Ukraine in the context of the recovery and modernisation of agriculture after the war. The proposed innovative technologies, such as the integration of solar energy into the irrigation system and the use of liquid mineral fertilisers, not only reduce the cost of energy and material resources, but also increase the overall efficiency of irrigation.

In addition, the introduction of stochastic yield forecasting methods allows for much more accurate forecasting of future harvests, which is an important tool for more efficient planning of agricultural operations. These methods take into account many factors, including climate change, which helps to ensure food security and stability of the agricultural sector in the face of global climate change.

With its integrated approach to addressing energy efficiency, resource conservation and yield forecasting, this work has the potential to become an important milestone in the development of sustainable agriculture in Ukraine. Irrigation is a key tool for increasing agricultural production efficiency, especially in the face of insufficient summer rainfall. More than half of Ukraine's agricultural output is grown on irrigated land, but due to aging technical equipment and lack of funding, the area under irrigation is shrinking significantly. As most of the country's land is in need of irrigation due to frequent droughts, the development of efficient and energy-saving irrigation systems is an important component of the recovery and modernisation of Ukraine's agricultural sector in the post-war period.

According to the Ministry of Agrarian Policy of Ukraine, more than 49% of the country's irrigation systems are in good working order, although much of the equipment is obsolete. In particular, old models of equipment such as Dnipro and Fregat have reached the end of their service life and need to be modernised. This poses a serious problem for farmers, as old equipment cannot always meet the requirements of modern technology and the need for high-performance irrigation.

One of the main trends in the development of irrigation technologies is the introduction of liquid mineral fertilisers through irrigation water. This approach reduces the cost of fertiliser application, improves the uniformity of its distribution across fields and reduces toxicity to plants, which is especially important for maintaining soil fertility. The use of liquid fertilisers also reduces the cost of transporting and storing dry fertilisers, making this process more cost-effective. In addition, it reduces the environmental impact, as there is less chance of contamination of soil and water resources.

The use of such technologies saves fuel and reduces the negative impact on soils. Given the importance of preserving natural resources, including water, irrigation, which covers 94% of the irrigated area, is becoming the most efficient method. It helps to reduce salinity and waterlogging, which in turn improves soil health and increases soil fertility. In addition, the even distribution of water reduces the risk of losses due to misuse of water resources.

The ability to apply fertilisers along with water increases the efficiency of using these resources, which is an important factor for farmers in a time of limited funding. The integration of modern energy-saving technologies and automation of sprinkler systems is an important area of development in Ukrainian agriculture. This can significantly improve the efficiency of using available resources, reduce the cost of servicing equipment and increase crop yields.

To achieve these goals, various solutions are proposed, including the introduction of solar power plants to power sprinklers. This will help reduce dependence on traditional energy sources and cut energy costs, which will be an important step towards ensuring sustainable agricultural development. The introduction of automated fertiliser application units and soil moisture sensors will allow for more precise control of the irrigation process and more efficient use of water and fertiliser, which will ultimately increase yields and reduce the environmental footprint.

One of the most promising solutions is the use of gel batteries, which ensure uninterrupted operation of irrigation systems even in the face of unstable energy supply. This will help to maintain irrigation efficiency and improve the overall condition of the agricultural sector in Ukraine.

Therefore, to overcome the problems associated with outdated irrigation systems, it is necessary to introduce modern technologies, including automation, energy saving and integration of fertilisers through irrigation systems. This will not only improve irrigation efficiency, but also reduce costs, improve the environment and increase soil fertility.

The use of modern technology has significantly improved the efficiency of the Zimmatic sprinkler, which was upgraded and installed at the Educational and Research Practical Centre of Mykolaiv National Agrarian University. This improvement is part of an overall strategy to increase the efficiency of agricultural production, where grain yields are an important aspect, as they are the main indicator of productivity and security in the agricultural sector. High yields are directly linked to food security and economic stability.

In particular, in the context of risky farming, where changing climatic conditions can significantly affect crop volumes, yield forecasting becomes extremely important for agricultural management and planning. Forecasting allows not only to assess potential outcomes but also to develop strategies to minimise losses. There are several methods for estimating future yields, including trend and cyclical analysis, identifying similar years, building regression models, using meteorological data for modelling, and synoptic analysis. However, most of these approaches do not take into account all possible factors that can affect the yield, such as soil conditions, fertiliser use or irrigation.

To improve the accuracy of forecasts, methods of random function theory are used, in particular, the Kolmogorov-Gabor polynomial. This method allows taking into account complex multidimensional relationships between various factors, but its implementation is quite complex. To facilitate this process, approximations, such as Hermite polynomials or Kalman algorithms, are used to reduce the complexity of calculations and ensure effective forecasting.

As for the risky farming zone, one of the main challenges is effective water management. The Lindsay Zimmatic machine is one of the examples of technologies that can solve this problem. It ensures an even distribution of water over the fields, maintains optimal irrigation conditions, which helps to increase yields, and saves resources by automating irrigation processes. This combination of modern irrigation methods and mathematical models ensures the stability and high efficiency of agricultural production.

In addition, complex methods involving several stages are used to build accurate winter wheat yield forecasting models. These methods combine different approaches to achieve maximum accuracy and efficiency in a changing climate and limited resources, providing farmers with the tools to optimise production and maintain high productivity.

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ANNOTATION

PART 1
MODERN PROBLEMS OF PHYSICAL CULTURE AND SPORTS

1.1. *Oksana Adamenko.* **Development of speed qualities of football players at the stage of preliminary basic training.** The study reveals the features of using a differentiated approach to the development and assessment of speed qualities of football players at the stage of preliminary basic training. The results of a pedagogical experiment to verify the effectiveness of the methodology developed by us for the differentiated development of speed qualities of football players at the stage of preliminary basic training are summarized.

1.2. *Viktor Derkach, Filip Pokusa.* **Assessment of the effectiveness of using complexes of special preparatory exercises for the development of speed and speed-power qualities of sprinters in specialized training groups..** The study assessed the effectiveness of using special training exercise complexes to develop speed and speed-strength qualities of sprinters in specialized training groups. The results of a survey of leading coaches on the effectiveness of using special training exercises to develop speed and speed-strength qualities of sprinters were analyzed. The effectiveness of the proposed methodology was tested during the experiment.

1.3. *Igor Martsinkovsky, Anastasiia Briatko.* **Experience of teaching medical and biological disciplines to bachellor students of the specialty "sports" in Ukraine during the ongoing russian-ukrainian war.** The ongoing Russian-Ukrainian war against Ukraine, launched by the Russian Federation in 2014, and its escalation on February 24, 2022, has changed the usual peaceful rhythm of life, including education. There is a widespread belief in society and among educational circles that distance learning has worsened the quality of education. It was established that the use of various methods of presenting information during the educational process in medical and biological disciplines of specialty 017 "Physical Culture and Sports" allowed maintaining a sufficiently high level of student success. The study found that distance learning is a form of learning for those students whose value needs are to obtain knowledge, even in wartime, they find the opportunity to obtain educational information.

1.4. *Iryna Veselova.* **The use of statodynamic exercises for the development of strength qualities of powerlifting athletes at the stage of specialized basic training**. The study reveals the methodology for using statodynamic exercises to develop the strength qualities of powerlifting athletes at the stage of specialized basic training. The effectiveness of this methodology has been experimentally tested and proven. The methodology for using statodynamic exercises in the training of powerlifting athletes allows for the diversification of dynamically repetitive loads of athletes in order to improve their strength qualities.

PART 2
CURRENT MANAGEMENT PROBLEMS: BY TYPE OF ACTIVITY

2.1. Illia Bulanov. **Principles of forming a risk management system in an enterprise.** The issue of researching the topic of risk management in an enterprise is extremely relevant in the modern business environment. In conditions of market instability and ever-increasing competition, enterprises are forced to focus on effective risk management to ensure the stability and profitability of their activities. In addition, with the advent of new technologies, changes in legislation, social trends, and military operations, enterprises face more and more risks that may affect their activities. Therefore, effective risk management becomes a key element of a successful enterprise development strategy.

2.2. Andrii Cheban, Daniel Palimąka. **Foundations of enterprise management in crisis conditions.** In this regard, there is an objective need for the formation and improvement of methods and mechanisms for enterprise management, including counteracting crisis phenomena and assessing the effectiveness of their application at different stages of enterprise development, including the objective need to optimize the business management system, taking into account the relevance of solving problems of survival when overcoming the negative impact of crisis phenomena in Ukraine. The purpose of the thesis is a theoretical and practical study of the effectiveness of the management system, and the introduction on this basis of recommendations for adapting the enterprise management system to modern crisis conditions.

***2.3. Roman Iakushko*. Principles of enterprise management in crisis conditions.** In order to overcome crisis situations, there are several ways: to develop an anti-crisis strategy to eliminate the negative impact; diversify the portfolio so that most of it does not depend on any one stakeholder, etc. The unpredictability of the events that happened in Ukraine forced many managers to think about how to develop their business so that the volatile environment does not have such a strong impact on business performance.

***2.4. Polina Puzyrova, Ievgen Sadovskyi*. Development of innovative it clusters in the context of turbulence.** The article determines that the development of IT innovation clusters in the context of turbulence is extremely important, since the current economic and social environment is characterized by high uncertainty, rapid technological change, geopolitical challenges, globalization and digitalization. It is proved that turbulence creates both challenges and opportunities for innovation, especially in the IT sector, which plays a key role in the transformation of economies and societies. It has been found that IT clusters contribute to economic diversification, which is important for regions with unstable traditional industries. Turbulent conditions often stimulate the reorientation of capital to innovative areas. IT clusters act as a platform for interaction between investors and enterprises, providing an inflow of financial resources. The influence of factors on the development of innovative clusters in the IT sector in conditions of turbulence is determined. It is established that the practical value of the development of innovation clusters in conditions of turbulence will create sustainable models of cooperation that will help minimize risks and strengthen the position of the IT industry at the national and international levels.

***2.5. Yurii Tyschenko, Iwona Mstowska.* Principles of work motivation in agricultural enterprises.** In more common cases, the practice of domestic companies is dominated by material motives of personnel. Less common is the transfer of certain elements from a modern foreign motivation system, which overall creates an ineffective motivation system. Consequently, issues related primarily to ensuring adequate financial support, which are primarily motivated by personnel, have become very relevant in the modern situation. From the point of view of innovation, an important prerequisite for the development of modern society is special attention to personnel. This creates conditions for economic growth and competitiveness of individual workers and companies as a whole and ensures economic development. In addition to the specific working conditions in industrial companies, each employee has his own motivations and incentives that encourage them to perform their assigned tasks every day. So, analysis of employee behavior requires the use of knowledge in combination with experience, professional skills, educational level, psychological and material conditions, etc.

***2.6. Mykola Subora, Andrii Skomorovskyi*. Organization of employee motivation at the enterprise in conditions of economic turbulence.** W pracy zbadano teoretyczne podstawy organizacji motywacji pracowników przedsiębiorstwa w warunkach turbulencji gospodarczych, zidentyfikowano zasadnicze cechy turbulencji gospodarczych oraz podano charakterystykę zarządzania i organizacji procesu motywacji pracowników w przedsiębiorstwie, m.in. a także przeanalizowano cechy organizacji motywacji kadr przedsiębiorstwa w warunkach zawirowań gospodarczych.

***2.7. Maksym Riznychenko.* Managing labor relations in remote work environments.** The thesis delved into the theoretical underpinnings of remote work within the personnel framework of an IT company. It elucidated the intricacies of managing labor relations amidst remote employment, scrutinized the challenges and benefits of remote work as a contemporary mode of personnel engagement, and explored the nuances of recruiting practices within the IT sector under remote work conditions.

***2.8. Tetiana Vlasiuk, Yaroslav Naumenko.* The role of the customs service in ensuring the economic security of Ukraine in the conditions of globalization.** The research is dedicated to summarizing the theoretical and methodological foundations and developing practical recommendations for improving the economic activities of the customs service in the context of Ukraine's integration into the EU. The theoretical principles of the economic activities of the country's customs service are examined, and the efficiency of the Ukrainian customs service's cooperation with the customs authorities of EU countries is analyzed. Directions for improving the performance of customs authorities have been developed, taking into account the experience of international institutions.

2.9. Kazimierz Łukawiecki, Denys Yakovunyk. **Methodological principles of strategic management of financial risks of the bank.** W ramach pracy dyplomowej przeanalizowano teoretyczne i metodologiczne fundamenty strategicznego zarządzania ryzykiem finansowym w bankach, dokonano szczegółowej analizy natury oraz klasyfikacji ryzyk finansowych, a także zidentyfikowano metodologiczne podejścia do oceny ryzyka w warunkach kryzysowych. Określono zasady, które powinny kierować strategicznym zarządzaniem ryzykiem finansowym w bankach. Przeprowadzono również analizę specyficznych cech funkcjonowania sektora bankowego Ukrainy w obliczu kryzysu, uwzględniając charakterystykę rozwoju tego sektora oraz wpływ kryzysu na poziom ryzyk bankowych. Szczególną uwagę poświęcono ocenie wsparcia księgowego i analitycznego, które jest kluczowe dla skutecznego zarządzania ryzykiem w sytuacjach kryzysowych. Badania pozwoliły na uzasadnienie naukowych i praktycznych kierunków doskonalenia strategii zarządzania ryzykiem finansowym w bankach podczas kryzysu, a także na przeprowadzenie diagnozy antykryzysowego zarządzania ryzykiem.

2.10. Liudmyla Prohoniuk. **Theoretical aspects of managing the sustainable development of territorial communities in the conditions of a secure environment.** The article examines the important role played by the territorial communities of Ukraine in the changing environment. The possibilities of these communities in ensuring economic stability and strengthening the country's independence have been studied. Ways to increase the efficiency of their activities and contribution to the support of economic and political stability of the nation are also considered.

2.11. Mariela Macola, Olena Yakovunyk. **The influence of management style and methods in ensuring the effective functioning of the enterprise.** The thesis delves into the theoretical underpinnings of management styles and methodologies within an enterprise, defining the essence and scope of management styles while providing an analysis of contemporary enterprise management techniques. A comprehensive examination of the economic operations was undertaken, encompassing a detailed overview of the company alongside an in-depth analysis of its financial activities.

2.12. Dmytro Palamarchuk. **Theoretical aspects of designing the organizational structure of the enterprise.** The thesis examines the theoretical aspects of designing the organizational structure of an enterprise,the essence of the organizational structure of the enterprise and the factors determining its choice are revealed,a comparative description of the types of organizational structures of enterprise management is given,andthe stages and methods of designing the organizational structure of an enterprise are analyzed.

2.13. Nataliia Shyshpanova. **The impact of military risks on the staffing of the public sector in the region.** The article is devoted to the study of the impact of military risks on the staffing of the public sector in the regions of Ukraine. It is noted that military risks, which have increased due to the ongoing hostilities, lead to an outflow of qualified personnel and complicate their involvement in public administration. The authors analyse the key aspects of personnel policy in wartime, in particular, the adaptive mechanisms of the state public administration of Mykolaiv region, which contribute to the stabilisation of management processes in times of crisis. The challenges faced by the public service are considered, and strategies for strengthening human resources at the regional level are proposed.

2.14. Zorina Shatska, Yevhen Biriukov. **Educational smart technologies as innovative methods of training and development of enterprise personnel.** The article explains that smart technologies are technologies that use artificial intelligence, machine learning, and big data analysis to provide cognitive awareness of objects that were previously considered inanimate. In the field of education, smart technologies are transformed into smart-education technologies or smart-education. The main characteristics of smart-education and their role in the training and development of enterprise personnel are determined. The types of educational smart technologies that can be used for the training and development of enterprise personnel are summarized, which include: e-learning; m-learning; f-learning; u-learning; blended learning.

2.15. Anna Oleshko, Olena Budiakova. **management of inclusive development of the national economy.** The concept of inclusive economic development, which has been actively developing in recent years, is highly relevant. A report made at the World Economic Forum in Davos in 2018 substantiated the need to abandon the single universal indicator of economic growth – GDP – and move to the Inclusive Development Index (IDI), which evaluates countries according to the criteria of growth, equity and sustainability. This is particularly relevant for Ukraine, where the share of the shadow economy is higher than in the EU, and GDP growth is mostly inflationary, so there is no link between GDP growth and the improvement of living standards.

PART 3
HOSPITALITY AND TOURISM INDUSTRY: STATUS AND CHALLENGES

3.1. Oleksii Aleksandrov. **Motivation and stimulation of staff work in restaurant service.** This thesis delves into the theoretical foundations of motivation and stimulation within the context of personnel work in contemporary enterprises. The concept, content, and functions of personnel labor motivation are defined, alongside an examination of modern methods for managing the motivation and stimulation systems. The work also provides insights into the characteristics of the motivation and stimulation systems within a modern enterprise. A significant portion of the thesis is dedicated to analyzing the theoretical underpinnings of organizational culture formation within an enterprise. The essence of organizational culture is described, with a particular focus on the features influencing its development. Notably, the study places emphasis on the analysis of how organizational culture impacts the labor motivation of a modern enterprise.

3.2. Kateryna Dodilova, Yuliia Zemlina, Viktoriya Poluda. **Current state and features of further development of the hotel industry in Ukraine.** The article is devoted to the study of the current state and prospects of development of the hotel industry in Ukraine. The hotel industry is seriously affected by the significant destruction of the tourism market. There is a constant destruction of infrastructure and the lack of consumers of hotel services in the regions of the country that are in close proximity to the war zones. The hotel industry in the north, east and south of Ukraine has suffered the most as a result of the hostilities, while hotel companies in the central and western regions have not suffered much and continue to operate. Despite all the problems, the state's hotel industry continues to function and has further development prospects, which are outlined in this study.

***3.3. Mykhailo Sosnovskyh.* Improving hotel management during martial law.** The thesis study examined the theoretical aspects of hotel management during the war, identified the essence of hotel management, identified the features of hotel management during the war, and also analyzed the methodology for researching tourism activities during the war situation in the country.

PART 4
TRANSPORT AND LOGISTICS SYSTEMS IN TODAY'S CONDITIONS

***4.1. Vitalii Voronov.* Research on liberalization of the railway freight transportation market.** The thesis study examined the state of liberalization of the railway freight transport market, analyzed modern research and international publications of scientometric databases on the liberalization of the railway freight transport market, studied the scientific heritage of Ukrainian scientists on marketing management at railway transport enterprises, and also analyzed the experience of liberalizing the railway freight transport market European countries. A diagnosis of the factual base and marketing research on the prospects for liberalization of the rail freight market was carried out, and the rail freight market was diagnosed. Particular attention is paid to the study of stakeholders' opinions on the liberalization of the railway freight market and the level of marketing management of the logistics potential of railway transport enterprises. The features of the implementation of stakeholder marketing in managing the logistics potential of railway transport enterprises in the conditions of market liberalization are analyzed.

***4.2. Mykola Ohiienko.* Aspects of warehouse logistics management at enterprises of the agricultural sector of the economy.** The research conducted delved into the theoretical underpinnings of storage logistics management within the agricultural sector, focusing on enterprises' operations. It elucidated the core principles and significance of storage logistics in agribusiness, assessing the efficacy of management processes therein. Additionally, it scrutinized the establishment, operation, and future prospects of elevators in the sector.

4.3. Yurii Lysytsia. **Basics of organization of the logistics system for product distribution at enterprises.** The thesis study examined the theoretical foundations of the organization of the logistics system for distribution of products at enterprises, determined the essence and approaches to managing the distribution of products, studied the concept of economic uncertainty in logistics chains, and also analyzed methods for assessing the efficiency of operations in distribution logistics.

4.4. Alona Ohiienko, Tadeusz Pokusa. **Global supply chains management in the context of international business.** The thesis examines the theoretical aspects of global supply chain management in the context of international business, identifies the economic essence and principles of development of global supply chains, examines the factors influencing technological changes on the development of global supply chains of MNCs, and also analyzes methodological approaches to assessing the international logistics processes of MNCs in the conditions Industry 4.0. A diagnosis of the state of global supply chains of MNCs in Industry 4.0 was carried out, and the development of logistics processes in the world was analyzed.

4.5. Andrii Ohiienko, Ihor Honchak. **Modern directions of optimization of transport logistics.** The thesis study examined the theoretical foundations for optimizing transport logistics, defined the role of logistics management in the activities of enterprises, identified the economic essence of transport logistics as a type of logistics activity, and studied the criteria and indicators for assessing the effectiveness of transport logistics at an enterprise.

4.6. Vasyl Hruban, Oleksiy Sadovuy. **Innovative energy-saving technologies in irrigated agriculture systems in the conditions of post-war reconstruction.** The paper investigates the current problems of irrigated agriculture in Ukraine and proposes energy- and resource-saving technologies for circular sprinklers. A mathematical model of the operation of sprinklers using solar power, an integrated fertigation system, and the application of agrochemicals has been developed. The results confirm the possibility of increasing yields by 5-7% and reducing production costs through modernization of equipment, which contributes to the intensification of agriculture in the post-war recovery.

ABOUT AUTHORS

PART 1

MODERN PROBLEMS OF PHYSICAL CULTURE AND SPORTS

1.1. ***Oksana Adamenko****,* PhD of Pedagogical, Associate Professor, Admiral Makarov National University of Shipbuilding, Ukraine.

1.2. ***Viktor Derkach,*** PhD of Sciences Physical Education and sport Admiral Makarov National University of Shipbuilding, Ukraine.
Filip Pokusa, Academy of Applied Sciences Academy of Management and Administration in Opole, Poland.

1.3. ***Igor Martsinkovsky***, PhD of medical sciences, Associate Professor,
Anastasiia Briatko,
Admiral Makarov National University of Shipbuilding, Ukraine.

1.4. ***Iryna Veselova,***
Admiral Makarov National University of Shipbuilding, Ukraine.

PART 2

CURRENT ISSUES OF MANAGEMENT AND EDUCATION:
BY TYPE OF ACTIVITY

2.1. ***Illia Bulanov,*** Academy of Applied Sciences
Academy of Management and Administration in Opole, Poland.

2.2. ***Andrii Cheban,***
Daniel Palimąka, Academy of Applied Sciences
Academy of Management and Administration in Opole, Poland.

2.3. ***Roman Iakushko,*** Academy of Applied Sciences
Academy of Management and Administration in Opole, Poland.

2.4. ***Polina Puzyrova,*** Doctor of Economics, Professor,
Ievgen Sadovskyi,
Kyiv National University of Technologies and Design, Ukraine.

2.5. ***Yurii Tyschenko.,***
Iwona Mstowska, PhD of Economics, Associate Professor,
Academy of Applied Sciences
Academy of Management and Administration in Opole, Poland.

2.6. ***Mykola Subora, Andrii Skomorovskyi,*** Academy of Applied Sciences
Academy of Management and Administration in Opole, Poland.

2.7. ***Maksym Riznychenko,*** Academy of Applied Sciences
Academy of Management and Administration in Opole, Poland.

2.8. ***Tetiana Vlasiuk,*** PhD of Economics, Associate Professor,
Yaroslav Naumenko,
Kyiv National University of Technologies and Design, Ukraine.

2.9. ***Kazimierz Łukawiecki,*** PhD of Economics, Associate Professor,
Academy of Applied Sciences Academy of Management and Administration in Opole, Poland.
Denis Iakovunyk*,* Postgraduate,
Private Higher Educational Establishment «European University», Ukraine.

2.10. ***Liudmyla Prohoniuk****,* PhD of Legal Sciences, Associate Professor,
Mykolaiv National Agrarian University, Ukraine.

2.11. ***Mariela Macola,*** Academy of Applied Sciences Academy of Management and Administration in Opole, Poland.
Olena Iakovunyk*,*
Private Higher Educational Establishment «European University», Ukraine.

2.12. Dmytro Palamarchuk, Academy of Applied Sciences
Academy of Management and Administration in Opole, Poland.

2.13. Nataliia Shyshpanova, PhD of Economics, Associate Professor,
Mykolaiv National Agrarian University, Ukraine.

2.14. Zorina Shatska*,* Doctor of Economics, Professor,
Yevhen Biriukov,
Kyiv National University of Technologies and Design, Ukraine.

2.15. Anna Oleshko, Doctor of Economics, Professor,
Olena Budiakova, PhD of Economics, Associate Professor,
Kyiv National University of Technologies and Design, Ukraine.

PART 3

HOSPITALITY AND TOURISM INDUSTRY: STATUS AND CHALLENGES

3.1. Oleksii Aleksandrov*,* Academy of Applied Sciences
Academy of Management and Administration in Opole, Poland.

3.2. Kateryna Dodilova*,* PhD in Geography, Associate Professor
Yuliia Zemlina*,* PhD of Pedagogical, Associate Professor,
Viktoriya Poluda*,* PhD of Pedagogical, Associate Professor,
Kyiv Professional College of Tourism and Hospitality Management, Ukraine.

3.3. Mykhailo Sosnovskyh, Academy of Applied Sciences
Academy of Management and Administration in Opole, Poland

PART 4

TRANSPORT AND LOGISTICS SYSTEMS IN TODAY'S CONDITIONS

4.1. ***Vitalii Voronov,*** Academy of Applied Sciences
Academy of Management and Administration in Opole, Poland.

4.2. ***Mykola Ohiienko,*** Doctor of Economics, Professor,
National aviation university, Ukraine.
Academy of Applied Sciences Academy of Management and Administration in Opole, Poland.

4.3. ***Yurii Lysytsia,*** Academy of Applied Sciences
Academy of Management and Administration in Opole, Poland.

4.4. ***Alona Ohiienko,*** Doctor of Economics, Professor,
National aviation university, Ukraine.
Tadeusz Pokusa, PhD of Economics, Associate Professor,
Academy of Applied Sciences
Academy of Management and Administration in Opole, Poland

4.5. ***Andrii Ohiienko,***
Ihor Honchak,
Academy of Applied Sciences
Academy of Management and Administration in Opole, Poland.

4.6. ***Vasyl Hruban,*** PhD of Techniks, Associate Professor,
Oleksii Sadovuy, PhD of Techniks, Associate Professor,
Mykolaiv National Agrarian University, Ukraine.

SYNERGY OF SOCIO-ECONOMIC DEVELOPMENT

SYNERGIA ROZWOJU SPOŁECZNO-GOSPODARCZEGO

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