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CONTENTS

PEDAGOGY

Abylkassymova A., Yeskhozhayeva S., Zhumabay N. Developing students' mathematical literacy through contextual problems based on stem education.....	16
Adaskanova Zh.K., Moldasan K.Sh., Tsay Y. Professional-research thinking of the future educational psychologist: concept and structure.....	41
Aliyeva Zh.Zh., Baikenzheyeva A.T., Arystanova S.D. Developing entrepreneurial skills in biology majors within the framework of the minor supplementary educational program.....	55
Akhmetova D.M., Oryngaliyeva Sh.O., Kundakova A. Methodological foundations for the use of regional oral history materials in school practice when teaching the topic of women on the home front.....	72
Baishuakova A.D., Aldabergenova M.K., Zhadrayeva G.A. Epistolary sources as a means of developing historical thinking in future history teachers.....	90
Boztayeva S.Zh., Amrenova G.R., Jumabayeva S.T. Features of the development of coordination abilities of university students.....	104
Darkulova K.N., Turgynbayeva Zh.M., Kuttybayeva Zh.F. The influence of modern digital technologies on the formation of academic writing competencies among students.....	117
Dzhumanova L.S., Kaskataeva Zh.A., Turbaeva S.M. Problems of using artificial intelligence in education.....	133
Yermekbayeva A., Suleimenova K., Shormakova A.B. The role of assessment criteria in improving academic writing in higher education.....	151
Zhanys A.B. Digital variative mathematics education for agricultural engineers.....	166
Zhussupbekova B.A., Kulanbayeva G.K. Historical and psychological portrait of Mustafa Chokay.....	183
Kegenbekov J.K., Urazakynov D.K. The relevance of career guidance training in biophysics at medical universities.....	199
Kemelbekova Zh.S., Kopzhasarova Zh.B. Generative artificial intelligence tools in education: PRISMA 2020-based analysis and improvement model.....	218

Kurymbayeva S.K., Baizhumanova N.S., Bakina Y.A. Higher education instructors competencies in using AI in the inclusive education process.....	237
Massalimova B.K., Shintemirova M.T., Nurkenova A.D. Using STEM technologies to develop students' research skills.....	259
Orazaliyeva R., Ametkhan Zh. Folk pedagogy as a source of development of the ethno-artistic potential of students of creative specialties of the university of Kazakhstan.....	285
Pilten P., Pilten G., Kuralbayeva A. Pedagogical approaches to values education among primary school teachers.....	301
Sugirbekova A., Nametkulova F., Tasbolat E. Methodology for preparing future physics teachers to organize students' research activities.....	320
Tankibayeva A.A., Turalbayeva A.T., Baimukhanbetov B.M. Formation of professional competencies of future primary school teachers on the basis of micro-learning.....	340
Shyndaliev N.T., Serikkazy A.S., Nurbekova G.F. Enhancing students' professional competencies in big data processing through artificial intelligence: results of a pedagogical experiment.....	364

ECONOMICS

Aitkazina M., Karshalova A., Biken V. Analysis of green lending programs of second-tier banks and development institutions in the Republic of Kazakhstan.....	380
Aitmanbetova R., Bukharbaeva A. Improving accounting and audit systems through digitalization in Kazakhstan's agricultural sector: a current approach.....	403
Altai M.T., Mustafayeva B.U., Kulbaeva M.A. Development of the tourism industry as a factor of economic growth in the Turkestan Region: institutional and legal aspect.....	423
Assanova Zh., Mahfudz A.A., Turysbekova R. Environmental audit as an accounting and analytical tool for ensuring sustainable development in the Republic of Kazakhstan.....	438
Ashirbayeva S.B., Yessirkepova A.M., Alzhanova A.A. Methodological approaches to assessing the economic efficiency of forestry in the context of climate change.....	465
Yeltay B.B., Azatbek T.A. Evaluating the effectiveness of state regulation and institutional environment formation in the non-ferrous metallurgy sector.....	486

Zhaukhanova A.K., Muslimkyzy L.

The impact of investment processes on the development of the labor market of the Republic of Kazakhstan.....510

Kaliyeva S., Umurzakova B.

Human capital management in project-based banks of the Republic of Kazakhstan.....529

Kamardinov Y., Moldashbayeva L., Satymbekova K.

Digital transformation of accounting of transport and logistics services based on AI and Big Data.....544

Karanova Zh.Y., Kazhmuratova A.K., Chakeyeva K.S.

China–Kazakhstan transport corridor: digitalization and efficiency in the context of growing freight flows.....564

Kozhakhmetova K., Rakhmatullayeva D.Zh., Ruziev K.

Multicriteria analysis in ESG-oriented portfolio optimization.....587

Madysheva M.Zh., Mazbayeva K.O.

Cost audit in a commercial healthcare company: assessment of efficiency and transparency.....609

Mamutova K.K., Pashenova L.M., Aitymbetova A.N.

Digitalization of tax administration in Kazakhstan: modern technologies and development directions.....627

Narimanov R.N., Niyetalina G.K., Tayauova G.Zh.

Comparison of quiet luxury and logo branding in the context of consumer status signaling in Kazakhstan.....640

Nizamdinova A., Hao Zhen, Dzhakisheva U.

Improving the mechanisms of strategic management accounting in renewable energy enterprises.....657

Nurlybek Zh.A., Nurgaliyev K.M., Tynyshbayeva A.A.

Investment screening as a state governance mechanism of foreign capital access: the Australian experience.....675

Pakhuasheva D.S., Ermekbayeva D.D., Duiskanova R.Zh.

Strategic management of sustainable development of hotel chains in Kazakhstan.....698

Primzharova K., Bissenbayeva S., Zhumaxanova K.M.

Social entrepreneurship in the Republic of Kazakhstan: stages of formation and mechanisms of development.....726

Tulaganov A.B., Nurmagambetova A.I., Bigozhin R.M.

Contribution of higher education system to implementation of sustainable development goals in Kazakhstan.....750

Tuleeva A., Karabaeva Sh., Yessentayeva A.

Digital IT marketing as a tool for enhancing the competitiveness of agro-industrial enterprises.....765

МАЗМҰНЫ

ПЕДАГОГИКА

Әбілқасымова А.Е., Есхожаева С.М., Жұмабай Н.

STEM білім беру негізінде контекстік есептер арқылы оқушылардың математикалық сауаттылығын дамыту.....16

Адасканова Ж.К., Молдасан К.Ш., Цай Е.

Болашақ педагог-психологтың кәсіби-зерттеушілік ойлауы: ұғымы және құрылымы.....41

Әлиева Ж.Ж., Байкенжеева А.Т., Арыстанова С.Д.

Міног қосымша білім беру бағдарламасы аясында биология мамандығы студенттерінің кәсіпкерлік дағдыларын дамыту.....55

Ахметова Д.М., Орынғалиева Ш.О., Құндақова А.

Тылдағы әйелдер тақырыбын оқытуда өңірлік ауызша тарих материалдарын мектеп практикасында қолданудың әдістемелік негіздері.....72

Байшуакова А.Д., Алдабергенова М.К., Жадраева Г.А.

Эпистолярлық деректер болашақ тарих мұғалімдерінің тарихи ойлауын дамытудың құралы ретінде.....90

Бозтаева С.Ж., Амренова Г.Р., Джұмабаева С.Т.

Университет студенттерінің үйлестіру қабілеттерін дамыту ерекшеліктері.....104

Даркулова К.Н., Тургынбаева Ж.М., Куттыбаева Ж.Ф.

Заманауи цифрлық технологиялардың студенттердің академиялық жазу құзыреттілігін қалыптастыруға әсері.....117

Жұманова Л.С., Қасқатаева Ж.А., Турбаева С.М.

Білім беру саласында жасанды интеллектті пайдалану проблемалары.....133

Ермекбаева А., Сулейменова Қ., Шормақова А.Б.

Жоғары оқу орнында болашақ филологтардың академиялық жазылымын дамытудағы критерийлік бағалау рөлі.....151

Жаныс А.Б.

Агроинженерлерге математиканы цифрлық вариативті оқыту.....166

Жусупбекова Б.А., Куланбаева Г.К.

Мұстафа Шоқайдың тарихи-психологиялық портреті.....183

Кегенбеков Ж.К., Уразақынов Д.К.

Медициналық жоғары оқу орындарында биофизика курсын кәсіби бағдарлы оқытудың өзектілігі.....199

Кемельбекова Ж.С., Копжасарова Ж.Б.

Білім берудегі генеративті жасанды интеллект құралдары: PRIMSA 2020 негізіндегі талдау және жетілдіру моделі.....218

Құрымбаева С.Қ., Байжұманова Н.С., Бакина Ю.А.

ЖОО оқытушыларының инклюзивті білім беру процесіндегі ЖИ қолдану құзіреттері.....237

Масалимова Б.К., Шинтемирова М.Т., Нүркенова А.Д.

Оқушылардың зерттеу дағдыларын дамыту үшін STEM технологияларын қолдану.....259

Оразалиева Р., Аметхан Ж.

Халықтық педагогика Қазақстанның жоғары оқу орындарындағы шығармашылық мамандықтары студенттерінің этномәдени әлеуетін дамыту көзі ретінде.....285

Пилтен П., Пилтен Г., Құралбаева А.

Бастауыш сынып мұғалімдерінің құндылықтарға негізделген білім берудегі педагогикалық тәсілдері.....301

Сугирбекова А., Наметкулова Ф., Тасболат Е.

Болашақ физика мұғалімдерін оқушылардың зерттеу әрекетін ұйымдастыруға даярлау әдістемесі.....320

Танкибаева А.А., Туралбаева А.Т., Баймуханбетов Б.М.

Микрооқыту негізінде болашақ бастауыш сынып мұғалімдерінің кәсіби құзыреттілігін қалыптастыру.....340

Шындалиев Н.Т., Серікқазы Ә.С., Нурбекова Г.Ф.

Жасанды интеллект арқылы студенттердің үлкен деректерді өңдеудегі кәсіби құзыреттілігін арттыру: педагогикалық эксперимент нәтижелері.....364

ЭКОНОМИКА**Айтқазина М., Каршалова А., Бикен В.**

Қазақстан Республикасындағы екінші деңгейдегі банктер мен даму институттарын «жасыл» несиелеу бағдарламаларын талдау.....380

Айтманбетова Р., Бұхарбаева А.

Қазақстанның ауыл шаруашылығы секторындағы бухгалтерлік есепті цифрландыру жағдайында бухгалтерлік есеп және аудит жүйесін жетілдіру.....403

Алтай М.Т., Мустафаева Б.У., Құлбаева М.А.

Түркістан облысының экономикалық өсу факторы ретінде туристік саланы дамыту: институционалдық-құқықтық аспект.....423

Асанова Ж., Махфудз А.А., Турысбекова Р.

Қазақстан Республикасында орнықты дамуды қамтамасыз етудің есепке алу-талдау құралы ретінде экологиялық аудит.....438

Аширбаева С.Б., Есиркепова А.М., Альжанова А.А.

Климаттық өзгерістер жағдайында орман шаруашылығының экономикалық тиімділігін бағалаудың әдістемелік тәсілдері.....465

Елтай Б.Б., Азатбек Т.А.

Түсті металлургия саласын мемлекеттік реттеудің және институционалдық ортаны қалыптастырудың тиімділігін бағалау.....486

Жауханова А.К., Муслимқызы Л.

Қазақстан Республикасының еңбек нарығының дамуына инвестициялық үдерістердің әсері.....510

Қалиева С., Умурзакова Б.

Қазақстан Республикасының жобалық басқару моделін қолданатын банктеріндегі адам капиталын басқару.....529

Камардинов Е., Молдашбаева Л., Сатымбекова К.

AI және Big Data негізінде көлік-логистикалық қызметтердің бухгалтерлік есебін цифрлық трансформациялау.....544

Каранова Ж.У., Қажымұратова А.К., Чакеева К.С.

Қытай–Қазақстан көлік дәлізі: жүк ағындарының өсуі жағдайында цифрландыру және тиімділік.....564

Кожаметова К., Рахматуллаева Д.Ж., Рузиев К.

ESG-бағдарланған портфельді оңтайландырудағы көп критериялды талдау.....587

Мадышева М.Ж., Мазбаева К.О.

Коммерциялық денсаулық сақтау кәсіпорнындағы шығындар аудиті: тиімділік пен ашықтықты бағалау.....609

Мамутова Қ.Қ., Пашенова Л.М., Айтымбетова А.Н.

Қазақстандағы салық әкімшілендіруді цифрландыру: заманауи технологиялар және даму бағыттары.....627

Нариманов Р.Н., Ниеталина Г.К., Таяуова Г.Ж.

Қазақстандағы тұтынушылардың статус дабылы контекстінде quiet luxury және logo branding салыстырмалы талдау.....640

Низамдинова А., Хао Чжэнь, Джакишева У.

Жаңартылатын энергия кәсіпорындарында стратегиялық басқарушылық есеп механизмдерін жетілдіру.....657

Нұрлыбек Ж.А., Нұрғалиев Қ.М., Тынышбаева А.А.

Шетел капиталына қолжетімділікті реттеудің мемлекеттік басқару механизмі
ретіндегі инвестициялық скрининг: Австралия тәжірибесі.....675

Пахуашева Д.С., Ермекбаева Д.Д., Дүйскенова Р.Ж.

Қазақстанның қонақ үй желілерінің тұрақты дамуын стратегиялық басқару.....698

Примжарова Қ., Бисенбаева С., Жұмаксанова К.М.

Қазақстан Республикасындағы әлеуметтік кәсіпкерлік: қалыптасу кезеңдері
және даму тетіктері.....726

Тулағанов А.Б., Нұрмағамбетова А.И., Бигожин Р.М.

Қазақстандағы жоғары білім беру жүйесінің орнықты даму мақсаттарын
жүзеге асыруға үлесі.....750

Тулеева А., Карабаева Ш., Есентаева А.

Агроөнеркәсіптік кәсіпорындардың бәсекеге қабілеттілігін арттыру құралы
ретіндегі цифрлық IT-маркетинг.....765

СОДЕРЖАНИЕ

ПЕДАГОГИКА

Абылкасымова А.Е., Есхожаева С.М., Жумабай Н.

Развитие математической грамотности учащихся посредством контекстных задач в рамках STEM-образования.....16

Адасканова Ж.К., Молдасан К.Ш., Цай Е.

Профессионально-исследовательское мышление будущего педагога-психолога: понятие и структура.....41

Алиева Ж.Ж., Байкенжеева А.Т., Арыстанова С.Д.

Развитие предпринимательских навыков у студентов специальности «Биология» в рамках дополнительной образовательной программы Minor.....55

Ахметова Д.М., Орынғалиева Ш.О., Кундакова А.

Методические основы использования материалов региональной устной истории в школьной практике при изучении темы женщин тыла.....72

Байшуакова А., Алдабергенова М., Жадраева Г.

Эпистолярные источники как средство развития исторического мышления будущих учителей истории.....90

Бозтаева С.Ж., Амренова Г.Р., Джумабаева С.Т.

Особенности развития координационных способностей студентов вузов.....104

Даркулова К.Н., Тургынбаева Ж.М., Куттыбаева Ж.Ф.

Влияние современных цифровых технологий на формирование компетенций академического письма у студентов.....117

Джуманова Л.С., Каскатаева Ж.А., Турбаева С.М.

Проблемы использования искусственного интеллекта в сфере образования.....133

Ермекбаева А., Сулейменова К., Шормакова А.

Роль критериального оценивания в развитии академического письма будущих филологов в вузе.....151

Жаныс А.

Цифровое вариативное обучение математике агроинженеров.....166

Жусупбекова Б.А., Куланбаева Г.К.

Историко-психологический портрет Мустафы Шокая.....183

Кегенбеков Ж.К., Уразакынов Д.К.

Актуальность профориентационного обучения курсу биофизики в медицинских вузах.....199

Кемельбекова Ж.С., Копжасарова Ж.Б.

Генеративные инструменты искусственного интеллекта в образовании: анализ по PRISMA 2020 и модель совершенствования.....218

Курымбаева С.К., Байжуманова Н.С., Бакина Ю.А.

Компетенции преподавателей вузов по использованию ИИ в процессе инклюзивного образования.....237

Масалимова Б.К., Шинтемирова М.Т., Нуркенова А.Д.

Использование STEM-технологий для развития исследовательских навыков учащихся.....259

Оразалиева Р., Аметхан Ж.

Народная педагогика как источник развития этнохудожественного потенциала студентов творческих специальностей вуза Казахстана.....285

Пилтен П., Пилтен Г., Куралбаева А.

Педагогические подходы к ценностно-ориентированному образованию у учителей начальных классов.....301

Сугирбекова А., Наметкулова Ф., Тасболат Е.

Методика подготовки будущих учителей физики к организации исследовательской деятельности.....320

Танкибаева А.А., Туралбаева А.Т., Баймуханбетов Б.М.

Формирование профессиональной компетентности будущих учителей начальных классов на основе микрообучения.....340

Шындалиев Н.Т., Серикказы А.С., Нурбекова Г.Ф.

Повышение профессиональной компетентности студентов в обработке больших данных с использованием искусственного интеллекта: результаты педагогического эксперимента.....364

ЭКОНОМИКА**Айтказина М., Каршалова А., Бикен В.**

Анализ программ зеленого кредитования банков второго уровня и институтов развития в Республике Казахстан.....380

Айтманбетова Р., Бухарбаева А.

Совершенствование системы учета и аудита в условиях цифровизации бухгалтерского учета аграрного сектора Казахстана.....403

Алтай М.Т., Мустафаева Б.У., Кулбаева М.А.

Развитие туристской отрасли как фактор экономического роста Туркестанской области: институционально-правовой аспект.....423

Асанова Ж., Махфудз А.А., Турысбекова Р.

Экологический аудит как учетно-аналитический инструмент обеспечения устойчивого развития в Республике Казахстан.....438

Аширбаева С.Б., Есиркепова А.М., Альжанова А.А.

Методические подходы к оценке экономической эффективности функционирования лесного хозяйства в условиях климатических изменений.....465

Елтай Б.Б., Азатбек Т.А.

Оценка эффективности государственного регулирования и формирования институциональной среды в сфере цветной металлургии.....486

Жауханова А.К., Муслимкызы Л.

Влияние инвестиционных процессов на развитие рынка труда Республики Казахстан.....510

Калиева С., Умурзакова Б.

Управление человеческим капиталом в банках Республики Казахстан с проектной моделью управления.....529

Камардинов Е., Молдашбаева Л., Сатымбекова К.

Цифровая трансформация бухгалтерского учета транспортно-логистических услуг на основе AI и Big Data.....544

Каранова Ж.У., Кажмуратова А.К., Чакеева К.С.

Транспортный коридор Китай–Казахстан: цифровизация и эффективность в условиях роста грузопотоков.....654

Кожамметова К., Рахматуллаева Д.Ж., Рузиев К.

Многокритериальный анализ в ESG-ориентированной портфельной оптимизации.....587

Мадышева М.Ж., Мазбаева К.О.

Аудит расходов в коммерческом предприятии здравоохранения: оценка эффективности и прозрачности.....609

Мамутова К.К., Пашенова Л.М., Айтымбетова А.Н.

Цифровизация налогового администрирования в Казахстане: современные технологии и направления развития.....627

Нариманов Р.Н., Ниеталина Г.К., Таяуова Г.Ж.

Сравнение quiet luxury и logo branding в контексте статусной сигнализации потребителей в Казахстане.....640

Низамдинова А., Хао Чжэнь, Джакишева У.

Совершенствование механизмов стратегического управленческого учета в предприятиях возобновляемой энергетики.....657

Нурлыбек Ж.А., Нурғалиев К.М., Тынышбаева А.А.

Инвестиционный скрининг как механизм государственного управления
доступом иностранного капитала: опыт Австралии.....675

Пахуашева Д.С., Ермекбаева Д.Д., Дуйскенова Р.Ж.

Стратегическое управление устойчивым развитием гостиничных сетей
Казахстана.....698

Примжарова К., Бисенбаева С., Жумаханова К.М.

Социальное предпринимательство в Республике Казахстан: этапы становления
и механизмы развития.....726

Тулаганов А.Б., Нурмагамбетова А.И., Бигожин Р.М.

Вклад системы высшего образования в реализацию целей устойчивого развития
в Казахстане.....750

Тулеева А., Карабаева Ш., Есентаева А.

Цифровой IT-маркетинг как инструмент повышения конкурентоспособности
предприятий агропромышленного комплекса.....765

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¹Committee of Science of the Ministry of Science and Higher Education of the Republic of Kazakhstan, Almaty, Kazakhstan;

²Al-Farabi Kazakh National University, Almaty, Kazakhstan.

E-mail: kalievas_@mail.ru

HUMAN CAPITAL MANAGEMENT IN PROJECT-BASED BANKS OF THE REPUBLIC OF KAZAKHSTAN

Kaliyeva Saule — Doctor of Economic Sciences, Associate Professor, Institute of Economics of the Committee of Science of the Ministry of Science and Higher Education of the Republic of Kazakhstan, Almaty, Kazakhstan,

E-mail: kalievas_@mail.ru, <http://orcid.org/0000-0003-0533-2728>;

Umurzakova Botakoz — PhD candidate, Al-Farabi Kazakh National University, Almaty, Kazakhstan,

E-mail: baisalovab@gmail.com, <https://orcid.org/0000-0002-9077-2535>.

Abstract. The relevance of this study is determined by the growing importance of human capital in the context of accelerated digital transformation and the transition of banks in the Republic of Kazakhstan toward project-based management models. Digitalization fundamentally changes the organization of banking processes, increases the role of cross-functional teams and strengthens the dependence of financial performance on employees' competencies, adaptability and innovative capacity. Under these conditions, human capital becomes not only a supporting resource but also a strategic asset that directly influences the sustainability and competitiveness of banking institutions. The purpose of this study is to provide an empirical assessment of the impact of human capital indicators on the financial performance of banks in Kazakhstan operating under a project-oriented management model. Bank performance is evaluated using return on assets (ROA), return on equity (ROE) and the cost-to-income ratio (CIR). Human capital is measured through indicators reflecting investments in personnel development, training expenditures and staff-related efficiency metrics. The methodology of the study is based on descriptive statistical analysis, correlation analysis and multiple regression modeling, which allows identifying both the direction and the magnitude of the relationship between human capital variables and financial performance indicators. The results demonstrate that investments in human capital have a

statistically significant and economically meaningful impact on bank efficiency. Project-based management enhances the return on human capital investments by improving coordination, accelerating decision-making processes and fostering knowledge sharing within project teams. The practical significance of the study lies in the applicability of its findings for developing HR strategies and human capital management systems in the banking sector of Kazakhstan.

Keywords: human capital; project-based management; banking sector; bank performance; digital transformation; Republic of Kazakhstan

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²Әл-Фараби атындағы Қазақ ұлттық университеті, Алматы, Қазақстан.

E-mail: kalievas_@mail.ru

ҚАЗАҚСТАН РЕСПУБЛИКАСЫНЫҢ ЖОБАЛЫҚ БАСҚАРУ МОДЕЛІН ҚОЛДАНАТЫН БАНКТЕРІНДЕГІ АДАМ КАПИТАЛЫН БАСҚАРУ

Қалиева Сәуле — экономика ғылымдарының докторы, қауымдастырылған профессор, Қазақстан Республикасы Ғылым және жоғары білім министрлігі Ғылым комитетінің Экономика институты, Алматы, Қазақстан,

E-mail: kalievas_@mail.ru, <http://orcid.org/0000-0003-0533-2728>;

Умурзакова Ботақөз — PhD докторанты, Әл-Фараби атындағы Қазақ ұлттық университеті, Алматы, Қазақстан,

E-mail: baisalovab@gmail.com, <https://orcid.org/0000-0002-9077-2535>.

Аннотация. Зерттеудің өзектілігі Қазақстан Республикасының банк секторында жедел цифрлық трансформация жағдайында және жобалық басқару моделіне көшу барысында адам капиталының рөлінің артуымен айқындалады. Цифрландыру банктік процестерді ұйымдастыруды түбегейлі өзгертеді, кросс-функционалды командалардың маңызын күшейтеді және қаржылық нәтижелердің қызметкерлердің құзыреттеріне, бейімделу қабілетіне және инновациялық әлеуетіне тәуелділігін арттырады. Осы жағдайда адам

капиталы тек қосалқы ресурс емес, банктік ұйымдардың тұрақтылығы мен бәсекеге қабілеттілігін айқындайтын стратегиялық активке айналады. Зерттеудің мақсаты - жобалық басқару моделін қолданатын Қазақстан банктерінің қаржылық тиімділігіне адам капиталы көрсеткіштерінің әсерін эмпирикалық тұрғыда бағалау. Банктер қызметінің тиімділігі активтердің рентабельділігі (ROA), меншікті капиталдың рентабельділігі (ROE) және операциялық тиімділік коэффициенті (Cost-to-Income Ratio, CIR) арқылы бағаланды. Адам капиталы персоналды дамытуға салынған инвестициялар, оқыту шығындары және кадрлық ресурстарды пайдалану тиімділігі көрсеткіштері негізінде өлшенді. Зерттеудің әдіснамасы сипаттамалық статистика, корреляциялық талдау және көптік регрессиялық модельдеу әдістеріне негізделген, бұл адам капиталы көрсеткіштері мен банктердің қаржылық нәтижелері арасындағы байланыстың бағыты мен күшін анықтауға мүмкіндік береді. Алынған нәтижелер адам капиталына салынған инвестициялар банктердің тиімділігіне статистикалық тұрғыдан мәнді және экономикалық тұрғыдан маңызды әсер ететінін көрсетеді. Жобалық басқару моделі адам капиталына салынған инвестициялардың қайтарымын арттырып, үйлестіруді жақсартады, басқарушылық шешімдерді қабылдау үдерістерін жеделдетеді және жобалық командалар ішінде білім алмасуды дамытады. Зерттеудің практикалық маңыздылығы алынған нәтижелерді Қазақстан Республикасының банк секторында HR-стратегияларды және адам капиталын басқару жүйелерін әзірлеу барысында қолдану мүмкіндігімен айқындалады.

Түйін сөздер: адам капиталы; жобалық басқару моделі; банк секторы; банктің тиімділігі; цифрлық трансформация; Қазақстан Республикасы

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¹Институт экономики Комитета науки Министерства науки и высшего образования Республики Казахстан, Алматы, Казахстан;

²Казахский национальный университет имени аль-Фараби, Алматы, Казахстан.

E-mail: kalievas_@mail.ru

УПРАВЛЕНИЕ ЧЕЛОВЕЧЕСКИМ КАПИТАЛОМ В БАНКАХ РЕСПУБЛИКИ КАЗАХСТАН С ПРОЕКТНОЙ МОДЕЛЬЮ УПРАВЛЕНИЯ

Калиева Сауле — доктор экономических наук, ассоциированный профессор, Институт экономики Комитета науки Министерства науки и высшего образования Республики Казахстан, Алматы, Казахстан,

E-mail: kalievas_@mail.ru, <http://orcid.org/0000-0003-0533-2728>;

Умурзакова Ботакоз — PhD докторант, Казахский национальный университет имени аль-Фараби, Алматы, Казахстан,

E-mail: baisalovab@gmail.com, <https://orcid.org/0000-0002-9077-2535>.

Аннотация. Актуальность исследования определяется возрастающей ролью человеческого капитала в условиях ускоренной цифровой трансформации и перехода банков Республики Казахстан к проектной модели управления. Цифровизация коренным образом изменяет организацию банковских процессов, усиливает значение кросс-функциональных команд и повышает зависимость финансовых результатов от компетенций персонала, его адаптивности и инновационного потенциала. В этих условиях человеческий капитал становится не только вспомогательным ресурсом, но и стратегическим активом, напрямую влияющим на устойчивость и конкурентоспособность банковских организаций. Целью исследования является эмпирическая оценка влияния показателей человеческого капитала на финансовую эффективность банков Казахстана, функционирующих в условиях проектно-ориентированной модели управления. Эффективность банковской деятельности оценивается с использованием показателей рентабельности активов (ROA), рентабельности собственного капитала (ROE) и коэффициента операционной эффективности (Cost-to-Income Ratio, CIR). Человеческий капитал измеряется через показатели, отражающие инвестиции в развитие персонала, затраты на обучение и эффективность использования кадровых ресурсов. Методология исследования основана на методах описательной статистики, корреляционного анализа и множественного регрессионного моделирования, что позволяет определить направление и силу взаимосвязи между показателями человеческого капитала и финансовыми результатами банков. Результаты показывают, что инвестиции в человеческий капитал оказывают статистически значимое и экономически существенное влияние на эффективность банков. Проектная модель управления повышает отдачу от инвестиций в человеческий капитал за счет улучшения координации, ускорения процессов принятия решений и развития обмена знаниями внутри проектных команд. Практическая значимость исследования заключается в возможности использования полученных результатов при разработке HR-стратегий и систем управления человеческим капиталом в банковском секторе Казахстана.

Ключевые слова: человеческий капитал; проектная модель управления; банковский сектор; эффективность банка; цифровая трансформация; Республика Казахстан

Introduction. The banking sector of the Republic of Kazakhstan has undergone significant structural and organizational changes in recent years due to the rapid digitalization of financial services, the development of ecosystem-based business models, and increased competition from fintech companies (OECD, 2020; World Bank, 2020). In this environment, traditional hierarchical management structures are gradually being replaced by more flexible and adaptive organizational forms based on project-oriented principles (Kerzner, 2017).

Project-based management enables banks to accelerate the introduction of

digital products, improve responsiveness to market changes, and enhance resource efficiency. However, the effectiveness of this management model largely depends on the quality of human capital, including employees' professional competencies, engagement, cross-functional collaboration skills, and readiness for continuous learning (Huselid, 1995; Pfeffer, 1998).

Despite the growing relevance of these issues, human capital management in project-based banks of Kazakhstan remains insufficiently explored in academic literature. Existing studies primarily focus either on financial performance indicators or on isolated aspects of HR management, without considering the specific features of project-based organizational models in the banking sector (Wright & McMahan, 2011; Guthrie, 2001).

Therefore, there is a need for a comprehensive empirical analysis of the relationship between human capital indicators and bank performance in the context of project-based management. This study aims to address this research gap by providing quantitative evidence from the banking sector of the Republic of Kazakhstan and contributing to the theoretical and practical understanding of human capital transformation under digitalization (Barney, 1991; Grant, 1996).

Literature Review. Human Capital in Economic Theory. The concept of human capital originates from neoclassical economic theory and was systematically developed in the seminal works of Becker (1993), who defined human capital as investments in education, training, and health that enhance individual productivity and income-generating capacity. This perspective laid the foundation for understanding human capital as a measurable economic asset contributing to organizational and macroeconomic growth (Becker, 1993).

Within the Resource-Based View (RBV), human capital is considered a strategic intangible resource characterized by value, rarity, inimitability, and non-substitutability, enabling firms to achieve sustainable competitive advantages (Barney, 1991). In the banking sector, where service quality and innovation heavily depend on employee expertise, this theoretical framework is particularly relevant (Grant, 1996).

Contemporary research expands the traditional notion of human capital by incorporating organizational capabilities, corporate culture, knowledge-sharing mechanisms, and learning systems. In the knowledge-based economy, human capital is increasingly viewed as a multidimensional construct that directly influences organizational performance and adaptability (Bontis, 1998; Edvinsson & Malone, 1997).

Human Capital and Bank Performance. Empirical studies consistently demonstrate a positive relationship between investments in human capital and bank performance. Research shows that expenditures on employee training and development, as well as improvements in labor productivity, are associated with higher profitability and lower operating costs in financial institutions (Huselid, 1995; Guthrie, 2001).

Moreover, human capital plays a critical role in enhancing banks' resilience

to external shocks and their capacity for innovation. Banks that actively invest in employee development tend to exhibit higher return on assets and more efficient cost structures, particularly in highly competitive and technology-driven environments (Wright & McMahan, 2011; Den Hartog & Verburg, 2004).

In the context of digital transformation, the importance of human capital becomes even more pronounced. The adoption of digital platforms, fintech solutions, and data-driven decision-making requires employees to possess advanced digital, analytical, and project management skills. Consequently, human capital development emerges as a key determinant of sustainable bank performance (OECD, 2020; World Bank, 2020).

Project-Based Management in the Banking Sector. Project-based management is widely recognized as an effective approach for implementing strategic change and innovation in organizations. It involves the execution of strategic and operational objectives through temporary project teams with clearly defined goals, timelines, and resource constraints (Kerzner, 2017; PMI, 2021).

In the banking sector, project-based management has become increasingly prevalent due to digital transformation initiatives, agile adoption, and the development of product-oriented teams. Studies indicate that the success of project-based management in banks largely depends on the maturity of HR practices, the ability to form cross-functional teams, and the level of employee engagement (Rigby, Sutherland, & Takeuchi, 2016).

However, empirical research examining project-based management in banks of emerging economies, including Kazakhstan, remains limited. This gap highlights the need for country-specific studies that integrate human capital analysis with project-oriented organizational models (Kerzner, 2017; PMI, 2021).

Transformation of Human Capital under Digitalization and Project-Based Management. Under conditions of digitalization, human capital undergoes profound qualitative changes that extend beyond its traditional interpretation as a set of skills and professional experience. The transformation of human capital in the digital economy represents a multi-level process involving changes in competencies, organizational structures, management practices, and value creation mechanisms (OECD, 2020).

At the competency level, digital transformation shifts the demand toward digital literacy, data analytics, systems thinking, and project management skills, alongside traditional financial expertise. In banking organizations, this trend fosters the emergence of interdisciplinary competencies combining finance, IT, and project-based coordination (World Bank, 2020).

Organizationally, digitalization promotes the transition from hierarchical structures to flexible project and product teams operating under agile principles. In such environments, human capital is realized not only at the individual level but also as a collective resource formed through knowledge sharing and collaborative problem-solving (Rigby et al., 2016).

Institutionally, human capital transformation is reflected in the evolution of HR practices toward continuous learning, individualized development paths, and the use

of digital tools for performance evaluation and employee engagement. As a result, investments in human capital become a strategic priority that directly influences innovation capacity and long-term sustainability of banks operating under project-based management models (Pfeffer, 1998; OECD, 2020).

Methodology. Research Object and Sample. The object of this study is second-tier banks of the Republic of Kazakhstan that actively apply elements of a project-based management model in their operations. The empirical sample includes five major banks: Kaspi Bank, Halyk Bank, Bank CenterCredit, ForteBank, and Freedom Bank Kazakhstan. The selection of these banks is justified by their significant market share, advanced digital transformation initiatives, and the availability of comparable financial and non-financial data disclosed in annual reports (Halyk Bank, 2024; Kaspi.kz, 2024).

The study covers the period from 2019 to 2024, which allows for capturing medium-term trends in human capital development and bank performance during the active phase of digitalization in the Kazakhstani banking sector (OECD, 2020; World Bank, 2020).

Data Sources and Variables. The empirical database is constructed using publicly available annual reports and consolidated financial statements of the selected banks for 2019–2024. To ensure comparability, all indicators are calculated using standardized financial metrics reported under IFRS (Barney, 1991).

Dependent variables (bank performance indicators):

ROA (Return on Assets) - net profit to total assets;

ROE (Return on Equity) - net profit to shareholders' equity;

CIR (Cost-to-Income Ratio) - operating expenses to operating income.

These indicators are widely used in empirical banking studies to measure financial and operational efficiency (Huselid, 1995; Den Hartog & Verbarg, 2004).

Independent variables (human capital indicators):

- total number of employees;
- personnel expenses;
- profit per employee;
- income per employee.

Control variables:

- bank size (natural logarithm of total assets);
- capitalization level (equity-to-assets ratio).

The selected variables reflect both quantitative and qualitative dimensions of human capital and are consistent with prior empirical research (Wright & McMahan, 2011).

Methods of Analysis. To achieve the research objectives, the study employs a combination of descriptive statistics, Pearson correlation analysis, and multiple regression analysis. Descriptive statistics are used to identify general patterns and heterogeneity among banks, while correlation analysis assesses the strength and direction of relationships between human capital indicators and performance metrics (Guthrie, 2001).

To estimate the impact of human capital on bank performance, the following regression model is specified:

$$ROA_i = \beta_0 + \beta_1 HC_exp_i + \beta_2 Prod_i + \beta_3 Size_i + \beta_4 Cap_i + \varepsilon_i$$

Where

HC_exp denotes personnel expenses per employee,

Prod represents profit per employee,

Size is bank size,

and Cap is the capitalization level.

Similar model specifications are applied for ROE and CIR as dependent variables (Huselid, 1995; Grant, 1996).

Results. Descriptive Statistics. The empirical analysis begins with a descriptive assessment of the key indicators characterizing bank performance and human capital development in the selected second-tier banks of the Republic of Kazakhstan. This stage of the analysis is important because it allows identifying the general distribution of financial and personnel-related indicators, as well as differences between banks in terms of profitability, operational efficiency and investment in employees. Descriptive statistics also provide an initial basis for further correlation and regression analysis by showing the scale of variation in the variables used in the study.

Table 1 — Descriptive statistics of bank performance and human capital indicators (2019–2024)

Indicator	Mean	Minimum	Maximum	Std. Dev.
ROA (%)	4.1	2.3	7.2	1.9
ROE (%)	27.6	14.8	34.0	7.1
CIR (%)	43.9	29.5	58.7	10.6
Number of employees	8,540	3,100	16,700	5,420
Personnel expenses per employee (mln KZT)	9.2	5.8	13.6	3.1
Profit per employee (mln KZT)	38.5	14.2	72.4	21.7

The results indicate substantial heterogeneity among banks in terms of both human capital investment and performance outcomes. Banks with advanced digital platforms and project-oriented operating models-particularly Kaspi Bank and Halyk Bank-demonstrate higher labor productivity and profitability levels (Kaspi. kz, 2024; Halyk Bank, 2024).

Correlation Analysis. Pearson correlation coefficients between human capital indicators and performance metrics are reported in Table 2.

Table 2 — Correlation matrix (Pearson coefficients)

Indicator	ROA	ROE	CIR
Personnel expenses per employee	0.68	0.61	−0.59
Profit per employee	0.74	0.71	−0.66
Number of employees	−0.21	−0.18	0.24

Note: coefficients significant at the 5% level are highlighted.

The results reveal a strong positive correlation between human capital investment and profitability indicators, as well as a negative correlation with the cost-to-income ratio. This suggests that higher investment in employees and greater labor productivity are associated with improved operational efficiency (Huselid, 1995; Wright & McMahan, 2011).

Regression Analysis. To further assess the impact of human capital on bank performance, multiple regression analysis is conducted with ROA as the dependent variable. The regression results are presented in Table 3.

Table 3 — Regression results (dependent variable: ROA)

Variable	Coefficient (β)	t-statistic	p-value
Constant	−2.14	−1.87	0.12
Personnel expenses per employee	0.31	2.94	0.021
Profit per employee	0.42	3.37	0.013
Bank size (ln Assets)	−0.18	−1.52	0.18
Capitalization level	0.27	1.98	0.07
R ²	0.69		
Adjusted R ²	0.63		

The regression results confirm a statistically significant positive impact of human capital indicators on bank profitability. Personnel expenses per employee and profit per employee are positively associated with ROA at the 5% significance level, indicating that investment in human capital enhances financial performance even after controlling for bank size and capitalization (Barney, 1991; Grant, 1996).

Human Capital and Operational Efficiency. An additional regression model is estimated with CIR as the dependent variable:

$$CIR_i = \alpha_0 + \alpha_1 HC_exp_i + \alpha_2 Prod_i + \alpha_3 Size_i + u_i$$

The results demonstrate a stable negative relationship between human capital indicators and CIR, suggesting that higher investment in employees and improved productivity contribute to lower operating costs and enhanced efficiency (Den Hartog & Verbarg, 2004).

Summary of Empirical Findings. Overall, the empirical analysis provides robust evidence that human capital is a significant determinant of both financial and operational performance in Kazakhstani banks operating under a project-based management model. Banks emphasizing digital competencies, project-oriented

teamwork, and continuous employee development achieve superior efficiency and resilience outcomes (OECD, 2020; World Bank, 2020).

Discussion. The results obtained in this study confirm the hypothesis that human capital is one of the key determinants of financial and operational performance of banks operating under a project-based management model. The statistically significant positive relationship between personnel expenses per employee, profit per employee, and such indicators as ROA and ROE indicates that investments in human capital generate not only organizational and social benefits but also a clear economic return. This means that personnel-related expenditures in modern banks should be interpreted not as costs, but as long-term investments aimed at increasing productivity and strengthening competitive positions.

These findings are fully consistent with Becker's human capital theory, according to which investments in education, training, and professional development enhance employees' productivity and, consequently, improve organizational performance. In the context of the banking sector of the Republic of Kazakhstan, this conclusion is particularly relevant, as digitalization and technological change have fundamentally transformed the competency requirements for bank employees. Today, banks increasingly demand not only traditional financial expertise, but also skills in data analytics, product management, IT architecture, agile methodologies, and project management, which are essential for effective work in interdisciplinary teams.

The results also support the assumptions of the Resource-Based View, which considers human capital a strategic intangible resource characterized by value, rarity, inimitability, and non-substitutability. The statistically significant impact of human capital indicators on bank performance suggests that employees' knowledge, skills, and innovative potential constitute a core source of sustainable competitive advantage. In the digital economy, banks with advanced human capital management systems gain a structural advantage over organizations that rely primarily on technological or financial resources.

Particularly noteworthy is the fact that the highest performance indicators are demonstrated by banks that actively apply a project-based management model. This provides evidence of a synergistic effect between human capital development and project-oriented organizational structures. Project-based management implies a high degree of team autonomy, flexibility in decision-making, result orientation, and rapid implementation of innovations. However, its effectiveness is impossible without highly qualified, motivated, and adaptable employees. Thus, human capital becomes the critical factor that ensures the success of project-based organizational forms.

The identified negative relationship between human capital indicators and the Cost-to-Income Ratio indicates that investments in employees contribute not only to revenue growth but also to relative cost reduction. This can be explained by higher labor productivity, optimization of business processes, and lower transaction costs achieved through more efficient organization of project teams. These findings are consistent with the conclusions of Huselid (1995) and Wright and McMahan

(2011), who emphasized that advanced HR practices significantly improve organizational efficiency.

Under conditions of digital transformation, the role of human capital acquires a qualitatively new dimension. Whereas previously professional knowledge and experience in finance were dominant, today digital competencies, the ability to work in agile environments, continuous learning, and cross-functional collaboration have become equally important. This allows human capital to be interpreted not merely as an individual resource, but as a collective organizational asset formed through project teams and corporate knowledge management systems.

The specificity of the banking sector of the Republic of Kazakhstan further reinforces the significance of these results. Leading banks actively develop ecosystem-based business models, digital platforms, and product teams, which makes the project-based management model a dominant organizational form. In this environment, competitiveness is increasingly determined not by the size of assets or access to capital, but by the ability to effectively manage human capital and transform employees' knowledge and competencies into tangible economic outcomes.

Therefore, human capital management in project-oriented banks should be regarded as an integral element of strategic management. Human capital acts as a linking mechanism between digital technologies, organizational transformation, and financial performance, ensuring banks' adaptability, resilience, and sustainable development in conditions of heightened uncertainty and rapid technological change.

Human Capital as a Strategic Resource in Project-Based Banks. The empirical results of this study provide strong evidence that human capital in project-based banks should be regarded as a strategic organizational resource rather than as a supporting operational factor. In contrast to traditional hierarchical banking models, where human resources mainly serve predefined processes, project-oriented structures place employees at the center of value creation. Project teams become the primary units of innovation, digital product development, and process transformation, which significantly increases the strategic importance of employees' competencies, creativity, and adaptability.

In project-based banks, human capital performs a dual function. On the one hand, it ensures the operational implementation of projects through technical, financial, and analytical expertise. On the other hand, it generates new organizational knowledge that accumulates through cross-functional interaction and collective problem solving. This transforms human capital into a dynamic strategic asset that evolves together with the organization and strengthens its long-term competitive position.

From this perspective, project-based management amplifies the economic returns from investments in human capital. The more actively a bank adopts project structures, agile methodologies, and interdisciplinary teamwork, the higher the marginal productivity of human capital becomes. This explains why banks

that combine digital transformation with project-oriented organizational models demonstrate superior performance indicators in comparison with traditionally managed institutions.

Digital Transformation and the Qualitative Change of Human Capital. Digital transformation leads not only to technological modernization of banking operations but also to a fundamental qualitative change in the nature of human capital. Traditional banking competencies focused on financial analysis, accounting, and regulatory compliance are increasingly complemented by digital literacy, data analytics, product thinking, and project management skills. As a result, human capital acquires a hybrid character that integrates financial, technological, and managerial competencies.

Moreover, digitalization changes the way human capital is created and utilized within organizations. Knowledge becomes more distributed across project teams rather than concentrated in individual experts or hierarchical units. This makes collaboration, communication, and collective learning key components of human capital effectiveness. Consequently, human capital should be conceptualized not only as an individual attribute but also as an organizational capability embedded in project teams and digital platforms.

In this context, the transformation of human capital represents a shift from a static stock of skills to a continuously evolving system of competencies shaped by technological change, organizational learning, and project-based interaction. This transformation strengthens the role of human capital as a core driver of innovation and organizational resilience in the banking sector.

Implications for Project-Based HR Management in the Banking Sector. The findings of this study have important implications for the design of HR management systems in project-oriented banks. In such organizations, HR functions should move beyond traditional administrative roles and become an integral part of the project management infrastructure. HR departments must actively participate in forming project teams, developing competency models, and supporting continuous professional development.

Project-based HR management requires flexible recruitment strategies focused on interdisciplinary skills, adaptive performance evaluation systems, and incentive mechanisms aligned with project outcomes. Employees should be motivated not only by individual performance indicators but also by team-based achievements and innovation results. This enhances knowledge sharing and strengthens collaboration across functional boundaries.

Furthermore, HR strategies in project-based banks should emphasize the development of soft skills, such as communication, leadership, adaptability, and problem-solving abilities, which are critical for effective project work. In this sense, HR management becomes a strategic partner of project offices and top management, contributing directly to banks' digital transformation and competitive sustainability.

5.4. Comparison with International Empirical Evidence

The results obtained in this study are consistent with international empirical evidence on the relationship between human capital and organizational performance. Previous studies have demonstrated that investments in employee development, training, and engagement positively affect productivity and financial outcomes (Huselid, 1995; Wright & McMahan, 2011). Similarly, reports by the OECD (2020) and the World Bank (2020) emphasize the critical role of human capital in ensuring sustainable economic growth and organizational adaptability in the digital economy.

However, this study contributes to the literature by extending these findings to the context of project-based banks in an emerging economy. While most prior research focuses on developed financial markets, empirical evidence from Central Asia remains limited. Therefore, the present analysis provides novel insights into how global theoretical frameworks of human capital management operate under conditions of rapid digitalization and institutional transformation characteristic of Kazakhstan's banking sector.

At the same time, the results highlight a specific feature of the Kazakhstani context: the strong integration of digital ecosystems, platform-based business models, and project-oriented organizational structures within large banks. This combination intensifies the impact of human capital on performance outcomes and distinguishes Kazakhstan's banking sector from more traditional banking systems.

Conclusion. This study empirically confirms the significant role of human capital in shaping the financial and operational performance of banks in the Republic of Kazakhstan operating under a project-based management model. The results demonstrate that personnel expenses per employee and profit per employee exert a statistically significant impact on return on assets (ROA), return on equity (ROE), and the Cost-to-Income Ratio. This indicates that human capital is not a secondary factor, but a strategic driver of sustainable development and competitiveness of banking organizations.

From a theoretical perspective, the findings support both human capital theory and the Resource-Based View, according to which employees' knowledge, competencies, and skills represent a key source of sustainable competitive advantage. In the context of digital transformation of the banking sector, these conclusions become particularly important, as human capital ensures the effective implementation and utilization of digital technologies as well as the success of project-based organizational structures.

The practical implications of the study are significant for bank management and HR policy development. Banks are advised to treat investments in personnel development as a component of long-term strategic investment aimed at enhancing productivity and financial stability. Special attention should be paid to the development of digital and project management competencies, the formation of cross-functional teams, the introduction of continuous learning systems, and the cultivation of an organizational culture focused on innovation and performance.

At the same time, the study has several limitations. First, the sample includes only

five major banks of the Republic of Kazakhstan, which restricts the generalizability of the results to the entire banking sector. Second, the analysis relies mainly on aggregated quantitative indicators, while such qualitative dimensions of human capital as employee engagement, corporate culture, and internal communication effectiveness were not directly incorporated into the empirical model. Third, the observation period is relatively limited, which does not allow a full assessment of the long-term effects of investments in human capital.

Future research may expand the empirical base by including a larger number of banks and applying qualitative research methods such as employee surveys and interviews with project office managers. It would also be promising to investigate the relationship between human capital and ESG indicators, as well as to conduct comparative studies with banking systems of other countries. This would provide a deeper understanding of the role of human capital in ensuring the sustainable development of banks in the digital economy.

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