



INNOVATION IQTISODIYOT

Ilmiy-amaliy elektron jurnal

2026

№4

ИННОВАЦИОННАЯ ЭКОНОМИКА

Научно-практический электронный журнал

INNOVATIVE ECONOMY

Scientific and practical electronic journal



Indexlanadigan bazalar:  Google Scholar  Crossref  OpenAIRE  CYBERLENIKA



INNOVATION IQTISODIYOT

ILMIY-AMALIY
ELEKTRON JURNAL

4-jild
4-son
Aprel, 2026

April, 2026
Volume 4
Number 4

ИННОВАЦИОННАЯ
ЭКОНОМИКА
Научно-практический
электронный журнал

INNOVATIVE ECONOMY
Electronic scientific and
practical journal

**INNOVATSION IQTISODIYOT****ILMIY-AMALIY ELEKTRON JURNAL**

ISSN: 3030-315X

ojs.kstu.uz

Muassis:**Qarshi davlat texnika universiteti****Tahririyat Kengashi raisi:**

R.X.Ergashev, iqtisodiyot fanlari doktori, professor

Tahririyat Kengashi raisi o‘rinbosari:

S.N.Xamrayeva, iqtisodiyot fanlari doktori, professor

Mas’ul muharrir:

N.A.Ochilova, PhD, dotsent

Texnik muharrir:

S.J.Qulmurotov

*Jurnal har oyda bir marotaba elektron shaklda jurnalning rasmiy sayti orqali nashr etiladi.***Tahririyat manzili:**

180100, Qarshi shahri, Mustaqillik ko‘chasi 225-uy Tel.:

+998 (75) 221 09 23

+998 (93) 902 72 63

Faks: +998 (75) 221 1395

innoeconomic@kstu.uz

“Innovatsion iqtisodiyot” ilmiy - amaliy elektron jurnali O‘zbekiston Respublikasi Oliy ta’lim, fan va innovatsiyalar vazirligi huzuridagi **Oliy attestatsiya komissiyasi rayosatining 2025-yil 5-apreldagi 369-sonli qarori** bilan milliy ilmiy nashrlar ro‘yxatiga kiritilgan.

Jurnalda quyidagi ruknlar asosida maqolalar nashr etiladi:

1. Nazariya va metodologiya
2. Raqamli iqtisodiyot
3. Mintaqa va tarmoqlar iqtisodiyoti
4. Kichik biznes va xususiy tadbirkorlik
5. Inson kapitali iqtisodiyoti
6. Menejment va marketing
7. Buxgalteriya hisobi, iqtisodiy tahlil va audit
8. Moliya, kredit va investitsiya
9. Ekonometrika va statistika
10. Xizmat ko‘rsatish va turizm sohasi

TAHRIRIYAT KENGASHI:**Tahririyat Kengashining xalqaro a'zolari:**

Ovchinnikov Viktor Nikolayevich - i.f.d., professor, akademik (Janubiy Federal Universitet, Rossiya)

Solodovnikov Sergiy Yurevich - i.f.d., professor (Belorussiya milliy texnika universiteti)

Sidorov Viktor Aleksandrovich - i.f.d., professor, (Kuban davlat universiteti)

Shevchenko Igor Viktorovich - i.f.d., professor (Kuban davlat universiteti, Rossiya)

Kusainov Xalel Xaymullievich - i.f.d., professor, akademik (Qozog‘iston Respublikasi Milliy fanlar akademiyasi)

Samandarzoda Iskandar Hakim - Iqtisodiyot fanlari doktori (Sh.Shotemur nomidagi Tojikiston agrar universiteti)

Gibadullin Artur Arturovich - i.f.n. dotsent (Milliy tadqiqot universiteti, Moskva energetika instituti, Rossiya)

Sergey Aleksandrovich Voynash - ilmiy xodim (P.Lumumbi nomidagi Rossiya xalqlar do‘stligi universiteti)

Valentina Nikolayevna Pulyayeva - iqtisod fanlari nomzodi, dotsent (Rossiya Federatsiyasi hukumati qoshidagi Moliya universiteti)

Dmitriy Evgenievich Morkovkin, iqtisod fanlari nomzodi, dotsent (Moliya universiteti, Rossiya Federatsiyasi hukumati)

Sadriddinov Manuchehr Islomiddinovich - i.f.d., professor, (Tojikiston Respublikasi Milliy fanlar Akademiyasi)

Perskaya Viktoriya Vadimovna - i.f.d., professor, (Rossiya Federatsiyasi hukumati huzuridagi Moliya universiteti)

Molchanov Igor Nikolayevich - i.f.d., professor, (Lomonosov nomidagi Moskva davlat universiteti)

Basova Mariya Mixaylovna - i.f.d., professor, (Rossiya Federatsiyasi hukumati huzuridagi Moliya universiteti)

Aleksandr Leonidovich Chupin, iqtisod fanlari nomzodi (P.Lumumbi nomidagi Rossiya xalqlar do‘stligi universiteti)

Nezamaykin Valeriy Nikolayevich - i.f.d., professor, (Rossiya davlat gumanitar universiteti)

Nikonorova Alla Vladimirovna - i.f.n., dotsent, (Rossiya Federatsiyasi hukumati huzuridagi Moliya universiteti)

Dmitriyeva Olga Aleksandrovna - i.f.n., dotsent, (Rossiya Federatsiyasi hukumati huzuridagi Moliya universiteti)

Shvets Yuriy Yuryevich - i.f.n., dotsent, (Rossiya Fanlar akademiyasining Nazorat fanlari instituti)

Kolossova Yelena Valeryevna - i.f.n., dotsent, (Plexanov nomidagi Rossiya iqtisodiyot universiteti)

Tahririyat Kengashi a'zolari:

Gulyamov Saidaxror Saidaxmedovich - i.f.d., professor, akademik (Pardayev Mamayunus Qarshiboyevich - i.f.d., professor)

Navruz-zoda Baxtiyor Negmatovich - i.f.d., professor

Xatamov Ochilid Qurbonovich - i.f.d., professor

Fayziyeva Shirin Shodmonovna - i.f.n., professor

Jumayeva Gulrux Jo‘raqulovna - i.f.n., professor

Egamberdiyeva Salima Raimovna - i.f.n., dotsent

Erkayeva Gulbahor Panjiyevna - i.f.n., professor

Yakubova Shamshinur Shuxratovna - i.f.d., (DSc) dotsent

Amirqulov Shuhrat Olimovich - i.f.f.d., (PhD), dotsent

Samiyeva Gulnoza Toxirovna - i.f.f.d., (PhD), dotsent

Aliqulov Azamat Tuyg‘unovich - i.f.f.d., (PhD), dotsent

Aminov Fazlitdin Baxadirovich - i.f.n., dotsent

Xo‘jaqulova Nigora Rustamovna - i.f.f.d., (PhD), dotsent

Turobov Sherzod Alisherovich - i.f.f.d., (PhD), dotsent

Alimova Munisa Yulchiyevna - i.f.f.d. (PhD) dotsent

Ergasheva Nasiba Raxmatullayevna - i.f.d., (DSc), dotsent

Boboqulov Sanjar Baxromkulovich - i.f.f.d., (PhD), dotsent

Djalilov Raxmonkul Hamidovich - i.f.f.d., (PhD), dotsent

Nomazov Baxrom Bobomurodovich - i.f.f.d. (PhD) dotsent

Alimxanova Nigora Alimxanovna - i.f.f.d. (PhD) dotsent

Jonuzokov Mirzabek Kulmamatovich - i.f.f.d. (PhD), dotsent

Muxammadiyeva Yulduz Yusupovna - i.f.f.d. (PhD)

Tursunova Aziza Xoshimovna - i.f.f.d. (PhD)

Xolliyev Sherali Baxtiyorovich - i.f.f.d. (PhD)

Panjiyev Samijon Aliqulovich - PhD, dotsent



ИННОВАЦИОННАЯ ЭКОНОМИКА

Научно-практический электронный журнал

ISSN: 3030-315X

ojs.kstu.uz

Учредитель:

**Каршинский государственный технический
университет**

Председатель редакционного совета:

Р.Х.Эргашев, доктор экономических наук, профессор

Заместитель председателя редакционного совета:

С.Н.Хамраева, доктор экономических наук,
профессор

Ответственный редактор:

Н.А.Очилова, PhD, доцент

Технический редактор:

С.Ж.Кулмуротов

Журнал издается один раз в месяц в
электронной форме и публикуется через
официальный сайт журнала.

Адрес редакции:

180100, г. Карши, ул. Мустакиллик, дом 225

Тел: +998 (75) 221 09 23

+998 (93) 902 72 63

Факс: +998 (75) 221 1395

E-mail: innoeconomic@kstu.uz

Научно-практический электронный журнал
«Инновационная экономика» включён в перечень
национальных научных изданий на основании
решения Президиума Высшей аттестационной
комиссии при Министерстве высшего образования,
науки и инноваций Республики Узбекистан от 5
апреля 2025 года № 369.

**В журнале публикуются статьи по
следующим рубрикам:**

1. Теория и методология
2. Цифровая экономика
3. Экономика регионов и отраслей
4. Малый бизнес и частное
предпринимательство
5. Экономика человеческого капитала
6. Менеджмент и маркетинг
7. Бухгалтерский учет, экономический анализ и
аудит
8. Финансы, кредит и инвестиции
9. Эконометрика и статистика
10. Сфера услуг и туризм

Редакционная коллегия:

Международные члены Совета редколлегии:

Овчинников Виктор Николаевич - д.э.н., профессор, академик
(Южный федеральный университет, Россия)

Солодовников Сергей Юрьевич - д.э.н., профессор
(Белорусский национальный технический университет)

Виктор Александрович Сидоров - д.э.н., профессор,
(Кубанский государственный университет)

Шевченко Игорь Викторович - д.э.н., профессор (Кубанский
государственный университет)

Кусаинов Халел Хаймуллович - д.э.н., профессор, академик
(НААН Республика Казахстан)

Самандарзода Искандар Хаким - д.э.н., профессор
(Таджикистанский аграрный университет им. Ш.
Шотемура)

Гибатуллин Артур Артурович - к.э.н., доцент
(Национальный исследовательский университет
«Московский энергетический институт»)

Войнаш Сергей Александрович - научный сотрудник
(Российского университета дружбы народов имени
П.Лумумби)

Пуляева Валентина Николаевна - к.э.н., доцент
(Финансовый университет при Правительстве РФ)

Морковкин Дмитрий Евгеньевич - к.э.н., доцент
(Финансовый университет Правительство РФ)

Садриддинов Манучехр Исламиддинович - д.э.н.,
профессор (Национальная академия наук Республики
Таджикистан)

Перская Виктория Вадимовна - д.э.н., профессор
(Финансовый университет при Правительстве РФ)

Молчанов Игорь Николаевич - д.э.н., профессор (Московский
государственный университет имени М.В. Ломоносова)

Басова Мария Михайловна - д.э.н., профессор
(Финансового университета Российской Федерации)

Чупин Александр Леонидович - к.э.н. (Российского
университета дружбы народов имени П. Лумумби)

Незаймакин Валерий Николаевич - д.э.н., профессор (РГТУ)

Никонорова Алла Владимировна - к.э.н., доцент
(Финансового университета Российской Федерации)

Дмитриева Ольга Александровна - к.э.н., доцент
(Финансового университета Российской Федерации)

Швец Юрий Юрьевич - к.э.н., доцент (Институт проблем
управления РАН)

Колосова Елена Валерьевна - к.э.н., доцент (Российский
экономический университет имени Г.В. Плеханова)

Члены Совета редколлегии:

Гулямов Саидхорр Саидхмедович - д.э.н., профессор,
академик

Пардаев Мамаюнус Каршибоевич - д.э.н., профессор

Навруз-зода Бахтиёр Негматович - д.э.н., профессор

Хатамов Очилди Курбанович - д.э.н., профессор

Файзиева Ширин Шодмоновна - к.э.н., профессор

Жумаева Гулрух Журакуловна - к.э.н., профессор

Эгамбердиева Салима Раимовна - к.э.н., доцент

Еркаева Гулбахор Панжиевна - к.э.н., профессор

Якубова Шамишнур Шухратовна - д.э.н., (DSc), доцент

Амиркулов Шухрат Олимович - д.ф.э.н., (PhD), доцент

Самиева Гулноза Тохировна - д.ф.э.наук., (PhD), доцент

Алигулов Азамат Туйгунович - д.ф.э.н., (PhD), доцент

Аминов Фазлитдин Бахадирович - к.э.н., доцент

Хужакулова Нигора Рустамовна - д.ф.э.н., (PhD), доцент

Туробов Шерзод Алишерович - д.ф.э.н., (PhD), доцент

Алимова Муниса Юльчиевна - д.ф.э.н., (PhD), доцент

Эрашиева Насиба Рахматуллаевна - д.э.н., (DSc), доцент

Бобокулов Санжар Бахромкулович - д.ф.э.н., (PhD), доцент

Джалилов Рахмонкул Хамидович - д.ф.э., (PhD), доцент

Номазов Бахром Бобомуродович - д.ф.э.н., (PhD), доцент

Алимханова Нигора Алимхановна - д.ф.э.н., (PhD), доцент

Джанузакан Мирзабек Кулмаматович - д.ф.э.н., (PhD),
доцент

Мухаммадиева Юлдуз Юсуповна - д.ф.э.н., (PhD)

Турсунова Азиза Хошимовна - д.ф.э.н., (PhD)

Холлиев Шерали Бахтиёрович - д.ф.э.н., (PhD)

Панджиев Самиджон Аликулич - PhD, доцент



**Buxgalteriya hisobi, iqtisodiy tahlil
va audit**

**Accounting, economic analysis and
audit**

**Бухгалтерский учет,
экономический анализ и аудит**



AI-DRIVEN ACCOUNTING AND DYNAMIC PRICING STRATEGIES IN THE RESTAURANT INDUSTRY

Ablakulova Shakhnoza Gayrat kizi, Ibragim Mamadiyevich Ganiyev

РОЛЬ ИИ В СОВРЕМЕННОЙ БУХГАЛТЕРИИ И УПРАВЛЕНИИ СТОИМОСТЬЮ УСЛУГ

Аблакулова Шахноза Гайрат кызы, Ибрагим Мамадиевич Ганиев

UMUMIY OVQATLANISH SOHASIDA SI TECHNOLOGIYALARI: AVTOMATLASHTIRILGAN BUXGALTERIYA VA DINAMIK NARX SHAKLLANTIRISH

Ablakulova Shaxnoza Gayrat qizi, Ibragim Mamadiyevich Ganiyev

Received: April 12, 2026 Revised: April 12, 2026 Accepted: April 19, 2026 Published: May 1, 2026

Abstract. As the restaurant sector undergoes digital transformation, this study analyzes the efficiency of AI-powered systems in managing finances and optimizing prices. Through an examination of automated inventory control and adaptive pricing algorithms, the article demonstrates how AI reduces human error and responds to market fluctuations. The findings suggest that AI is no longer optional but a critical tool for enhancing restaurant ROI, streamlining operations, and maintaining a leading edge over competitors.

Аннотatsiya. Статъя раскрывает потенциал искусственного интеллекта как инструмента стратегического управления в ресторанном секторе. Особое место отведено механизмам адаптивного ценообразования и интеллектуальному контролю затрат. Автор анализирует, как технологии ИИ трансформируют классические подходы к учету и планированию, обеспечивая высокую точность прогнозов и минимизацию рисков. Внедрение ИИ-решений рассматривается как необходимый этап для повышения маржинальности и операционной устойчивости предприятий в условиях цифровой экономики.

Annotatsiya. Maqola restoran biznesida sun'iy intellektga asoslangan raqamli ekotizimlarni shakllantirish masalalariga bag'ishlangan. Muallif tomonidan SI yordamida talabni aniq bashorat qilish va moslanuvchan narx siyosatini yuritishning afzalliklari ochib beriladi. Ma'lumotlar tahlili asosida boshqaruv samaradorligini oshirish va xizmat ko'rsatish rentabelligini yaxshilash imkoniyatlari tahlil etilgan. Tadqiqot yakunida SI texnologiyalari nafaqat texnologik yangilik, balki restoranlarning daromadini oshiruvchi asosiy iqtisodiy drayver ekanligi isbotlangan.

Keywords. Foodservice industry, intelligent systems, adaptive pricing models, expenditure analysis, machine learning algorithms, predictive demand analytics, economic viability, smart management, digital business transformation, data-driven decision making.

Ключевые слова. Индустрия питания, интеллектуальные системы, адаптивное ценообразование, анализ издержек, алгоритмы машинного обучения, предиктивная аналитика спроса, экономическая эффективность, интеллектуальное управление, цифровизация бизнеса, Big Data в ритейле.

Kalit so'zlar. Umumiy ovqatlanish industriyasi, intellektual tizimlar, moslanuvchan narx siyosati, xarajatlar tahlili, o'zi o'rganuvchi algoritmlar, iste'mol bozorini prognozlash, iqtisodiy samaradorlik, katta hajmdagi ma'lumotlar, aqlli boshqaruv, sohani raqamlashtirish.

■ INTRODUCTION

The global push toward a digital economy is fundamentally reshaping every sector, and the hospitality industry is no exception. Today's restaurant business operates in a high-stakes environment defined by fierce

competition, fluctuating consumer trends, and volatile raw material costs. Traditional accounting methods, which rely heavily on manual entry and human oversight, are increasingly prone to errors, leading to significant resource drain and operational inefficiencies.



The global restaurant landscape is currently navigating a period of unprecedented complexity. Conventional management strategies have largely lost their edge, a shift that became particularly evident following the COVID-19 pandemic. The crisis acted as a catalyst for digital transformation, forcing establishments to dismantle and rebuild their business models from the ground up. In this new era, Artificial Intelligence (AI) has emerged not merely as a calculating tool, but as a sophisticated "intellectual partner" capable of driving strategic decisions. Specifically, AI is revolutionizing financial oversight and pricing mechanisms within the restaurant sector [11]. This article analyzes the profound impact of AI technologies on financial management, evaluates current industry practices, and explores future growth trajectories.

From a global economic perspective, the restaurant industry generated a massive \$4.6 trillion in revenue in 2024, with profits ranging between \$300 billion and \$450 billion [3]. The scale of engagement is equally staggering: between 3.5 and 4 billion people are regular patrons of food services. Approximately 2.3 billion individuals dine out at least once a week, while 2 billion people actively use online delivery platforms [18]. Consequently, the industry processes an immense volume of data, reaching 12–15 billion transactions daily, or roughly 4–5 trillion transactions annually [14].

Modern Restaurant Revenue Management (RRM) strategies are built upon five core pillars: pricing, inventory control, time management, data governance, and sales optimization. Artificial Intelligence is driving the most significant disruptions in the realms of data governance and pricing. By processing vast datasets in real-time, AI systems empower owners and managers to move away from guesswork and toward precise, data-backed decision-making.

In the context of the digital economy, the service sector—and specifically the restaurant business—is evolving at a rapid pace. Heightened competition and rising overhead costs demand a shift toward modern, agile management styles. Traditional accounting and pricing often look backward, relying on historical data that fails to account for real-time market shifts.

In contrast, AI offers the ability to process high-velocity data, provide accurate forecasts, and identify optimal solutions instantly. It plays a pivotal role in automated cost monitoring, demand prediction, dynamic pricing, and inventory optimization—all of which are essential for protecting profit margins. Global leaders such as McDonald's, Starbucks, and Domino's have already integrated AI-driven systems for pricing and demand forecasting, underscoring the critical relevance of AI integration in today's restaurant ecosystem.

■ LITERATURE REVIEW

The integration of Artificial Intelligence in restaurant management has been a focal point for numerous international scholars, whose research provides a foundation for this study. Thomas H. Davenport and Rajeev Ronanki emphasize that AI serves as a critical catalyst for optimizing business processes, particularly in driving operational efficiency and streamlining workflows [2]. Andrew Ng, a pioneer in the

field, highlights the necessity of data-driven decision-making systems for companies undergoing an "AI transformation," arguing that data is the core engine of modern business evolution [12]. Jürgen Schmidhuber has provided the scientific groundwork for Deep Learning models, demonstrating their superior accuracy in time-series forecasting—a vital component for predicting restaurant traffic and sales [17]. David Hardoon and Galit Shmueli (2013) developed a robust model for utilizing data effectively within the "Business Analytics" concept, bridging the gap between raw information and actionable managerial insights [4]. Cathy O'Neil (2022) contributes a critical perspective by addressing the ethical dimensions and the need for transparency in algorithmic decision-making, ensuring that AI-driven pricing remains fair and unbiased [13].

Furthermore, contemporary empirical studies specifically focused on the restaurant industry suggest that AI-powered demand forecasting and dynamic pricing mechanisms can bolster total revenue by 15% to 30%.

■ RESEARCH METHODOLOGY

This study was conducted using a multi-faceted analytical approach. The research draws upon a diverse array of materials, including:

- Scientific findings from both national and international researchers.
- Official datasets provided by relevant Ministries and the National Statistics Agency.
- Comprehensive reports from global financial institutions.

The primary data was gathered through the collection of statistical metrics, which were then processed using modern software tools to identify patterns and correlations. The scientific conclusions presented in this paper are derived from a rigorous synthesis of empirical data and existing theoretical frameworks, ensuring the validity and reliability of the results.

■ ANALYSIS AND RESULTS

At first glance, the process of pricing in the restaurant business might seem straightforward, but in reality, it relies on complex economic, operational, and managerial factors. What makes it particularly tricky is the multi-layered nature of costs, the high volume of daily transactions, the wide variety of menu items, and the direct and indirect expenses tied to food preparation—all of which make setting accurate and optimal prices a genuine challenge.

To begin with, the structure of restaurant costs is inherently complex. Typically, expenses include food raw materials (food cost), labor, rent and utilities, marketing, depreciation, and various other operational costs. While food cost often accounts for about 30–40% of total revenue and labor cost can reach 25–35%, these figures vary significantly from dish to dish. For example, meat-based dishes tend to have a higher ingredient cost, while labor-intensive desserts may carry more labor expense. This means each menu item requires its own individual costing, a task that becomes especially complicated in larger restaurants that offer hundreds of different products.



Another key factor is the sheer number of transactions. Restaurants in major cities can process thousands of transactions daily, each one featuring a unique combination of items. A customer might order a main course, a drink, and a dessert—and each of these comes with its own cost structure, potential discounts, promotions, or seasonal pricing. If prices shift throughout the day—such as during happy hour promotions—it adds another layer of complexity. With so many transactions happening, keeping a steady average profit margin is no small feat.

The third challenge lies in product variety and menu complexity. Modern restaurants often offer dozens, sometimes hundreds, of different dishes and drinks. Each item has its own recipe, portion size, preparation method, and standard cost. For instance, the same cut of meat might be used in multiple dishes, but in different amounts. What's more, ingredient prices are constantly in flux due to inflation, seasonal shifts, or changes in import costs. If the cost of ingredients rises but menu prices aren't updated promptly, profit margins take a hit. That's why pricing requires constant monitoring and quick recalculations.

Finally, there are both direct and indirect costs tied to food preparation. Direct costs include ingredients and the chef's labor, while indirect costs cover utilities like electricity, gas, water, equipment depreciation, and sanitation. A dish that requires prolonged cooking, for example, uses more energy—and that adds to its cost. Yet, many restaurants record utility expenses as a lump sum without allocating them to specific dishes. As a result, some items may end up being far less profitable than expected.

On top of all that, demand variability adds yet another layer of complexity to pricing. Weekends and holidays typically bring a surge in customers, while weekdays tend to be quieter. If prices stay the same across the board, restaurants miss out on potential extra profits during peak times—and when demand drops, lower sales volumes can cut into revenue. That's why having a flexible, demand-driven pricing strategy makes sense. But putting one into practice requires even more analysis and number-crunching.

All of this shows that pricing in the restaurant industry isn't a one-time decision—it's an ongoing process shaped by multiple factors in constant motion. Between the intricate cost structure, the high volume of transactions, the wide range of products, and the varying preparation expenses, finding that sweet spot for pricing is no simple task. That's why traditional manual calculations no longer cut it in modern restaurant management. What's really needed now are automated, data-driven approaches that can keep up with the pace.

To put things in perspective, there are roughly 25 to 30 million restaurants worldwide, employing around 400 million people. That scale alone makes the accounting and pricing side of things incredibly complex.

Breaking down a typical restaurant's expenses, you're usually looking at: food ingredients (30–40% of costs), labor (25–35%), rent and utilities (10–20%), plus marketing and other miscellaneous expenses.

This is where artificial intelligence comes in. Using AI for accounting and dynamic pricing is quickly <https://ojs.kstu.uz/index.php/ej>

becoming one of the most effective tools in modern restaurant management. Traditional bookkeeping and pricing models tend to rely heavily on historical data and often miss the mark when it comes to reflecting real-time changes. AI technologies, on the other hand, can sift through massive amounts of data in no time, uncover hidden patterns, and automatically suggest the best pricing decisions on the fly.

So, how does AI-powered accounting actually work in practice? It all starts with bringing every piece of financial and operational data together into one unified digital system. Point-of-sale (POS) terminals, inventory records, supplier transactions, payroll details, and utility bills—all of it gets integrated onto a single platform in real time. From there, machine learning algorithms go to work, analyzing the data to break down cost structures, flag unnecessary expenses, and calculate profitability on the fly. Imagine getting an alert the moment the ingredient cost for a particular dish creeps up or when food waste starts trending higher. That's the kind of insight AI can deliver straight to a manager's dashboard. The result? Fewer human errors and much tighter financial discipline.

But AI doesn't just track current expenses—it's also a powerful tool for analyzing them and planning future budgets. Take Atelier Crenn, for example. There, chefs can check real-time ingredient prices while they're experimenting with new dishes. Within seconds, they know exactly what any product costs and can calculate a dish's total expense before it even hits the menu.

Then there's Karl Strauss Brewing Company, where an AI system keeps a constant eye on how purchase prices shift over time. If coffee prices have been climbing over the past few months or meat costs are fluctuating, the executive chef sees it immediately. That kind of visibility makes all the difference when it's time to plan menus and set prices with confidence.

Research from Romania backs this up, showing that cloud-based financial analysis platforms can cut operational costs by 10–15%. That's the power of real-time financial monitoring combined with smarter strategic decisions.

Now, let's talk about dynamic pricing—one of the most exciting applications of AI in this space. Traditionally, restaurants set prices using a simple "cost-plus" formula: take the cost and add a desired profit margin. But that approach completely ignores fluctuations in demand, seasonal trends, or what competitors are doing. AI-driven dynamic pricing, on the other hand, juggles multiple factors at once: time of day, day of the week, weather, holidays, current demand levels, customer segments, and even historical sales data. When demand is high, the system might suggest a slight price bump. When things slow down, it can whip up discount offers or promotions automatically.

Pricing is one of the toughest and most high-stakes decisions in the restaurant business. Set prices too high, and you scare customers away. Too low, and profits evaporate. AI is helping restaurants walk that tightrope and find the sweet spot.

Take the Price Studio platform from Revenue Management Solutions (RMS), for instance. It uses AI to help restaurants figure out the best pricing strategy by



weighing competitor pricing, demand shifts, seasonality, customer purchasing power, and more. As Michelle Miller, RMS's director of AI and machine learning, puts it, AI isn't just about speed—it's about building smarter systems. She emphasizes that AI frees up people to focus on strategic decisions instead of getting bogged down in repetitive tasks.

Here's a concrete example: if a restaurant's weekend traffic jumps by 30%, the algorithm might nudge prices up by 5–10% on certain popular items to capture more revenue. At the same time, during slower periods, it can bundle items into combo deals or roll out temporary discounts to keep sales moving. It's all about squeezing the most out of every opportunity (as illustrated in Figure 1).



Figure 1. AI-based restaurant management model

Artificial intelligence makes accounting in restaurants transparent, fast, and accurate—while turning pricing into a flexible system that actually responds to market demand. The bottom line? Lower costs, healthier profit margins, and a serious boost in competitiveness.

When it comes to dynamic pricing, restaurants have traditionally relied on a pretty straightforward formula:

$$\text{Price} = \text{Cost} + \text{Profit Margin}$$

But an AI-powered model takes a whole bunch of factors into account:

1. Current demand levels
2. Time of day and day of the week
3. Seasonal trends
4. What competitors are charging
5. Customer segments

So the general model ends up looking something like this:

$$P = \sum (C, D, T, S, R)$$

Where:

- C = Cost
- D = Demand
- T = Time factor
- S = Season
- R = Competitor price

The logic is simple: when demand is high, prices go up—when demand drops, prices come down. In plain English, the system automatically adjusts based on real-time conditions.

To make dynamic pricing work effectively, you first need to know what demand is going to look like. That's where forecasting comes in. Using LSTM neural networks and regression models, restaurants can predict weekly sales volumes with impressive accuracy. These models crunch historical data, spot patterns, and give managers a reliable glimpse into future demand.

And the results speak for themselves. Studies show that restaurants using AI-powered systems have seen:

- Inventory waste slashed by 20–35%
- Labor productivity jump by 15–25%
- Profit margins climb by 10–20%

The math is pretty straightforward: when you cut costs on one side and boost revenue on the other,

profitability naturally takes off. AI helps restaurants do exactly that—squeeze more out of every ingredient, every labor hour, and every menu item.

CONCLUSION AND RECOMMENDATIONS

Let's be real—artificial intelligence in the restaurant business isn't just another passing trend. It's becoming a survival tool. By automating accounting to cut costs and using dynamic pricing to boost revenue, AI is laying the foundation for modern restaurant management. Looking ahead, the restaurants that will lead the market aren't necessarily the ones with the best chefs or the fanciest decor—they'll be the ones that truly know how to manage their data.

AI is taking restaurant management to a whole new level. Research and real-world experience both point to the same conclusion: using AI for accounting and dynamic pricing helps optimize expenses, forecast demand more accurately, and fatten up those profit margins. By crunching data in real time, managers can spot overspending, identify low-margin items, and root out operational inefficiencies before they become bigger problems. The result? Tighter financial discipline and smarter, more informed decisions at every turn.

From automatically processing invoices to tracking costs in real time, adjusting prices on the fly, and predicting what customers will want next week—AI is transforming the nuts and bolts of running a restaurant. And it's all translating into better financial performance.

Just look at the numbers. In Romania, restaurants that jumped on the AI bandwagon saw revenue jump by as much as 20%, food waste drop by 15–30%, and operational costs shrink by 10–15%. That's not just theory—that's real, measurable impact.

That said, AI isn't magic. It only works as well as the data it's fed and the systems supporting it. Garbage in, garbage out—if the data is incomplete or inaccurate, even the smartest algorithms will spit out useless recommendations. That's why a gradual, step-by-step approach to digital transformation makes the most sense for most restaurants.

So what should restaurants actually do? Here are a few practical recommendations:

First, get your systems talking to each other. Integrate your POS and inventory management into one



unified platform. No more siloed data or manual double-entry.

Second, dip your toes into dynamic pricing. Start small—run a pilot program on a few menu items, see how it performs, and scale up from there.

Third, don't forget about your people. All the fancy tech in the world won't matter if your staff doesn't know how to use it. Invest in training to build those digital skills.

Bottom line: AI is quickly becoming the difference between restaurants that just survive and those that thrive. In an industry known for thin margins and fierce competition, that edge matters more than ever.

Author details / Сведения об авторе / Muallif haqida

1. Ablakulova Shakhnoza Gayrat kizi – A student of SBTSUE / студентка Самаркандский филиал Ташкентского государственного экономического университета / Toshkent davlat iqtisodiyot universitetining Samarqand filiali talabasi

E-mail: shakhnozavlakulova@gmail.ru

ORCID: 0009-0002-7211-8385

2. Ibragim Mamadiyevich Ganiyev Scientific Supervisor: Associate Professor, PhD / Ibragim Mamadiyevich Ganiyev Ilmiy rahbar: dotsent, PhD / Ибрагим Мамадиевич Ганиев Научный руководитель: доцент, PhD

E-mail: ibragimganiyev@gmail.ru

ORCID: 0009-0004-4253-6231

REFERENCES

[1] Ablakulova Sh.G'. Sun'iy intellekt: eng ilg'or chatbotlarning qiyosiy tahlili// Iqtisodiyot, moliya va innovatsiyalar jurnali. ISSN:2181-3299. Volume-III Issue-1. –Samarqand, 2025. -93-102-b.

[2] Davenport, T. H., & Ronanki, R. (2018, January 9). Artificial Intelligence for the Real World. Harvard Business Review (HBR). <https://www.bizjournals.com/boston/news/2018/01/09/hbr-artificial-intelligence-for-the-real-world.html>

[3] Food Service Market: Global Industry Trends, Share, Size, Growth, Opportunity and Forecast 2024–2030.

[4] Hardoon, D. R., & Shmueli, G. (2013). Getting Started with Business Analytics: Insightful Decision-Making. CRC ess.

[5] IMARC Group (2024). Food Service Market: Global Industry Trends, Share, Size, Growth, Opportunity and Forecast 2024–2030. <https://www.imarcgroup.com/food-service-market>

[6] Ibragimov G.A., Toshqulova D.O', Ablakulova Sh.G'. Oziq-ovqat mahsulotlari etishtirishda suv resurslaridan foydalanishning o'rni// Servis. -№2. – Samarqand, 2025. -60-63 b.

[7] Ibragimov G.A., Yuldoshev G.T., Shukurova N.K., Ablakulova Sh.G. Historical -theoretical basis of water resources management//Mintaqaviy iqtisodiyotni

rivojlantirishda yashil texnologiyalarning o'rni va barqaror rivojlanish: Resp. ilm. amal. konf. –Samarqand, 2025. -54-62-b.

[8] Ibragimov G.A., Yuldoshev G.T., Shukurova N.K., Ablakulova Sh.G. Directions for managing innovative technologies in beekeeping//Mintaqaviy iqtisodiyotni rivojlantirishda yashil texnologiyalarning o'rni va barqaror rivojlanish: Resp. ilm. amal. konf. – Samarqand, 2025. -63-72-b.

[9] Ibragimov G.A., Yuldoshev G.T., Shukurova N.K., Ablakulova Sh.G. Opportunities for innovative ways to meet demand in beekeeping//Mintaqaviy iqtisodiyotni rivojlantirishda yashil texnologiyalarning o'rni va barqaror rivojlanish: Resp. ilm. amal. konf. – Samarqand, 2025. -54-62-b.

[10] Ibragimov G.A., Yuldoshev G.T., Ablakulova Sh.G. Asalarichilikda iqtisodiy samaradorlik va talabni qondirish imkoniyatlari// Iqtisodiyot, moliya va innovatsiyalar jurnali. ISSN:2181-3299. Volume-III Issue-1. –Samarqand, 2025. -65-76-b.

[11] Lourdes Bujalance-López, Lydia González-Serrano, María Paula Lechuga Sancho, Pilar Talon-Ballester, Volume 127, Issue 6, 2025, Pages 2169-2196, ISSN 0007-070X, <https://doi.org/10.1108/BFJ-08-2024-0816>.

<https://www.sciencedirect.com/science/article/pii/S0007070X25000291>

[12] Ng, A. (2018). The AI Transformation Playbook: How to lead your company into the AI era. Landing AI

[13] O'Neil, C. (2022). The Shame Machine: Who Profits in the New Age of Humiliation

[14] Research and Markets (2024). Online Food Delivery Market – Growth, Trends & Forecast. <https://www.researchandmarkets.com>

[15] Restaurant revenue management: a systematic literature review and future challenges//British Food Journal,

[16] Revenue Management Solutions. How RMS Uses AI to Revolutionize Restaurant Pricing and Profitability. September 2025. <https://www.revenuemanage.com/blog/how-rms-uses-ai-to-revolutionize-restaurant-pricing/>

[17] Schmidhuber, J. (2015). Deep learning in neural networks: An overview. Neural Networks, 61, 85–117

[18] The NPD Group (2024). Global Foodservice Industry Performance Report

[19] The Ottimate Editorial Team. From Prep to Profit: How AP Automation Lets Chefs and Managers Focus on the Food. September 17, 2025. <https://ottimate.com/blog/from-prep-to-profit-how-ap-automation-lets-chefs-and-managers-focus-on-the-food/>

[20] Trif, A.; Andor, P.; Mititean, T.I.; Socol, C.T.; Rusu, A.; Criste, F.L. Financial Innovations and AI-Driven Management in Romania's Tourism and Public Catering Sector, in Proceedings of the 1st International Online Conference on Risk and Financial Management, 17–18 June 2025, MDPI: Basel, Switzerland.



INNOVATION
IQTISODIYOT
ILMIY-AMALIY ELEKTRON
JURNAL

ISSN: 3030-315X



t.me/kstu_uz



Qarshi shahri,
Mustaqillik ko'chasi 225



www.kstu.uz
www.ojs.kstu.uz