



Automated Pricing and Islamic Commercial Justice: A Jurisprudential and Economic Study of Price Determination in the Digital Economy

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Abstract:

The digital transformation of commerce has fundamentally changed the traditional mechanisms through which prices are determined. Increasingly, firms employ automated software, algorithmic systems, machine learning, and large-scale consumer data to determine, recommend, or continuously modify the prices of goods and services. Such systems may respond to demand, supply, inventory, time, location, competitor prices, purchasing behaviour, and estimated willingness to pay. Although automated pricing can improve market efficiency, reduce transaction costs, and facilitate more responsive resource allocation, it can also generate concerns relating to information asymmetry, consumer vulnerability, discrimination, deception, exploitation, and market manipulation. These developments raise important questions for Islamic commercial jurisprudence because Islamic law does not evaluate commercial transactions solely according to their formal contractual structure but also considers justice, mutual consent, transparency, prevention of harm, and protection of wealth. This study examines automated pricing through an integrated jurisprudential and economic framework. It analyses the concepts of dynamic pricing, personalized pricing, algorithmic price discrimination, consumer welfare, and information asymmetry and relates them to classical Islamic principles including 'adl, tarādī, bayān, gharar, tādīs, ghabn, ihtikār, and maṣlaḥah. The study argues that automation itself is neither inherently permissible nor impermissible. Rather, the legal and ethical status of an automated pricing mechanism depends upon its objectives, data inputs, pricing methodology, degree of transparency, relationship to genuine market conditions, and consequences for contracting parties. The study proposes a Shariah-oriented framework based on transparency, genuine consent, proportionality, non-exploitation, market integrity, consumer protection, and accountability. It concludes that Islamic jurisprudence can accommodate technological innovation while requiring automated pricing to remain within the normative boundaries of commercial justice.

Keywords: Automated Pricing; Islamic Commercial Justice; Algorithmic Pricing; Islamic Jurisprudence; Digital Economy; Personalized Pricing

Introduction

The determination of price has always occupied a central position in economic exchange because price performs several functions simultaneously. It communicates scarcity, coordinates supply and demand, influences production decisions, allocates resources, and determines how economic value is distributed between sellers and buyers. In traditional commercial environments, price determination was generally visible and relatively comprehensible. Buyers and sellers interacted directly, observed prevailing market conditions, compared alternative offers, negotiated where appropriate, and reached agreements concerning the exchange of goods or services. Contemporary digital commerce has transformed this environment. Prices may now be generated, adjusted, tested, and personalized by software systems capable of processing enormous quantities of information within seconds. The emergence of algorithmic pricing therefore represents not merely a technological modification of an old commercial practice but a transformation in the informational structure of markets.¹

The contemporary digital economy permits firms to collect and analyse information about consumer behaviour, purchasing histories, browsing patterns, geographical location, timing, product preferences, and other behavioural indicators. Algorithmic systems can use these data to predict consumer responses and, in some circumstances, estimate an individual's willingness to pay. The recent *Cambridge Handbook of Algorithmic Price Personalization and the Law* identifies the growing availability of big data and sophisticated algorithmic tools as a major factor enabling firms to infer consumers' preferences, financial and personal circumstances, transaction patterns, and willingness to pay.² This development creates new opportunities for commercial efficiency, but it also raises questions about the distribution of informational power between firms and consumers.

From an economic perspective, automated pricing can perform legitimate and potentially beneficial functions. A retailer may adjust prices in response to inventory levels; a hotel may alter room rates according to seasonal demand; an airline may adjust fares according to remaining capacity; and a digital platform may modify prices according to fluctuations in supply and demand. Such forms of dynamic pricing do not necessarily involve discrimination or deception. Rather, they may represent sophisticated applications of ordinary economic principles.³ Nevertheless, algorithmic pricing can also move beyond general market conditions and establish different prices for different consumers according to individualized predictions of willingness to pay. This is generally described as personalized pricing. The economic consequences of such practices are complex. Dubé and Misra's field-based research found that machine-learning-based personalized pricing increased firms' expected profits while reducing

¹ . Fabrizio Esposito and Mateusz Grochowski, "Algorithmic Price Personalization: From *Laesio Enormis* to *Laesio Algorithmica*?" in *The Cambridge Handbook of Algorithmic Price Personalization and the Law*, ed. Fabrizio Esposito and Mateusz Grochowski (Cambridge: Cambridge University Press, 2025), 1–26.

² . Fabrizio Esposito and Mateusz Grochowski, eds., *The Cambridge Handbook of Algorithmic Price Personalization and the Law* (Cambridge: Cambridge University Press, 2025), 1–26.

³ . Hal R. Varian, *Intermediate Microeconomics: A Modern Approach*, 9th ed. (New York: W. W. Norton, 2014), 3–19, 421–448. The 2014 ninth edition is documented as a 758-page Norton edition.

total consumer surplus relative to uniform pricing, although more than 60 percent of consumers in their study benefited from personalization.⁴

These developments create a significant problem for Islamic commercial jurisprudence. Islamic law possesses a sophisticated body of principles concerning lawful exchange, mutual consent, market conduct, deception, uncertainty, exploitation, monopoly, price manipulation, and protection of wealth. Classical Muslim jurists did not encounter algorithmic pricing in its modern technological form, but they did analyse the underlying economic and ethical problems that may arise when one contracting party possesses superior information or market power. Abū Yūsuf's discussion of taxation and public economic administration, Abū 'Ubayd's treatment of wealth and public rights, al-Ghazālī's discussion of commercial ethics, and Ibn Taymiyyah's analysis of market regulation collectively demonstrate that Islamic economic thought cannot be reduced to the formal validity of a contract.⁵

The contemporary challenge is therefore not to determine whether software itself is permissible. Software is merely an instrument. The substantive question is whether the objectives, data, mechanisms, and outcomes of an automated pricing system conform to Islamic principles of commercial justice. A transparent algorithm that adjusts prices according to genuine supply and demand presents a substantially different jurisprudential problem from a hidden system that identifies a consumer's urgency and raises the price precisely because the consumer appears unable to refuse. The former may be an ordinary technological expression of market pricing; the latter may involve exploitation of informational asymmetry and vulnerability.

The present study consequently argues that Islamic jurisprudence should examine automated pricing through a process-oriented conception of commercial justice. The relevant inquiry should include not only the final price but also the manner in which the price was generated, the information employed, the relationship between the parties, the availability of alternatives, the existence of deception, and the economic consequences for consumers and markets. This approach permits Islamic jurisprudence to engage constructively with technological innovation without sacrificing the ethical objectives of commercial law.⁶

1. Literature Review and Research Gap

The literature concerning automated pricing can broadly be divided into three bodies: contemporary economic literature on dynamic and personalized pricing, legal literature on algorithmic price personalization, and Islamic literature concerning commercial justice and market regulation. Each body has developed considerably, but their intersection remains comparatively limited. Contemporary economic scholarship has examined price discrimination, dynamic pricing, consumer surplus, market power, demand estimation, and machine-learning-based personalization. The 2023 study by Dubé and Misra is particularly significant because it uses randomized field-experiment data to examine personalized pricing implemented through machine learning. Their findings demonstrate that personalized pricing can produce substantial increases in expected profits while simultaneously creating distributional effects among

⁴. Jean-Pierre Dubé and Sanjog Misra, "Personalized Pricing and Consumer Welfare," *Journal of Political Economy* 131, no. 1 (2023): 131–189

⁵. Abū Yūsuf, Ya'qūb ibn Ibrāhīm, *Kitāb al-Kharāj* (Beirut: Dār al-Ma'rifah, n.d.), 48–49; Abū 'Ubayd al-Qāsim ibn Sallām, *Kitāb al-Amwāl* (Beirut: Dār al-Fikr, n.d.), 273–276

⁶. Muḥammad 'Uthmān Shubayr, *al-Mu'āmalāt al-Māliyyah al-Mu'aṣirah fī al-Fiqh al-Islāmī*, 6th ed. (Amman: Dār al-Nafā'is, 2007), 5–16.

consumers.⁷ This literature establishes that automated pricing is not merely a theoretical possibility but a commercially significant phenomenon with measurable welfare implications.

A second body of literature concerns the legal implications of algorithmic price personalization. Esposito and Grochowski's 2025 *Cambridge Handbook of Algorithmic Price Personalization and the Law* represents an important recent development in this field. The handbook examines algorithmic price personalization from legal, economic, and consumer-protection perspectives and situates the phenomenon within broader questions concerning personal data, consumer welfare, and pricing power. Its publication demonstrates that algorithmic personalization has become sufficiently important to warrant systematic interdisciplinary legal analysis.⁸ The literature also considers pre-contractual information rights, transparency, data protection, discrimination, and the relationship between algorithmic decision-making and consumer autonomy.

The third body of literature consists of Islamic jurisprudential and economic scholarship. Classical works such as *Kitāb al-Kharāj*, *Kitāb al-Amwāl*, *al-Mabsūṭ*, *Badā'i' al-Ṣanā'i'*, *al-Mughnī*, and *al-Hisbah fī al-Islām* provide principles concerning market conduct, commercial exchange, pricing, public interest, harm, monopoly, and justice.⁹ Contemporary scholars such as Muṣṭafā Aḥmad al-Zarqā, Wahbah al-Zuhaylī, Muḥammad 'Uthmān Shubayr, Muḥammad Nejatullah Siddiqi, M. Umer Chapra, and Syed Nawab Haider Naqvi have extended Islamic commercial and economic analysis to modern economic circumstances.¹⁰ Their writings establish that Islamic economics recognizes both market mechanisms and moral constraints.

More recently, a 2026 article entitled "The Fiqh of Algorithms: AI-Driven Dynamic Pricing in Shariah Business Perspectives" has directly examined the intersection of algorithmic dynamic pricing and Islamic commercial jurisprudence. The study employs classical principles such as justice, clarity, and public interest to develop a normative governance framework.¹¹ Its emergence is particularly important for the present research because it means that the field can no longer accurately be described as completely unexplored. Instead, the research gap lies in the need for a more extensive synthesis of classical commercial jurisprudence, contemporary Islamic economic thought, and the economic literature on personalized pricing and consumer welfare.

The specific contribution of this study therefore lies in developing a jurisprudential-economic classification of automated pricing practices rather than merely discussing artificial intelligence in commercial transactions. The study distinguishes dynamic pricing from personalized pricing, legitimate price differentiation from exploitative discrimination, and market-responsive pricing from algorithmic manipulation. It further seeks to connect classical concepts such as *ghabn*, *tadlīs*, *gharar*, *tarāḍī*, *iḥtikār*, and *thaman al-mithl* with contemporary concepts such as information asymmetry, consumer surplus, market power, and algorithmic price discrimination.

⁷.Jean-Pierre Dubé and Sanjog Misra, "Personalized Pricing and Consumer Welfare," *Journal of Political Economy* 131, no. 1 (2023): 131–189.

⁸.Fabrizio Esposito and Mateusz Grochowski, eds., *The Cambridge Handbook of Algorithmic Price Personalization and the Law* (Cambridge: Cambridge University Press, 2025), 1–26.

⁹. 'Alā' al-Dīn al-Kāsānī, *Badā'i' al-Ṣanā'i' fī Tartīb al-Sharā'i'* (Beirut: Dār al-Kutub al-'Ilmiyyah, 1986), 7:194–196.

¹⁰.Muṣṭafā Aḥmad al-Zarqā, *al-Madkhal al-Fiqhī al-Āmm* (Damascus: Dār al-Qalam, 1998), 1:466–470.

¹¹.Asep Koswara, Amin, and Wahyudi, "The Fiqh of Algorithms: AI-Driven Dynamic Pricing in Shariah Business Perspectives," *Josh-E: Journal of Sharia Economics* 2, no. 1 (2026): 38–55.

The objective is not to impose a fixed historical model upon digital markets but to derive principles capable of addressing new technological circumstances through disciplined jurisprudential reasoning.¹²

2. Conceptual and Economic Foundations of Automated Pricing

Automated pricing refers broadly to the use of software or algorithmic systems to determine, recommend, or modify the price of a product or service with limited direct human intervention. The term encompasses several distinct practices and should therefore not be treated as synonymous with personalized pricing. A firm may use an algorithm simply to monitor competitors and adjust its own price, to reduce the price of excess inventory, or to increase the price of scarce products. In each case, the algorithm performs a pricing function, but the underlying economic logic differs. Understanding these distinctions is essential for a precise Islamic jurisprudential assessment.¹³

One important category is dynamic pricing, in which prices vary according to changing market conditions. Demand, supply, capacity, inventory, time, season, and competitor behaviour may all influence the price. Dynamic pricing is widely associated with industries characterized by variable capacity or rapidly changing demand. Airlines, hotels, transportation services, event organizers, and online retailers can use such mechanisms to adjust prices continuously. From a conventional economic perspective, dynamic pricing can improve resource allocation by allowing prices to reflect scarcity. A higher price during peak demand can reduce excess demand and encourage additional supply where possible. A lower price during weak demand can stimulate consumption and prevent waste.

A second category is personalized pricing. Here the system attempts to estimate the maximum or preferred price for a particular consumer using individual data. The relevant data may include purchasing history, browsing activity, location, device information, loyalty status, or other indicators. The Cambridge Handbook describes the capacity of big-data systems to infer consumer preferences and willingness to pay as a central feature of contemporary price personalization.¹⁴ This form of pricing raises more complicated ethical questions because the price may no longer be determined primarily by market conditions but by the characteristics of the individual consumer.

A third category is algorithmic price optimization, where software calculates an economically optimal price for a particular product based on a combination of costs, expected demand, inventory, competition, and other variables. This category can overlap with both dynamic and personalized pricing. The distinction is therefore not technological but functional: what information does the system use and what objective does it pursue?

These distinctions have direct implications for Islamic commercial jurisprudence. If an algorithm adjusts prices because supply has decreased, the practice may be evaluated primarily through the principles governing market pricing and prevention of artificial scarcity. If it differentiates prices according to a consumer's loyalty status, the question may concern transparency and legitimate

¹². Muḥammad Nejatullah Siddiqi, *Economics: An Islamic Approach* (Leicester: The Islamic Foundation, 1979), 17–29.

¹³. Thomas T. Nagle, John E. Hogan, and Joseph Zale, *The Strategy and Tactics of Pricing*, 5th ed. (New York: Routledge, 2016), 1–29.

¹⁴ . Esposito and Grochowski, “Algorithmic Price Personalization,” 1–26, esp. 1–6.

commercial differentiation. If it identifies an individual's urgent need and deliberately charges that person substantially more, the principles of exploitation, harm, and *ghabn* become much more important.

Economic theory also distinguishes between price discrimination and ordinary price variation. Price discrimination occurs when sellers charge different prices for essentially the same product or service based upon characteristics associated with consumers or market segments. It is not automatically harmful. Some forms can expand access by allowing lower prices to consumers with lower willingness or ability to pay. Other forms may transfer substantial consumer surplus to firms. Dubé and Misra's findings illustrate precisely this complexity: personalized pricing generated higher expected profits while producing heterogeneous effects among consumers.¹⁵

Consequently, an Islamic framework should avoid equating price difference with injustice. A difference in price is not itself sufficient evidence of *zulm*. Justice requires examination of the reason for the difference, the information available to the parties, the proportionality of the price, the possibility of alternatives, and the presence or absence of deception. Such an approach permits Islamic jurisprudence to distinguish legitimate commercial flexibility from exploitative technological pricing.¹⁶

3. Islamic Concept of Commercial Justice and the Market

Islamic commercial law is founded upon a normative conception of exchange in which economic activity is connected to justice, moral responsibility, and protection of wealth. The Qur'anic prohibition against consuming wealth unjustly and its requirement that trade occur through mutual consent establishes a foundational framework for commercial relations.¹⁷ The principle is significant because it prevents the market from being understood solely as a mechanism in which any mutually accepted price is automatically legitimate. Consent is necessary, but it exists within a wider ethical structure.

The Qur'an repeatedly commands justice and prohibits oppression, aggression, and unlawful appropriation of wealth.¹⁸ These principles form the moral foundation for Islamic economic conduct. Al-Ghazālī's treatment of commerce emphasizes honesty, avoidance of deception, fair dealing, and moral accountability.¹⁹ Abū 'Ubayd's *Kitāb al-Amwāl* likewise demonstrates that economic resources and property rights are embedded within broader considerations of public responsibility and legitimate entitlement.²⁰ These classical sources indicate that the Islamic market is neither purely state-controlled nor morally neutral. It is a market governed by ethical and legal norms.

The classical concept of *tarāḍī*—mutual consent—is particularly important. A lawful commercial exchange requires voluntary agreement between the contracting parties. Yet genuine consent presupposes that the transaction is not fundamentally structured through deception or

¹⁵ . Dubé and Misra, "Personalized Pricing and Consumer Welfare," 131–189.

¹⁶ . Muḥammad Nejatullah Siddiqi, *Islamic Economic Thought: A Survey of Contemporary Literature* (Leicester: The Islamic Foundation, 1981), 1–18.

¹⁷ . Qur'ān 4:29.

¹⁸ . Qur'ān 16:90.

¹⁹ . Abū Ḥāmid al-Ghazālī, *Iḥyā' 'Ulūm al-Dīn*, 2:81–82.

²⁰ . Abū 'Ubayd al-Qāsim ibn Sallām, *Kitāb al-Amwāl* (Beirut: Dār al-Fikr, n.d.), 273–276.

coercion. If a seller deliberately conceals material information or manipulates the circumstances under which the buyer makes a decision, the mere act of acceptance does not necessarily settle the ethical question. Islamic jurisprudence therefore pays attention to the conditions under which consent is obtained.

This principle becomes highly relevant in digital commerce. Consumers often see only the final price displayed on a screen. They may not know whether the price has been calculated according to ordinary market factors, their previous purchasing behaviour, their geographical location, their browsing history, or an estimate of their maximum willingness to pay. The seller may possess a detailed informational profile while the consumer remains unaware of the factors influencing the transaction. Such informational asymmetry can affect the quality of consent.

Ibn Taymiyyah's analysis of market justice provides an especially important bridge between classical jurisprudence and modern digital markets. His discussions of *ḥisbah* address circumstances in which traders may exploit market participants who lack knowledge of prevailing prices or may manipulate prices through collective behaviour.²¹ His conception of the fair equivalent price does not require every commodity to have a permanently fixed price. Instead, it recognizes that market exchange can become unjust when bargaining power, information, or collective conduct is manipulated.

The Islamic concept of justice therefore operates at several levels. At the individual level, it requires honesty and fairness between contracting parties. At the market level, it requires protection against manipulation, monopoly, artificial scarcity, and coordinated exploitation. At the social level, it considers the effects of economic conduct upon vulnerable members of society. Contemporary Islamic economists have similarly argued that efficiency must be integrated with ethical and distributive considerations. Chapra's analysis of Islamic economic development, Naqvi's treatment of ethics and economics, and Siddiqi's writings on Islamic economic methodology all emphasize that economic behaviour in Islam is embedded within a moral order.²²

For automated pricing, this means that the central question is not whether algorithms are technologically sophisticated but whether their use preserves the substantive objectives of Islamic commercial justice. A system that increases efficiency without deception may support legitimate commerce. A system that converts informational superiority into exploitation requires legal and ethical scrutiny.²³

4. Mutual Consent, Information Asymmetry and Transparency

The principle of mutual consent provides one of the most important starting points for evaluating automated pricing. The Qur'an explicitly connects lawful commercial exchange with mutual agreement, thereby establishing consent as a fundamental condition of legitimate economic interaction.²⁴ Classical Islamic jurisprudence subsequently developed extensive rules concerning offer and acceptance, contractual knowledge, disclosure, defects, uncertainty, and deceptive

²¹ . Ibn Taymiyyah, *al-Ḥisbah fī al-Islām*, 17–23.

²² . M. Umer Chapra, *Islam and the Economic Challenge* (Leicester: The Islamic Foundation, 1992), 1–15.

²³ . Muḥammad 'Uthmān Shubayr, *al-Mu'āmalāt al-Māliyyah al-Mu'āṣirah*, 105–119; Wahbah al-Zuhaylī, *al-Mu'āmalāt al-Māliyyah al-Mu'āṣirah*, 21–34.

²⁴ . Qur'ān 4:29.

practices. These rules demonstrate that consent is not merely a formal verbal or electronic act; it must be considered in relation to the informational conditions surrounding the transaction.

Digital commerce creates a new form of information asymmetry. A contemporary firm may possess data concerning a consumer's past purchases, search patterns, location, frequency of visits, price sensitivity, and previous responses to promotions. The consumer, by contrast, may see only the final price. The algorithm may therefore possess a much more detailed understanding of the consumer's economic behaviour than the consumer possesses about the seller's pricing system. Esposito and Grochowski emphasize precisely this growing capacity of firms to use big data and algorithmic tools to infer preferences and willingness to pay.²⁵

Information asymmetry is not automatically unlawful in Islamic commerce. Sellers naturally possess information about their products, costs, inventory, and business strategies. Buyers likewise possess information about their preferences and reservation prices. The problem arises when informational superiority is deliberately used to deceive or unjustly exploit another party.

The classical prohibition of *tadlīs* provides a useful analogy. Deception may involve concealing a material characteristic of a commodity, misrepresenting its condition, or creating a false impression. In digital commerce, deception may take a less visible form. A firm may present a price as though it were an ordinary market price while secretly calculating it according to an individualized estimate of the consumer's maximum willingness to pay. Alternatively, a platform may conceal that the price displayed to one consumer differs substantially from that displayed to another consumer under comparable conditions.

This does not necessarily mean that every algorithm must disclose its source code. Commercial enterprises have legitimate interests in protecting proprietary technology. Islamic transparency should instead be understood functionally: consumers should receive sufficient information to make a meaningful commercial decision. The precise mathematical formula may remain confidential, but material aspects of the pricing practice should not be intentionally concealed when they would reasonably affect the consumer's decision.

The principle of *bayān*—clarity or disclosure—therefore becomes highly relevant. Islamic commercial law repeatedly requires the contracting parties to know the essential characteristics of the exchange. Excessive uncertainty is restricted through the prohibition of *gharar*, while deception is restricted through rules concerning *tadlīs*.²⁶ If an algorithm makes the price itself uncertain or changes it according to undisclosed conditions after the consumer has committed to the purchase process, the concern becomes stronger.

A useful distinction can consequently be made between algorithmic opacity and algorithmic deception. Opacity means that consumers do not understand the technical functioning of the system. Deception means that the seller deliberately withholds or misrepresents material information in order to obtain an advantage. Not every opaque algorithm is deceptive. However, an algorithmically opaque system may become ethically problematic if opacity is intentionally used to conceal exploitation.

²⁵. Esposito and Grochowski, "Algorithmic Price Personalization," 1–26.

²⁶. Muslim ibn al-Ḥajjāj, *Ṣaḥīḥ Muslim*, Kitāb al-Buyūʿ, ḥadīth nos. 1513–1515.

The Islamic approach should therefore support a reasonable level of transparency without demanding that firms disclose every technical detail. The objective is to protect meaningful consent, not to eliminate legitimate commercial confidentiality.²⁷

5. Gharar, Tadbis, Ghabn and Exploitation in Algorithmic Pricing

The classical concepts of *gharar*, *tadbis*, and *ghabn* provide a particularly useful jurisprudential vocabulary for analysing automated pricing. These concepts should not be mechanically equated with modern economic categories, but their underlying rationales can illuminate contemporary problems. *Gharar* concerns excessive uncertainty or ambiguity in transactions; *tadbis* concerns deception or concealment; and *ghabn* concerns substantial disadvantage or inequitable exchange under circumstances recognized by Islamic jurisprudence. Their relevance becomes apparent when algorithmic systems determine prices through processes that consumers cannot reasonably understand or anticipate.

Gharar is particularly relevant where an automated pricing system introduces material uncertainty concerning the price or contractual conditions. If a consumer is shown a price that changes unpredictably during the transaction without adequate notice, the issue is not simply technological convenience. The buyer may be entering an agreement without sufficient knowledge of a fundamental contractual term. Classical jurists restricted forms of uncertainty because excessive ambiguity could lead to dispute and unjust enrichment.²⁸ Therefore, an automated system that continuously modifies the price should provide reasonable clarity concerning when and why such modifications occur.

Tadbis concerns deception. The Prophet's condemnation of deceptive commercial practices establishes a broad ethical principle that remains relevant to digital commerce.²⁹ An algorithm could facilitate deception if it deliberately presents materially different prices to comparable consumers while creating the false impression that the displayed price is a neutral market price. Again, price differentiation itself is not necessarily *tadbis*. The critical issue is whether material information is intentionally concealed in a manner that affects the other party's decision.

The concept of *ghabn* may be even more directly relevant to personalized pricing. Ibn Taymiyyah discusses circumstances in which a person who is unfamiliar with market prices can be exploited by a seller who charges substantially more than the prevailing equivalent price.³⁰ In the digital economy, algorithms can identify consumers who appear less sensitive to price or more likely to accept an inflated price. The technology therefore has the potential to scale a problem that classical jurists encountered at an individual level.

Nevertheless, caution is required. Islamic law does not establish that every difference between a market average and an individual transaction price is prohibited. Bargaining, negotiation, quality differences, convenience, location, timing, and consumer preference can legitimately produce different prices. A luxury hotel may charge more than a budget hotel; a consumer may voluntarily purchase a product at a premium because of convenience; and a loyal customer may receive a discount. These differences do not necessarily constitute *ghabn*.

²⁷ . Muṣṭafā Aḥmad al-Zarqā, *al-Madkhal al-Fiqhī al-ʿĀmm*, 1:466–470.

²⁸ . Wahbah al-Zuhaylī, *al-Fiqh al-Islāmī wa Adillatuh*, 4:340–352.

²⁹ . Muslim ibn al-Ḥajjāj, *Ṣaḥīḥ Muslim*, Kitāb al-ʾImān, Bāb qawl al-Nabī ﷺ “man ghashshanā fa-laysa minnā,” ḥadīth no. 101.

³⁰ . Ibn Taymiyyah, *al-Ḥisbah fī al-Islām*, 44–45

The jurisprudential concern becomes stronger when the seller deliberately uses hidden information about the buyer's vulnerability to impose an excessive price. Consider a consumer who repeatedly searches for a necessary service because alternatives are unavailable. An algorithm may infer urgency and raise the price. The consumer technically accepts the price, but the economic context may involve a significant asymmetry of power and information. The Islamic principle of preventing harm (*darar*) becomes relevant because the seller's profit is generated not merely from supplying the service but from exploiting the buyer's constrained alternatives.

The same reasoning applies to algorithmic exploitation of emergency conditions. Dynamic pricing during extraordinary demand is not automatically unlawful. Yet deliberately identifying emergency conditions and maximizing prices precisely because consumers cannot reasonably withdraw from the transaction raises stronger concerns. The Islamic jurisprudential analysis should therefore distinguish between ordinary market scarcity and commercial exploitation of necessity.

This distinction is essential for a balanced framework. A prohibition based solely on the existence of automated price differentiation would be excessively broad. A rule allowing every price on the ground that the buyer clicked "accept" would be excessively narrow. Islamic jurisprudence provides a middle approach: examine consent, information, harm, deception, proportionality, and market conditions together.³¹

6. Dynamic Pricing, Price Discrimination and Market Justice

Dynamic pricing is one of the most common applications of automated pricing technology. Its basic logic is straightforward: prices change as market conditions change. Demand may rise during hours, seasons, or events; supply may become temporarily constrained; inventory may decline; or competitor prices may change. Algorithms enable firms to respond to these developments rapidly and continuously. The economic rationale is that variable prices can help allocate scarce resources and coordinate demand with supply.³²

From an Islamic perspective, the existence of changing prices is not itself problematic. The Prophet Muhammad ﷺ was asked to impose price controls when market prices increased, and the relevant hadith literature records his refusal to impose a fixed price under the circumstances presented.³³ Classical jurists subsequently developed detailed discussions concerning when market intervention may or may not be justified. Ibn Taymiyyah's analysis is particularly important because he did not treat every price increase as injustice. Instead, he distinguished between natural market changes and prices distorted by harmful conduct such as collusion or exploitation.³⁴

This distinction can be translated into the digital economy. If an algorithm raises prices because demand has genuinely increased while supply is constrained, the practice may represent a

³¹. Ibn Qayyim al-Jawziyyah, *al-Ṭuruq al-Ḥukmiyyah fī al-Siyāsah al-Sharʿiyyah* (Cairo: Maṭbaʿat al-Sunnah al-Muḥammadiyyah, n.d.), 245–264.

³². Thomas T. Nagle, John E. Hogan, and Joseph Zale, *The Strategy and Tactics of Pricing*, 5th ed. (New York: Routledge, 2016), 1–29

³³. Al-Bukhārī, *Ṣaḥīḥ al-Bukhārī*, Kitāb al-Buyūʿ, ḥadīth nos. 2079–2081; Muslim, *Ṣaḥīḥ Muslim*, Kitāb al-Buyūʿ, ḥadīth nos. 1515.

³⁴. Ibn Taymiyyah, *al-Ḥisbah fī al-Islām*, 17–23.

technologically sophisticated form of ordinary market pricing. If the algorithm is used to create artificial scarcity, coordinate prices with competitors, or exploit consumers who have no realistic alternative, the jurisprudential assessment becomes different.

Price discrimination presents another layer of complexity. Different consumers may receive different prices for the same product. Such differentiation can occur for legitimate reasons. Student discounts, loyalty discounts, bulk discounts, promotional offers, and geographic pricing may all involve different prices. In some cases, differentiated prices can expand access to goods by allowing firms to serve consumers with different purchasing capacities.

Personalized pricing based on estimated willingness to pay is more controversial. The seller may use consumer data to identify the highest price each individual is likely to accept. Economically, this can transfer consumer surplus to the firm. Dubé and Misra found that personalized pricing increased expected profits and reduced aggregate consumer surplus relative to uniform pricing, although individual outcomes varied considerably.³⁵ This demonstrates that the welfare consequences of personalization cannot be reduced to a simple binary judgment.

An Islamic evaluation should therefore examine the basis and consequences of differentiation. If the price difference reflects legitimate commercial considerations that are known or reasonably understandable, it may be permissible. If the difference is based upon hidden exploitation of vulnerability, the ethical concern increases.

The concept of justice does not require identical treatment in every circumstance. Justice may require proportionate treatment according to relevant differences. Islamic jurisprudence itself recognizes different commercial rules according to the circumstances of goods, parties, contracts, and markets. Thus, the mere fact that two consumers pay different prices does not establish injustice.

However, unjust discrimination may arise when the differentiation is based upon irrelevant characteristics or hidden vulnerabilities. If a firm deliberately charges a consumer more because its data indicate that the consumer is desperate, isolated, elderly, inexperienced, or otherwise unable to resist the price, the commercial practice warrants stronger scrutiny.

This leads to an important methodological principle: Islamic commercial justice is not equivalent to uniform pricing. The objective is not to make every consumer pay the same amount. The objective is to ensure that price differentiation remains connected to legitimate commercial reasons and does not become a mechanism for deception, coercion, or exploitation.³⁶

7. Algorithmic Collusion, Monopoly, and Market Manipulation

Automated pricing creates another important issue: the possibility of algorithmic coordination among competing firms. Traditional market manipulation may involve explicit agreements among traders to raise prices, restrict supply, or divide markets. Algorithmic systems can potentially produce similar outcomes through automated responses to competitors' prices. A firm's algorithm may continuously monitor competitors and modify its own price. If multiple firms employ similar systems, their algorithms may repeatedly respond to one another and converge on higher prices.

³⁵. Dubé and Misra, "Personalized Pricing and Consumer Welfare," 131–189.

³⁶. Toseef Azid and Lutfi Sunar, eds., *Social Justice and Islamic Economics: Theory, Issues and Practice* (London: Routledge, 2019), 203–218.

The Islamic prohibition of market manipulation is rooted in the broader principle of preventing harm and preserving fair exchange. Classical Muslim jurists discussed monopoly, hoarding, collusion, and other practices that could injure consumers or distort market conditions. Abū Yūsuf's economic thought is particularly relevant because his treatment of public finance and market conditions recognizes the importance of economic administration and the prevention of unjust burdens.³⁷ Ibn Taymiyyah's *al-Hisbah* provides an even more direct framework. He discusses situations in which traders collectively manipulate prices and argues that market regulation may be justified where such conduct produces injustice.³⁸

The technological form of coordination does not necessarily change the substantive economic effect. If several firms deliberately design algorithms to coordinate prices, the fact that the final coordination is executed automatically rather than verbally does not make the resulting market manipulation ethically neutral. Islamic jurisprudence generally evaluates conduct according to its substance and consequences rather than merely its external form.

A more difficult case arises when algorithms independently converge on similar prices without an explicit agreement among firms. Here the jurisprudential analysis is more complex. If there is no intention to collude and each firm independently responds to market conditions, similar prices may simply reflect competitive equilibrium. However, if firms knowingly design systems to facilitate coordination or deliberately exploit algorithmic interaction to maintain inflated prices, the ethical concern becomes stronger.

The principle of *maṣlaḥah* may also become relevant. Market competition serves social interests by encouraging efficiency, innovation, and reasonable prices. Practices that systematically weaken genuine competition can harm consumers even if individual transactions remain formally valid. Islamic economic thought therefore recognizes the role of market institutions in protecting public welfare.

Algorithmic monopoly raises similar questions. A dominant digital platform may possess extensive data and technological capabilities unavailable to smaller competitors. Its algorithm may optimize prices using information accumulated across millions of transactions. Such informational advantages can reinforce market power. Market dominance is not necessarily prohibited merely because a firm is successful, but abuse of dominance that harms consumers or prevents fair competition requires scrutiny.

The principle of *iḥtikār* should therefore not be applied mechanically to every large digital company. Hoarding in the classical sense and algorithmic market dominance are economically different phenomena. Nevertheless, the underlying concern—preventing the artificial restriction of access to essential goods and the exploitation of market power—can be relevant.

A Shariah-oriented digital market framework should consequently require monitoring of algorithmic pricing systems for coordinated conduct, artificial scarcity, exclusionary pricing, and systematic exploitation of market power. Such oversight would not represent hostility toward technology. Rather, it would preserve the basic market conditions under which voluntary exchange can function fairly.

³⁷. Abū Yūsuf, *Kitāb al-Kharāj*, 48–49, 79–81.

³⁸. Ibn Taymiyyah, *al-Hisbah fī al-Islām*, 17–23, 40–41.

The Islamic economic tradition provides a conceptual foundation for such oversight because the market is recognized as an important institution but not as an ethically self-sufficient mechanism. Market freedom operates within the boundaries of justice and prevention of harm.³⁹

8. Consumer Welfare, Maṣlaḥah and the Ethics of Data-Driven Pricing

Consumer welfare represents an essential dimension of the economic analysis of automated pricing. Traditional price theory often emphasizes efficiency, profit maximization, and resource allocation. Islamic economics incorporates these considerations but places them within a broader framework of human welfare and moral responsibility. The concept of *maṣlaḥah* is therefore particularly relevant because it directs attention toward legitimate benefits and the prevention of harm.

Automated pricing can generate consumer benefits. Dynamic discounts can make products cheaper during periods of low demand. Inventory-based price reductions can prevent waste. Personalized promotions can allow consumers to receive offers relevant to their preferences. Algorithmic systems can also reduce transaction costs and make markets more responsive. Therefore, an Islamic framework should not begin from the assumption that technological pricing is inherently harmful.

At the same time, data-driven personalization creates the possibility of transferring substantial informational power from consumers to firms. The more data a firm possesses, the more accurately it may estimate consumer preferences and willingness to pay. The Cambridge Handbook emphasizes precisely this connection between big data, algorithmic tools, and the capacity to predict consumer behaviour.⁴⁰ The economic literature demonstrates that the welfare consequences are heterogeneous. Dubé and Misra found that while personalized pricing reduced aggregate consumer surplus relative to uniform pricing, more than 60 percent of consumers benefited from personalization in their experimental setting.⁴¹

This evidence is significant for Islamic jurisprudence because it demonstrates that the principle of public welfare cannot be applied through a simplistic assumption that all personalization is harmful. Some consumers may benefit, while others may bear higher costs. The Islamic analysis therefore requires attention to distributional effects as well as aggregate efficiency.

Naqvi's ethical approach to economics emphasizes that economic behaviour should be evaluated within a moral framework rather than through efficiency alone.⁴² Chapra similarly integrates economic development with social justice and moral objectives.⁴³ Siddiqi's writings on Islamic economics likewise emphasize that economic activity must operate within the ethical framework of Islam.⁴⁴ These approaches support an analysis in which consumer welfare is not merely

³⁹. Abū al-Ḥasan al-Māwardī, *al-Aḥkām al-Sultāniyyah* (Cairo: Muṣṭafā al-Bābī al-Ḥalabī, 1966), 256.

⁴⁰. Esposito and Grochowski, *The Cambridge Handbook of Algorithmic Price Personalization and the Law*, 1–26.

⁴¹. Dubé and Misra, "Personalized Pricing and Consumer Welfare," 131–189 and 151–158.

⁴². Syed Nawab Haider Naqvi, *Ethics and Economics: An Islamic Synthesis* (Leicester: The Islamic Foundation, 1981), 27–42.

⁴³. M. Umer Chapra, *Islam and the Economic Challenge* (Leicester: The Islamic Foundation, 1992), 213–235.

⁴⁴. Muḥammad Nejatullah Siddiqi, *Economics: An Islamic Approach* (Leicester: The Islamic Foundation, 1979), 17–29.

measured through aggregate monetary surplus but also through fairness, dignity, transparency, and protection against exploitation.

Data itself therefore becomes a relevant ethical consideration. A consumer may voluntarily provide information to a platform, but the subsequent use of that information for price discrimination raises a separate question. The consumer may consent to data collection for service personalization without understanding that the same information will be used to determine the maximum price that can be extracted from them.

This distinction suggests the importance of purpose limitation in Islamic commercial ethics. Data collected for one legitimate commercial purpose should not automatically be assumed to authorize every subsequent use. If data are employed in ways that materially alter the economic position of consumers, meaningful disclosure becomes increasingly important.

The concept of *maṣlahah* also requires attention to vulnerable groups. A pricing system may be efficient for the majority but disproportionately harmful to consumers with limited alternatives. Islamic justice does not require identical outcomes, but it does require attention to serious and avoidable harm.

Accordingly, a Shariah-oriented evaluation of automated pricing should consider at least four dimensions of consumer welfare: economic benefit, informational autonomy, vulnerability, and distributive impact. This broader conception of welfare is more consistent with Islamic economic ethics than a narrow focus on price alone.⁴⁵

9. A Proposed Shariah Framework for Automated Pricing

The preceding analysis permits the development of a structured framework for evaluating automated pricing. The first principle should be lawfulness of the underlying transaction. Automation cannot make an otherwise prohibited transaction permissible. If the product or service itself is unlawful, the algorithmic method of pricing does not alter that status. The second principle is clarity of price. The consumer should know the actual price before completing the transaction, except where a legitimate contractual mechanism clearly permits subsequent adjustment. Excessive uncertainty concerning the price may raise concerns under the prohibition of *gharar*.⁴⁶

The third principle is genuine consent. Consumers should not be deceived into accepting a price. Consent should be meaningful rather than merely formal. A digital interface should not deliberately conceal material pricing information or exploit cognitive limitations in ways that undermine autonomous decision-making. The fourth principle is transparency proportionate to materiality. Firms need not disclose proprietary source code, but consumers should receive sufficient information about significant pricing practices to understand the conditions affecting their transaction.

The fifth principle is non-exploitation. Automated systems should not intentionally identify and exploit severe vulnerability, emergency, or lack of alternatives. This principle is closely connected with the classical concepts of *ghabn* and *ḍarar*. The sixth principle is proportionality of price differentiation. Price differences should have a reasonable relationship to legitimate

⁴⁵. Munawar Iqbal, ed., *Distributive Justice and Need Fulfillment in an Islamic Economy* (Leicester: The Islamic Foundation, 1986), 185–201

⁴⁶. Wahbah al-Zuhaylī, *al-Fiqh al-Islāmī wa Adillatuh*, 4:340–352.

commercial factors. The greater the difference between prices for comparable consumers, the stronger the justification and transparency requirements should become.

The seventh principle is market integrity. Algorithms should not be deliberately designed to facilitate collusion, artificial scarcity, monopoly abuse, or manipulation. The eighth principle is data responsibility. Consumer data should not be transformed into a mechanism for hidden exploitation. Firms should establish appropriate limits concerning which categories of personal information may legitimately influence pricing.

The ninth principle is accountability. Responsibility for an algorithmically generated price ultimately remains with the commercial entity deploying the system. An organization should not be able to avoid responsibility by arguing that “the algorithm made the decision.” The algorithm is a tool developed, selected, trained, deployed, and monitored by human institutions.

The tenth principle is review and correction. Because algorithms may produce errors, unintended discrimination, or harmful outcomes, firms should establish mechanisms for consumers to challenge unusual prices or seek review. This principle is particularly relevant where the algorithm operates on probabilistic predictions rather than objective market variables.

On this basis, automated pricing can be classified into three broad categories. Permissible automated pricing includes transparent dynamic pricing based on legitimate supply, demand, inventory, cost, and capacity considerations. Conditionally permissible pricing includes personalized discounts, loyalty pricing, and other differentiated arrangements where the basis is legitimate, the consumer is not deceived, and exploitation is absent. Unjust or potentially prohibited pricing includes hidden exploitation of vulnerability, deliberate deception, artificial scarcity, collusive algorithmic conduct, and discriminatory pricing based on ethically unacceptable characteristics.

This classification is preferable to a blanket prohibition because it recognizes the diversity of automated pricing mechanisms. It also reflects the methodology of Islamic jurisprudence, in which legal rulings can vary according to circumstances, objectives, causes, and consequences.

The proposed framework therefore places justice rather than uniformity at the centre of Islamic digital pricing. A fair price need not be mathematically identical for every consumer. What matters is whether differences are connected to legitimate reasons and whether the process preserves the rights and interests of contracting parties.⁴⁷

10. Jurisprudential Evaluation of Common Automated Pricing Scenarios

The proposed framework can be tested through several hypothetical commercial scenarios. The first is inventory-based pricing. Suppose an online retailer automatically reduces the price of a product when inventory becomes excessive and increases the price when stock becomes scarce. The algorithm does not analyse individual consumers and applies the same price to all buyers under identical market conditions. Such pricing appears substantially compatible with ordinary market principles because the price responds to genuine changes in supply. No inherent element of deception or exploitation is evident.

The second scenario concerns time-based dynamic pricing. A hotel charges higher rates during a major public event because demand has increased substantially. The price is displayed clearly before booking and applies equally to consumers purchasing the same room under the same conditions. The price difference is based on time and market demand rather than on hidden characteristics of individual consumers. From an Islamic perspective, the existence of a higher

⁴⁷ . Ibn Qayyim al-Jawziyyah, *al-Ṭuruq al-Ḥukmiyyah*, 245–264.

price during peak demand does not itself establish injustice. The relevant inquiry would instead concern whether the hotel artificially restricted supply or engaged in deceptive conduct.

The third scenario involves personalized discounts. An online retailer offers loyal customers lower prices because of their purchasing history. The customer knows that membership provides special discounts. Such differentiation may be regarded as legitimate commercial practice because the price difference is connected to a transparent contractual or promotional arrangement.

The fourth scenario is more complicated: two consumers simultaneously purchase the same product, but the algorithm charges one more because it predicts that the individual has a higher willingness to pay. If the consumer is not informed that individualized pricing is occurring, the issue of informational asymmetry becomes significant. The practice cannot automatically be classified as prohibited merely because prices differ, but it requires stronger scrutiny concerning deception, proportionality, and exploitation.⁴⁸

The fifth scenario concerns vulnerability. Suppose an algorithm detects that a consumer urgently requires transportation from a location where no alternative provider is immediately available and substantially increases the price because the consumer is unlikely to refuse. Here the system is using information about vulnerability rather than ordinary market scarcity. The Islamic concepts of harm, exploitation, and unjust enrichment become highly relevant.

The sixth scenario concerns emergency goods. During a disaster, an algorithm raises the price of essential food or medicine because demand has suddenly increased. Genuine scarcity can justify some price movement, but deliberate exploitation of emergency necessity may conflict with Islamic principles of social responsibility and prevention of harm. The more essential the commodity and the weaker the consumer's alternatives, the stronger the justification for regulatory intervention.

The seventh scenario concerns algorithmic collusion. Several competitors deploy systems designed to respond to each other's prices and maintain a predetermined minimum price. Even if no traditional written agreement exists, deliberate coordination that produces artificial price inflation would raise serious concerns under Islamic market ethics.

These examples demonstrate that automated pricing cannot be evaluated through a single formula. The legal assessment must consider the cause of the price difference, transparency, consumer knowledge, market alternatives, vulnerability, competitive conditions, and social consequences. Classical Islamic jurisprudence provides principles for this contextual reasoning, while contemporary economics supplies analytical tools for understanding the effects of pricing mechanisms.⁴⁹

11. Discussion: Integrating Classical Fiqh with the Digital Economy

The integration of classical Islamic jurisprudence with contemporary automated pricing requires methodological care. It would be inappropriate simply to search classical books for a term equivalent to "algorithmic pricing" because no such technology existed. Equally inappropriate would be to abandon classical jurisprudence on the assumption that technological novelty

⁴⁸. Khan, Naimat Ullah, Najeeb Ullah Khan, and Robina Iqbal. "Social Upbringing of Children and the Role of Parents: Study in the Light of Islamic Teachings." *Ma'arif-e-Auliya* 3, no. 4 (2025): 25-36.

⁴⁹. Pierre Dubé and Sanjog Misra, "Personalized Pricing and Consumer Welfare," *Journal of Political Economy* 131, no. 1 (2023): 131–189.

renders traditional principles irrelevant. Islamic legal reasoning has historically addressed new commercial circumstances by applying established principles to changing facts.

The appropriate approach is therefore functional analogy combined with contextual analysis. The researcher should identify the economic function of the modern practice and compare it with the rationale underlying established jurisprudential rules. For example, the classical concern with exploiting an uninformed buyer can inform the analysis of algorithmic price personalization when an algorithm possesses superior information about the buyer's willingness to pay. The analogy is not based on identical technology but on a shared problem of informational advantage.

Similarly, the classical prohibition of *tadlīs* can illuminate digital deception, while *gharar* can inform the evaluation of unpredictable pricing mechanisms. *Ihtikār* and market regulation can contribute to the analysis of algorithmic market power, while *maṣlahah* can help evaluate the broader consequences of automated pricing for consumers and society.

Modern Islamic jurisprudential works provide methodological support for such adaptation. Al-Zarqā's treatment of general jurisprudential principles demonstrates the importance of understanding legal rules in relation to their underlying causes and changing circumstances.⁵⁰ Wahbah al-Zuhaylī's writings on contemporary financial transactions similarly demonstrate the role of established legal principles in addressing modern contractual practices.⁵¹ Shubayr's treatment of contemporary financial transactions provides further evidence that technological and institutional developments can be assessed through a structured jurisprudential framework rather than by abandoning classical categories.⁵²

The economic dimension is equally important. Islamic jurisprudence should not evaluate algorithmic pricing without understanding the economic functions of pricing systems. A rule that ignores supply, demand, inventory, competition, consumer surplus, and market structure may mischaracterize legitimate commercial practices as exploitation. Conversely, an economic analysis that ignores justice and ethical responsibility may treat harmful practices as efficient simply because they increase firm profits.

The interdisciplinary method is therefore not optional; it is necessary. The phenomenon itself is interdisciplinary. Algorithmic pricing combines economics, computer science, consumer behaviour, data governance, law, and ethics. An Islamic jurisprudential analysis that isolates only one dimension would be incomplete.

The central methodological conclusion is that Islamic commercial jurisprudence should evaluate automated pricing at three interconnected levels: first, the contractual level, examining consent, clarity, and uncertainty; second, the behavioural level, examining deception, exploitation, and informational asymmetry; and third, the market level, examining competition, monopoly, collusion, and public welfare.

This three-level approach provides a coherent bridge between classical jurisprudence and the digital economy. It also prevents two opposite methodological errors: technological determinism,

⁵⁰. Muṣṭafā Aḥmad al-Zarqā, *al-Madkhal al-Fiqhī al-ʿĀmm* (Damascus: Dār al-Qalam, 1998), 1:466–470.

⁵¹. Wahbah al-Zuhaylī, *al-Muʿāmalāt al-Māliyyah al-Muʿāṣirah* (Damascus: Dār al-Fikr, n.d.), 21–34.

⁵². Muḥammad ʿUthmān Shubayr, *al-Muʿāmalāt al-Māliyyah al-Muʿāṣirah fī al-Fiqh al-Islāmī*, 6th ed. (Amman: Dār al-Nafāʾis, 2007), 105–119.

which assumes that algorithms require entirely new ethics, and historical literalism, which assumes that classical commercial rules can simply be copied without adaptation.

Islamic jurisprudence possesses sufficient conceptual resources to engage with algorithmic pricing, provided that those resources are applied through disciplined analysis of contemporary economic realities.⁵³

Conclusion

Automated pricing has introduced a new stage in the evolution of commercial exchange. The movement from human price setting toward algorithmically generated and personalized prices has transformed the relationship between information, market power, and consumer choice. Digital firms can now process vast amounts of data and use predictive systems to determine prices with a degree of speed and precision that was previously impossible. This development can improve economic efficiency, reduce transaction costs, respond to changing market conditions, and generate benefits for both firms and consumers. Yet the same technology can also intensify informational asymmetry and create opportunities for hidden exploitation.

The present study demonstrates that Islamic commercial jurisprudence has conceptual resources capable of addressing these challenges. The principles of *'adl*, *tarāḍī*, *bayān*, prohibition of *gharar* and *tadlīs*, prevention of *ghabn* and *ḍarar*, regulation of *iḥtikār*, and consideration of *maṣlahah* provide a coherent normative foundation for evaluating algorithmic pricing. These principles do not require rejection of technological innovation. Rather, they establish conditions under which innovation can remain compatible with commercial justice.

The study has also demonstrated that automated pricing should not be treated as a single legal category. Dynamic pricing based upon genuine supply and demand is substantially different from personalized pricing based upon individual willingness to pay. Transparent loyalty discounts differ from secret exploitation of consumer vulnerability. Inventory-based price adjustments differ from algorithmic collusion. Consequently, the jurisprudential ruling must depend upon the factual structure and economic consequences of the pricing mechanism.

Contemporary economic research reinforces this conclusion. Personalized pricing can increase firms' profits while producing heterogeneous consumer outcomes. Dubé and Misra's research found that total consumer surplus declined under personalized pricing relative to uniform pricing, while more than 60 percent of consumers in their study nevertheless benefited from personalization.⁵⁴ This complexity demonstrates why an Islamic framework should not rely upon simplistic assumptions concerning either market efficiency or consumer harm.

The study therefore proposes a Shariah-oriented framework based upon ten principles: lawful subject matter, price clarity, genuine consent, proportionate transparency, non-exploitation, proportionality of price differentiation, market integrity, responsible data use, institutional accountability, and mechanisms for review and correction. These principles provide a basis for distinguishing permissible, conditionally permissible, and unjust forms of automated pricing.

The fundamental conclusion is that the Islamic assessment of an automated price should not depend merely upon whether the consumer technically accepted the displayed amount. The

⁵³ . Asep Koswara, Amin, and Wahyudi, "The Fiqh of Algorithms: AI-Driven Dynamic Pricing in Shariah Business Perspectives," *Josh-E: Journal of Sharia Economics* 2, no. 1 (2026): 38–55.

⁵⁴ . Jean-Pierre Dubé and Sanjog Misra, "Personalized Pricing and Consumer Welfare," *Journal of Political Economy* 131, no. 1 (2023): 131–189.

process through which the price was generated is equally relevant. If the price reflects legitimate market conditions, is transparently presented, and does not exploit vulnerability, automated pricing can be compatible with Islamic commercial principles. If, however, the system deliberately conceals material information, exploits necessity, manipulates consumers, facilitates collusion, or converts personal data into an instrument of unjust enrichment, the practice conflicts with the objectives of Islamic commercial justice.

The digital economy therefore does not require Islam to abandon its classical commercial principles. Rather, it requires those principles to be applied with greater analytical precision. The challenge for contemporary Islamic scholarship is not to choose between technology and tradition but to develop a jurisprudential framework through which technological innovation can serve legitimate economic activity while remaining accountable to justice, transparency, human dignity, and the protection of wealth.

Recommendations

1. Islamic jurisprudential scholars should develop specialized research on algorithmic pricing rather than treating all digital commerce as a single category.
2. Shariah standards for automated pricing should distinguish clearly between dynamic pricing, algorithmic optimization, and personalized pricing.
3. Digital firms should provide consumers with meaningful information about material factors that affect individualized prices without necessarily disclosing proprietary algorithms.
4. Automated pricing systems should be subjected to periodic Shariah and ethical audits where they materially affect consumer welfare.
5. Pricing algorithms should not deliberately exploit emergency, extreme necessity, or severe informational vulnerability.
6. Islamic financial and commercial institutions should develop guidelines concerning the ethical use of consumer data in pricing decisions.
7. Regulators and Shariah scholars should pay particular attention to algorithmic collusion, artificial scarcity, and the abuse of market dominance.
8. Future Islamic economic research should combine jurisprudential analysis with empirical economic evidence concerning consumer surplus, price discrimination, and market concentration.
9. Islamic universities and research institutions should establish interdisciplinary research programmes connecting Islamic jurisprudence, economics, data science, and digital commerce.
10. Future studies should examine automated pricing within specific sectors such as transportation, healthcare, e-commerce, hospitality, food delivery, and digital financial services.

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