

Proposal for a Novel Method to Eradicate Scalpers of Otaku Goods

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Abstract

With the recent expansion of the otaku goods market, the problem of individuals and dealers buying up limited-edition products and reselling them at exorbitant prices (“scalpers”) has become a serious concern, placing an economic burden on fans and causing market distortion. Measures against resale, such as determining buyers on a first-come, first-served basis or by lottery, are common; however, their effectiveness is limited because scalpers can buy up all the products using swarm tactics. This problem can be solved by selecting buyers through an auction system, but in practice this method is rarely used. This study examines the reasons why the auction method is not easily adopted and proposes a new method to eliminate scalpers. The auction method, which seeks a fair market price, is difficult to adopt because sellers prefer to deliver products to those who deeply appreciate their work rather than those willing to pay the highest price, a characteristic often associated with otaku goods. Therefore, it is necessary to develop a system that facilitates product ownership for individuals with a strong appreciation for the work. This study proposes embedding information media, such as microchips, into products to register ownership details. Owners could then access services such as bonus videos and images and receive email notifications marking the anniversary of their acquisition. We believe that unfair price inflation by scalpers can be suppressed by updating the owner’s information, provided the product is traded exclusively within this system, which may restrict reselling for a certain period after the transaction.

Keywords: microchips, otaku goods, otaku market, scalpers

1. Introduction

1.1 *The Expansion of the Otaku Goods Market and the Problem of Scalping*

In recent decades, the market for otaku goods such as anime, manga, and games has expanded rapidly (Mangiron, 2021; Sugishita & Masuda, 2023; Kawashima, 2024). One of the defining characteristics of this market is the overheated supply-demand imbalance that occurs when limited-edition products are released. Exploiting this imbalance, scalpers are increasingly buying these products in large quantities and reselling them at high prices. Scalpers particularly target limited-edition products and products with short pre-order periods, selling them at prices significantly higher than the official selling price. This results in an increased financial burden for true fans, while also having a negative impact on the healthy commercial activities of companies and retailers.

Market distortion caused by scalpers is an important issue from an economic perspective. Reselling is seen as a “market imperfection” that takes advantage of supply-demand imbalances to impose a financial loss on consumers, and relevant countermeasures are essential from the perspective of protecting consumer welfare. However, existing countermeasures remain inadequate and have limitations in preventing scalping. Previous studies and practices have proposed measures to prevent scalping, such as lottery sales, purchase restrictions, imposing penalties on purchasers who buy for the purpose of resale, and strengthening personal authentication at the time of purchase. While these measures are effective in temporarily curbing the behavior of scalpers, they have not led to a fundamental solution, as scalpers are constantly finding new ways, such as AI and bot-based purchasing methods (Siwicki, 2024).

Currently, economists are focusing on a combination of “scalper’s behavior monitoring” and “dynamic price adjustment” as a new scalping prevention approach (Wu et al., 2018). The former is a method of monitoring the behavioral history and purchase patterns of buyers and imposing preventive restrictions on high-risk buyers, while the latter is an attempt to curb scalping by adjusting prices based on the supply-demand balance of the overall market. However, “dynamic price adjustment” has been criticized for providing undue advantages to sellers and facilitating a wealth transfer from customers, and this pricing system does not improve resource

allocation (Woodcock, 2020). While these approaches have had some effect, it is noted that they remain limited in their ability to counter the adaptive capacity of scalpers.

1.2 Role of the Auction Method as a Countermeasure Against Scalpers

Given the limitations of these measures, the auction method is also worth considering as a countermeasure against scalpers (Fu, 2023). In reality, however, the auction method is not widely adopted in the sale of otaku goods; other methods are more common. Auctions are used in many fields as a fair method of determining the value of products based on market principles, but their diffusion is limited with regard to otaku goods.

In the otaku goods market, methods that emphasize immediacy and fairness, such as lottery sales, pre-order sales, and purchase restrictions, are mainstream (BANDAI SPIRITS CO., LTD., n.d.; NHK Promotions Inc., n.d.; Nintendo, n.d.; Nintendo Museum, 2024; animate Ikebukuro Flagship Store, 2024), and these are commonly employed to combat scalpers. One reason the auction method is less likely to be adopted is that competition tends to drive up prices, increasing the likelihood that fans with limited financial resources will not have the opportunity to purchase. Another factor is the fact that most otaku goods are relatively low-priced items, for which the auction is not suitable.

It is believed that sellers of otaku goods are interested not only in maximizing profits but also in delivering their products to people who truly love their work. They also consider it important to focus on the connection with the fan and collector community and to provide products that are loved by true fans, in order to gain long-term brand value and fan support. This assumption aligns with the situation of artists selling live tickets, as speculated by Fenton (2020). This paper identifies the current status and challenges of the auction method as a countermeasure against scalpers in the sale of otaku goods, and theorizes why the auction method has not been generally adopted. Furthermore, another alternative method to auctions and future issues to minimize the impact of scalpers will be discussed.

Based on previous research, and after specifying the limitations of current countermeasures, this paper proposes new scalping countermeasures specifically for the market of otaku goods, especially physical products such as figures. This paper proposes repurposing existing microchip technology used for dogs and cats as a new approach to countering scalpers. This technology has been used for animal identification management, and its features—contactless data management and secure embedding—could work effectively in terms of resale prevention. We believe that microchip technology could be applied to otaku goods to identify the purchaser, track resale history, prove authenticity, and introduce transaction restrictions for a certain period of time. These transaction restrictions would prohibit the resale of the products for a certain period after purchase, with the aim of curbing the movement of scalpers and creating an environment in which fans can obtain products at a fair price. Furthermore, this technology will benefit consumers by providing new advantages for the fan community and establishing links with official resale platforms.

This study examines the specific implementation of microchip technology for dogs and cats in the otaku goods market, evaluates its effectiveness, and theoretically analyzes the advantages of this technology compared to conventional measures against scalping. We also examine the challenges in implementing the technology, along with its ethical and privacy implications. Additionally, we aim to explore its potential as a new solution to the scalpers' problem, demonstrate how it can enhance fan satisfaction, and propose a new direction for the healthy development of the otaku goods market.

2. Literature Review

2.1 Clarification of Issues

To clarify the cause of market distortions by scalpers, we will analyze the current situations and limitations of anti-scalping measures.

2.1.1 Analysis of Scalpers' Behavior Patterns

- The behavior of scalpers is based on a typical business model that exploits the gap between supply and demand (Leslie & Sorensen, 2014). Targets are usually products with limited supply, such as products available for limited sales or limited time periods, or products sold only at specific events. These items are often related to particularly popular anime or video games, and are in high demand among fans, making them very attractive targets for scalpers. In addition, the scarcity of products that are only available at official or specific stores tends to increase resale prices due to their obtainability.
- It is common for scalpers to use bots to purchase large quantities of items from online stores, taking away the slots available to true fans (Hagenbach & Kübler, 2021). In many cases, they also hire proxy buyers to secure a

large number of items for purchase at real events or in stores. In addition, in lottery sales of popular items, multiple accounts are used to increase the probability of winning, and every possible means is used to obtain the items and prepare for subsequent resale (Siwicki, 2024).

- The resold products are usually sold at a higher price (Benitah, 2004; Parlow, 2023), but the timing and pricing of such sales are also strategic. In some cases, resale is done immediately after the product is released, targeting the moment when demand is at its highest, while in other cases, resale is done after holding the product and waiting until the work is expected to become even more popular. For example, when a work is made into a movie or a sequel is announced, the value of the product may rise even more, and scalpers will release the product at the right time.
- Flea market applications are the primary channel for resale. Such platforms are convenient for scalpers, providing them with a direct way to reach their fans (Ueda et al., 2021). Social media networks are also used as trading venues, where sales can be quickly targeted to specific fanbases.
- Market-savvy scalpers also keep a close eye on trends such as new anime broadcasts or movie releases of works, or the sudden rise in popularity of a particular character. This allows them to flexibly change the products they target and adopt strategies to maximize profits. Such activities have a significant impact on the fan community. Specifically, high resale prices above the regular price reduce the opportunity for true fans to obtain the product, leading to a spike in market prices. In addition, a situation arises where fans are unable to obtain products due to a shortage of supply through authorized channels resulting from scalpers purchasing products in large quantities. This situation causes friction and confrontation between scalpers and fans, and in particular, the act of reselling at a high price often causes antipathy among fans.

2.1.2 Effectiveness and Limitations of Current Anti-Resale Measures

- Establishment of a no-resale clause: Many manufacturers clearly state “no resale” on their official sales pages. This measure is expected to have a certain level of effectiveness in terms of possible legal action, but in practice it is difficult to monitor resale activities and to prove violations. The problem is that it is difficult to prevent resale activities completely. In addition, according to a previous study that qualitatively evaluated the effectiveness of anti-resale laws in the U.S., legal regulations that suppress resale prices are considered to be less effective (Drayer, 2011; Fenton, 2020; Parlow, 2023).
- Lottery sales: The method of distributing the right to purchase popular products by lottery is widely used to ensure fairness, but scalpers often use multiple accounts to participate in the lottery, which creates a loophole in the system. Thus, the effectiveness of the lottery sales system in preventing scalping is also limited (Hagenbach & Kübler, 2021).
- Premium membership system: The premium membership system aims to eliminate scalpers by limiting the sale of products to specific members (Hyman, 2016). While targeting a specific fan base can strengthen the community, it is not a perfect preventive measure because non-members cannot purchase products and, on the other hand, scalpers may acquire memberships.

2.1.3 Reasons for Difficulty in Adopting the Auction Method

The auction method here refers to “a method in which bids are placed for n limited items, and only the n th highest bidder can purchase the item at the n th bid price” (Fu, 2023). First of all, this method forces bidders to make very strategic decisions in how they set their bid prices. Bidders must predict the behavior of other bidders while taking into account their own position. As a result, prices may be excessively inflated among bidders, especially for popular products priced well above the seller’s expected price. This increases the risk that fans with limited financial resources will be unable to purchase the product and may abandon the content, ultimately increasing the risk of brand damage. The mechanism of being able to buy at the n th highest price out of n pieces of products also creates an additional source of uncertainty for bidders. Bidders must constantly worry about whether they are the n th highest bidder, which leads to stress and anxiety. This psychological burden may discourage fans from purchasing the product. Thus, the bidding system, which allows the purchase of a limited-edition product at the n th highest price when there are n pieces available, has multiple problems, such as difficulty in making strategic decisions, withdrawal of fans without financial resources, brand damage, and psychological burden. The combination of these factors may make the transaction unattractive to both fans and sellers.

3. Methods

3.1 Proposal

The canine and feline microchip is a small electronic device that is now widely used as a means of pet identification by pet owners and plays an important role in enabling rapid identification in the event of pet loss. Microchips typically measure approximately 1.5 mm in diameter and 8 mm in length (Nittoku Co., Ltd., n.d.) and are implanted under the pet's skin. The microchip contains a unique identification number that can be read using RFID (Radio Frequency Identification) technology. After being inserted under the dog or cat's skin, the chip is read from a distance of a few centimeters by a special reader. After implantation, the owner must register his or her information in the microchip database. The microchip is assigned a unique identification number and the information associated with it is registered in a national or regional database. This database would include the owner's contact information.

One advantage of microchips is that they can be used throughout the animal's life and the information can be easily updated if the owner changes. In addition, in some countries and regions, the microchip serves as proof of legal ownership. Given these characteristics, microchip technology could be applied to otaku goods as a means of determining their authenticity. For example, embedding a microchip in a limited-edition or collectible item would allow for easy verification of the product's identification and rapid verification of whether the item is authentic at the time of resale.

Furthermore, since the microchip can be registered in a database with information linked to a unique identification number, it becomes possible to track the purchaser's information and the product's distribution history. When scalpers sell counterfeit products, this system helps protect consumers by revealing information that is not registered in the legitimate database. In addition, the introduction of microchips in otaku goods can increase the detection rate of stolen or lost items. Even when distribution on the resale market is unclear, identification information can be used to prove that the item belongs to the original owner.

Clarifying ownership, especially for limited-edition or collectible items, provides a way to prove the owner's authenticity at the time of resale and is expected to help curb unauthorized resales and the sale of counterfeit products. Furthermore, imposing a sales ban for a certain period and managing sales and purchases on a microchip-managed service can further curb exorbitant pricing and unauthorized resales. This is expected to promote a healthier otaku goods market and improve the trust of collectors and fans.

3.2 Application of Microchip Technology

By embedding microchips in otaku goods, the following functions can be realized:

- Tracking resale history by registering the owner's information in a database
- Providing identification information to prove authenticity
- Restricting resale by imposing a ban on transactions for a certain period
- Sending notification emails on anniversaries related to the artwork or the date the product was acquired, as well as providing access to owner-only videos and images, etc.

3.3 System Design, Operation, and Security Measures

To design a system using microchip technology and develop a prototype to verify its effectiveness in the market, the prototype will feature an easy-to-use interface for users and manage the database.

3.3.1 Design

The design of the microchip system's database is a critical element for the secure and efficient management of product identification and ownership information. This section details the database structure, access privileges, and linkage to the API (Application Programming Interface).

First, the structure of the database should be discussed. The microchip database consists of three main categories of information: product information, owner information, and historical information, which includes product registration and owner update history, purchase price history, and microchip scan implementation history. Owner information comprises personal information such as email addresses. This information is used to contact the owner when the item is lost or stolen and to prove ownership. Historical information serves to ensure management transparency by enabling follow-up investigations in the event of problems in the system, and can also be used to confirm price fluctuations at the time of resale. In addition, by presenting identification and registering ownership information at the time of purchase, the risk of scalpers becoming purchasers is reduced, as the initial purchaser's information is retained in the system's history.

The database will be designed as a relational database and will use a query language such as SQL. This design allows for flexible and fast data retrieval and updating. Data integrity is maintained because each record is uniquely identified by a microchip ID. Access privilege management is also important in database design. Since product and owner information is subject to legal regulations from the perspective of personal information protection, strict authentication and authorization processes are required to prevent unauthorized access and leakage of data. Specifically, role-based access control is recommended to ensure that only necessary information is accessible to each user in the system. Specifically, since owner information is personal, access should be granted only to the owner themselves, the manufacturer, and national entities such as the police in the event of loss or theft, while the most recent owner should only be able to view and update their own information.

Furthermore, a strong authentication mechanism is essential to access the database; in addition to password authentication, two-factor authentication is recommended. This will provide additional security in the unlikely event that credentials are compromised. Finally, since databases need to work with other systems and applications, exposing APIs will enable real-time data queries from external systems. APIs require authentication to ensure data security, and encrypted communications should be used to send and receive data. This will allow for real-time data queries from devices such as smartphone apps. This allows secure access from devices such as smartphone applications.

3.3.2 Operation

The operational process of the microchip system must ensure efficiency and accuracy in the registration, renewal, and confirmation phases. Each process is described in detail here.

First, after a microchip is inserted into a product, it must be registered in the database. This registration process involves the manufacturer or retailer inputting the microchip ID and basic information about the product, along with the purchaser's information, into the database. This is usually done via an online form or dedicated application, but paper-based applications may also be considered. Automation should be implemented in the registration process whenever possible. The user interface should be designed to be intuitive and easy to understand, and error-checking features and highlighting of required fields will help prevent erroneous entries and missed registrations.

Second, owner information should be updated whenever there is a change. In particular, if the owner's contact information changes, the database should be updated promptly to reflect the new details. Therefore, it is desirable to provide a reminder notification function that prompts the owner to periodically check whether the information is outdated. Notifications are typically sent via email or SMS, but push notifications via a smartphone application would also be effective.

Finally, if an item is lost or stolen, it is scanned by the police or other authorities to verify the microchip ID. The owner's information is then queried in a database, and steps are taken to contact them. For this process to be efficient, the interface between the scanner and the database must be designed to operate with low latency and allow for real-time data queries.

3.3.3 Security Measures

Security and privacy protection in microchip systems are essential to prevent unauthorized access or data leakage. This section discusses specific measures in terms of data encryption, authentication, and log management.

First, data encryption is a fundamental and important measure for data transmission and storage. It is standard practice to use encrypted communications, such as SSL/TLS, for data transmission, as they protect data exchange over the Internet. Strong encryption technologies such as AES (Advanced Encryption Standard) are also used to protect stored data in the event of unauthorized database access.

Next, authentication and access control are key elements to enhance security. All system users must go through an authentication process to access data, and in particular, two-factor authentication should be implemented in addition to password authentication. Two-factor authentication provides additional safeguards even if credentials are compromised. Moreover, the use of standard authentication frameworks, such as OAuth and OpenID Connect, further increases the reliability of authentication.

Finally, log management is required to record all system operations. All data access and update operations should be recorded in detail so that unauthorized access or inappropriate behavior can be traced when discovered. Log data should be audited on a regular basis, and immediate action should be taken if anomalies are detected. Thus, strict log management is essential to improve the system's overall security and transparency.

4. Discussion

This study clarified the background of the scalping problem in the otaku goods market, examined the limitations of existing anti-scalping measures, and proposed the use of microchip technology to address the issue. Unjustified price hikes by scalpers and situations where legitimate consumers (true fans) are forced to purchase products at high prices risk undermining the health of the fan community and causing a long-term decline in brand value. Therefore, there is an urgent need to introduce new methods to combat scalping.

The introduction of the proposed microchip technology holds great promise as a new means to ensure the authenticity of otaku goods and to enable proof of ownership. Microchipping will be a powerful means of facilitating the delivery of products to true fans who have a love for the products. By registering a unique identification number in a database, the purchaser's information and the product's distribution history can be tracked, potentially curbing fraudulent activities by scalpers. In addition, the ability to provide benefits and information to fans through microchip-based services is expected to strengthen the relationship with fans and contribute to increased brand loyalty.

However, several challenges exist in the implementation of microchip technology. First, there are concerns about the initial cost of implanting a microchip and the costs associated with managing the database. Consumer perceptions about the use of microchips and concerns about privacy must also be considered. It is important to create an environment in which consumers understand how their information will be handled and can use it with peace of mind.

Furthermore, it is necessary to verify whether the sales management system works without setting a period during which transactions are prohibited, or works only if it imposes such restriction, to curb scalping and create a healthy market environment.

If the proposals in this study are realized, it is expected that the health of the otaku goods market will be improved and an environment will be created where true fans can obtain products at fair prices. The next step is to develop a prototype of the proposed system and verify its effectiveness in the actual market.

5. Conclusion

In this study, we focused on the issue of scalping in the otaku goods market and proposed the application of microchip technology after stating the limitations of existing anti-scalping measures. While the otaku goods market is built on the passion of fans and the demand for limited products, unfair pricing by scalpers seriously affects fans and companies. To solve this problem, it is necessary not only to control prices and revise sales methods, but also to develop a new mechanism to build trust between fans and companies.

The proposed microchip technology is expected to be an effective means of verifying product authenticity and confirming ownership, as well as curbing scalping activities. In particular, the use of microchips will foster an environment where fans can acquire the products they truly desire at fair prices, enabling companies to preserve brand value and strengthen relationships with their fans. In addition, equipped with the ability to prohibit transactions for a certain period and manage trading information, the system can prevent fraudulent activities by scalpers and lay the groundwork for consumer protection.

In future research, it is important to evaluate the specific implementation methods and operational performance of the proposed system and to quantitatively analyze its effectiveness. It is also necessary to consider the ethical aspects of microchip-based data management while giving due consideration to consumer privacy. Through these studies, it is hoped that the otaku goods market will become healthier and more sustainable, and that steps will be taken toward the realization of a society where true fans can access products under fair conditions.

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Authors' contributions

Dr. Sayaka Iwano and Mr. Takuto Iwano were responsible for study design and revising. Dr. Sayaka Iwano was responsible for methodology. Dr. Sayaka Iwano drafted the manuscript and Mr. Takuto Iwano revised it. All authors read and approved the final manuscript.

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References

- Animate Ikebukuro Flagship Store [@animatehonten]. (2024, July 5). [Notice] *Regarding the purchase restriction per transaction, Upper limit for individual items: Up to 3 items per type. Upper limit for trading items: Up to 3 boxes. *For separated sales from the box, the limit is up to the number of items per box** Thank you for your understanding and cooperation. Tweet; Translated by Authors. Twitter. Retrieved from <https://x.com/animatehonten/status/1809194513275240622>
- Bandai Spirits Co., Ltd. (n.d.). *Premium Bandai*. Retrieved November 24, 2024, from https://p-bandai.jp/global_pc.html
- Benitah, J. C. (2004). Anti-scalping laws: Should they be forgotten? *Tex. Rev. Ent. & Sports L.*, 6, 55. Retrieved from <https://heinonline.org/HOL/LandingPage?handle=hein.journals/tresl6&div=5&id=&page=>
- Drayer, J. (2011). Examining the effectiveness of anti-scalping laws in a United States market. *Sport Management Review*, 14(3), 226–236. <https://doi.org/10.1016/j.smr.2011.04.002>
- Fenton, G. (2020). Taming the ticket market: How a closed ticketing system can beat back scalpers and recapture lost revenue. *Ent. & Sports Law.*, 36, 57. Retrieved from <https://www.greenbergglusker.com/content/uploads/2020/12/Graham-Fenton-ABA-Taming-the-Ticket-Market-esl36-2.pdf>
- Fu, B. (2023). *Increasing ticketing allocative efficiency using marginal price auction theory*. arXiv. <https://doi.org/10.48550/arXiv.2309.11189>
- Hagenbach, J., & Kübler, D. (2021). Allocation of online appointments: A system to deter black-market profiteers. *IPP Policy Briefs*, 69. Retrieved from https://www.ipp.eu/wp-content/uploads/2021/11/Note_IPP_69_en.pdf
- Hyman, D. (2016, September 27). *How do you stop ticket scalpers? Eric Church has an answer*. Vice. Retrieved from <https://www.vice.com/en/article/how-do-you-stop-ticket-scalpers-eric-church-has-an-answer/>
- Kawashima, N. (2024). *The economic ecology of Japan's anime industry*. Retrieved from <https://shs.hal.science/halshs-04714049/>
- Leslie, P., & Sorensen, A. (2014). Resale and rent-seeking: An application to ticket markets. *Review of Economic Studies*, 81(1), 266–300. <https://doi.org/10.1093/restud/rdt033>
- Mangiron, C. (2021). Found in translation: Evolving approaches for the localization of Japanese video games. *Arts*, 10(1), 9. <https://doi.org/10.3390/arts10010009>
- NHK Promotions Inc. (n.d.). *POKÉMON X KOGEI—Playful Encounters of Pokémon and Japanese Craft, Information on Lattery Sales*. Retrieved November 24, 2024, from <https://www.nhk-p.co.jp/kogei-pokemon-lottery/>
- Nintendo. (n.d.). *Nintendo Museum Shop*. Retrieved November 24, 2024, from <https://museum.nintendo.com/en/shop/index.html>
- Nintendo Museum [@Museum_Nintendo]. (2024, October 4). *Please note that there is a limit to the quantity*

that can be purchased per person for the following items sold at the Nintendo Museum shop, Bonus Stage. One per person - Hardware Keychain Collection (six types) 1983–1999 - Hardware Keychain Collection (seven types) 2000–2017 - Hanafuda playing cards: Houou - Hyakunin Isshu playing cards: Houou - Nintendo Museum neck strap and card holder - Green Pipe Super Mario cookies - Nintendo Museum cookies □One per person (only one type from a selection of four) - Cushions (four types): Family Computer controller, Super Famicom controller, Nintendo 64 controller, Wii Remote □Up to eight items or one box per person - Magnet Collection (eight types) We apologize for any inconvenience this may cause. Tweet. Twitter. Retrieved from https://twitter.com/Museum_Nintendo/status/1842023649219600665

Nittoku Co. Ltd. (n.d.). *RFID microchip*. Retrieved November 21, 2024, from <https://www.nittoku.co.jp/rfid/microchip/>

Parlow, M. J. (2023). The law and economics of ticket scalping. *Wayne Law Review*, 68(2). Retrieved from <https://ssrn.com/abstract=4324594>

Siwicki, M. J. (2024). *Law 2024* (pp. 231–249). <https://doi.org/10.4337/9781035337934.00021>

Sugishita, K., & Masuda, N. (2023). Social network analysis of manga: Similarities to real-world social networks and trends over decades. *Applied Network Science*, 8(1), 79. <https://doi.org/10.1007/s41109-023-00604-0>

Ueda, S., Matsui, R., & Hario, D. (2021). Profiles of PlayStation5 scalpers. *JSICR Journal*, 39(2), 83–90. https://doi.org/10.11430/jsicr.39.2_83

Woodcock, R. A. (2020). The efficient queue and the case against dynamic pricing. *Iowa Law Review*, 105(4), 1759–1797. Retrieved from <https://ilr.law.uiowa.edu/print/volume-105-issue-4/the-efficient-queue-and-the-case-against-dynamic-pricing>

Wu, C., Yu, K., & Wu, X. (2018, November). Scalping anomaly detection based on mobile internet traffic data. Paper presented at ICTCE 2018: 2018 The 2nd International Conference on Telecommunications and Communication Engineering, Beijing, China. <https://doi.org/10.1145/3291842.3291905>

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