

# Dynamic Pricing in Airlines Ticketing Browsing History: An Ethical Perspective

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**Abstract:** The phenomenon of the global airlines operators worldwide has over pricing strategies especially on online booking considered to be ethical provides the context for further exploration of the issue and the means to improve online booking in an ethical perspective. This study's literature analysis narrowed several research gaps: lacks of exploration of the effect of browsing history in the dynamic pricing to business ethics in particular if it is used in a negative aspect; lacks the understanding how this affects the theory of distributive justice and rule-consequentialist ethics; and lacks general public and regulators perspective of the phenomenon. Refers to the analysis, present literature lacks evidence on understanding the relationship between dynamic pricing influences by browsing history to business ethics, thus provides an opportunity to explore the phenomenon. This study will contribute: for practitioners, to improve the general public's future decision making; provides e-commerce industry better perspective regarding fairness and business ethics; and for regulators in the airline industry to make policy changes; and second for academia, to expand the theories of distributive justice and rule-consequentialist ethics incorporating browsing history and business ethics; provides a broad theoretical framework on dynamic pricing relationship; and provides quantitative perspective especially on business ethics.

**Keywords:** Browsing History, Dynamic Pricing, Business Ethics.

## 1. Introduction

Consumer throughout the world demands for a just price for goods and services that were offered in the market. Despite the maturity of the pricing mechanism in most industries, the debate on fair prices still continues. For example, in the airline industry, fare prices fluctuate regularly due to market forces especially on consumer demand and supply. The fare price will be more expensive during peak time and also at the time of departure. This is usually associated with pricing strategy tactics employed by many Airlines operator worldwide known as dynamic pricing. According to Weiss and Mehrotra (2001) dynamic pricing is pricing mechanism created by recent advancement of information technology.

The advancement in innovate pricing mechanism systems; despite of its best intention, has raise some concerns on fairness of price. For instance, there are also cases, where different travelers are charged with separate rates at the same time of booking for the same destination. To cite some example in addition to present researcher's own experience, a YouTube video (with 295 likes difference advantage) has reported that this is a scam by the airline industry using browsing history function in the online booking system.

The utilization of this technological tool was initially to support the operations of an online industry. As an example, using 'online micro-marketing' application which uses computer application that tracks browsing history. According to Weiss (2011) this application distinguishes how users arrive at a given site, and what other sites they visit before and after; and databases that store a 'vast amount of information' on previous purchases. Therefore, the author concluded that online companies including Airlines have potential power to use an unparalleled amount of consumer information in altering their pricing strategies.

In relation to this and the rising concern, it could be argued that, does the leverage that the global airlines operators worldwide have over pricing strategies especially on online booking, is considered to be ethical? These phenomenon provides the context for further exploration of the issue and the means to improve online booking in an ethical perspective, which will be discussed in the following sequence of sections: literature review; research gap; aims and objectives; significance of study; and conclusion.

## 2. Literature Review

As a foundation to the study, this literature review section covers key words related to the topic to identify theory as well as key concepts which are under research to be identified for further discussions in the research gap section. This literature analysis comprises understanding: business ethics; online business ethics; airline and other transportation; dynamic pricing, price fairness; and, law and policy.

### A. *Business Ethics*

Miller (2014) explained ethics is a habit learned through mentoring and developed through practice. The author explained that in a world of conflicting influences, we each carve out our own ethical space that can serve as an example to others as they face their own individual ethical challenges, but at the corporate level, a moral exemplar will inform the larger corporate ethical space only when the leadership of the corporation consciously adopts and constantly reinforces the example of its moral exemplar. In addition to this, Gerald (2011) argued that leaders who identify and take precautions on preventing future ethical issues first as compare to the rival, have stronger position to avoid future.

In relating to business ethics in an organization, Jennings (2006) pointed out that the nature of ethical dilemmas can be categorized into two; unethical acts vs. ethical mistakes. An unethical act happens when something is done with immoral intention which fundamentally is wrong in societal or organizational culture. In contrast, an ethical mistake happens when something is done unintentionally unethical and later,

they regret and fully accountable on it inclusive taking any corrective actions. Gerard (2011) provided a framework consists of five questions which each of them views an ethical issue from a different perspective; self-interests, interests of others, principles, reciprocity and long-term interests.

In determining business ethical perspective, Koch (2010) argued that the important action should be taken is by considering the appropriate ethical theory for present situation, where the methodology and approach is one of the critical argumentation. Therefore, in terms of ethical nature of profit maximization, the author argues using the rule-consequentialist ethics; it is ethically justifiable for business profit maximization as their main objective in operating their businesses, as long as it does not violate the precedent law or social customs.

### (1) *Online Business Ethics*

The internet is increasingly being accepted as a medium for various types of businesses; similarly, this could be link to the rising ethical issues among the online businesses. In this context, Roman (2010) explained perceived deception influences consumer trust and creates a strong negative effect on satisfaction which further affects consumer loyalty intentions. Prior to this, the author (Roman 2007) had developed a scale for measuring the perception of an online retailer's integrity. In other development, Limbu *et al.* (2011) argued that perceived online ethics comprises of four dimensions: security, privacy, non-deception, and fulfillment. The author suggested that online retailer should know that violation of any of the four dimensions may raise ethical concerns about them.

### (2) *Airline and Other Transportation Industry Ethics*

Trust plays an important consideration in the online transaction (Sangeeta, 2013). According to the author, based on previous works, contributory factors to formation of consumer trust for online buy transaction includes prospective buyer, company competency reputation, willingness to customize, web site competency (private and security; website design; reliability; easy for use, hedonic pleasure and perceived usefulness; and, legal and regulatory compliance) and process attributes (transaction security, data safety and privacy) as highlighted in table 1. In addition, the author highlighted following the study on online reservation of railway tickets in the Indian context, four decisive factors that contribute towards development of trust in consumers for generating online buying intention includes transaction security, consumer data privacy and safety, credible return policies and web site's image. In contrast, lack of trust according to Chen and Barnes (2007) is a barrier and would discourage online buying among the consumer.

In another aspect, Nataraja (2011) in examining the competitive advantage of Emirate Airlines suggested that appropriate strategies' formulation and its proper implementation have contributed to the success of the Airline. The author added that these strategies which include operational, generic, and intensive and diversification are aimed to be different from other airlines and more focused on sustainable dynamic pricing. In contrast, Hannigan *et al.* (2014) indicated that price has a positive relationship with firm's performance, whereas quality has a negative relationship. Using data from the US airline industry from 1997 to 2011, the author concluded that price is the driving force behind performance. However, firms that share numerous routes are likely to charge higher prices (Gimeno & Woo, 1996). Price elements will be discussing further in the next section.

### *B. Dynamic Pricing*

In recent years, numerous businesses have adopted dynamic pricing strategies in the e-commerce market (Elmaghraby and Keskinocak, 2003). The author pointed out one of the factor that contributes to the adoption of dynamic pricing is the advancement of technologies. For example, click-stream technology: for gathering and analysing consumer traffic, demographic, and preferences. The stored data enables

businesses to perform real-time setting and adjust dynamic pricing with marginal cost. Therefore, according to authors (Fudenberg & Tirole, 2001; Pitt et al., 2001) with the use of the technology businesses could alter prices to target certain niche markets. Based on Lee and Illia (2011), there is a positive relationship between consumers' perception on illusion control in price determination and lateral consumer relationship with price fairness.

In addition to this, dynamic pricing also allows price to be determined during the transaction between buyers and sellers' interaction. They can now monitor the price changes using shopping agents such as Shopbots (Kephart et al., 2000), evaluate various options (Kautz et al., 1997), and negotiate terms and conditions (Chavez & Maes, 1996). According to the authors, such interaction allows online buyers perceived control in prices which were not possible in the traditional market. They argued that this contributes to a fair purchase of product or services.

### *C. Price Fairness*

Cox (2001) viewed with the popular increase to dynamic pricing in the e-commerce market; there has also been an increase in consumer complaints in perceived price unfairness. Other authors (Kannan & Kopalle, 2001; Suter & Hardesty, 2005) added that these perceived perceptions of price unfairness lead to negative outcome: consumer dissatisfaction; the spread of negative information; loss of relationship; and deteriorating trust in sellers. As such, to help overcome such responses by consumer due to the dynamic pricing, Kung et al. (2002) recommended businesses to pay closer attention to the issue of price fairness. A similar view by Reinartz (2001) is observed where the author indicated that the most important condition that must be upheld for the operational ability of dynamic pricing is attention to consumer perceived fairness.

One argument which is in tandem with perceived fairness is the distributive justice theory. According to Cox (2001) this theory focused on perceived fairness of how resources and rewards are distributed. The author suggested that fairness perception is developed only when all investors engaged in the relationship share the same rewards. In this aspect, this adds the earlier work on this theory by Martins and Monroe (1994) that suggested consumer perceive price fairness when they paid the same price with others for the purchase of the same particular product or services. In more recent study in online businesses, authors (Lee & Illia, 2011) concluded by price fairness is perceived by focussing on illusion of control and lateral relationship.

### *D. Law and policy (Malaysian perspective)*

In Malaysia, the competition Act 2010 [Act 712] was in force since January 2012 coupled with the establishment of the Malaysian Competition Commission (MyCC) as the regulating body on competition matters. The principle in the country's competition law follows the prohibition on enterprises: In engaging in conduct of dominant position such as imposing unfair purchase or selling price; limiting or controlling production, market outlets or market access, refusing to supply; applying discriminatory conditions that discourage new market entry; engaging in predatory behaviour towards competitors; or buying up scarce supplies in excess of the dominant enterprise's own needs. Despite the act is newly introduced, the establishment of the Act has paved many decisions on resolving enterprises' conflicts and protecting consumer rights.

In relation to the local airlines industry, the typical competition issues include price-fixing and predatory pricing. For example, in the case of Malaysian Airlines and Airasia 2011 collaboration agreement, MyCC imposed a Malaysian Ringgit 10 million fine to each airlines operator. MyCC view that the agreement which originally was intended for cost savings has violated Competition Act with the creation of an anti-competition agreement for market dominance at the expense of the consumers. Despite there are some

precedent cases on competition; however, it could be argued that the provision of the act does not cover e-commerce price fairness issue.

### 3. Research Gap

The literature analysis section on the major theme of the topics suggest rule-consequentialist ethics (Koch, 2010) as a primary theory in business ethics, which justifies profit maximization as long as the running of the business do not violate law, norm or social customs. Violation of any four dimensions of security, privacy, non-deception and fulfillment compromise ethics in the online business (Limbu et al., 2011). In analyzing the transportation perspective, studies suggest transaction security is an element of decision by the buyers (Sangeetha, 2013) and transaction privacy, security and scam in online risks vulnerabilities and this could also lead to lack of trust in the online medium (Chen & Barnes, 2007). One of the key highlights is the adoption dynamic pricing strategies with the use advanced technologies for browsing history (e.g. cookies, click-stream technology) for data to be used to adjust the pricing strategy for minimal cost. However, present literature does not highlight the use of such technology on price discrimination, which contradicts the theory of distributive justice (Cox, 2011) for fairness when paying for the same price with other consumer for purchasing the same products or services. In addition to this, using Malaysian perspective, the existing law on competitive also does not cover aspects of online booking.

Based on the synthesis, it could be argued that the present literature gaps are as follows:

- *It lacks the exploration of the effect of browsing history in the dynamic pricing to business ethics in particular if it is used in a negative aspect;*
- *It lacks the understanding how this affects the theory of distributive justice and rule-consequentialist ethics; and*
- *It lacks general public and regulators perspective of the phenomenon.*

Therefore, this under researched area provides for further exploration of the problems highlighted in the introduction section. The key words comprise of dynamic pricing, browsing history (as a technology) and effects to business ethics which invites a study on the relationship of the identified constructs.

### 4. Aims and Objectives

The suggested topic for future research is presented as follows:

#### A. Problem Statement

A major question remains to be explored is “Does dynamic pricing influenced by browsing history in airline online booking is ethical in business practice?”

#### B. Research Questions and Research Objectives

The main aim of this study is to identify the relationship of dynamic pricing influenced by browsing history to business ethics.

This is supported by the following questions to meet its objectives:

The following research question (RQ) is to achieve research objective (RO) 1:

**RQ 1**                    What is the association between dynamic pricing and business ethics?

The following Hypothesis (H) are representing RQ1:

*Hypothesis 1o*            There is no association between dynamic pricing and business ethics.

*Hypothesis 1a*            There is association between dynamic pricing and business ethics.

**RO 1**                    To identify the association between dynamic pricing and business ethics.

The following research question (RQ) is to achieve research objective (RO) 2:

**RQ 2**                    What is the relationship of dynamic pricing influenced by browsing history to business ethics?

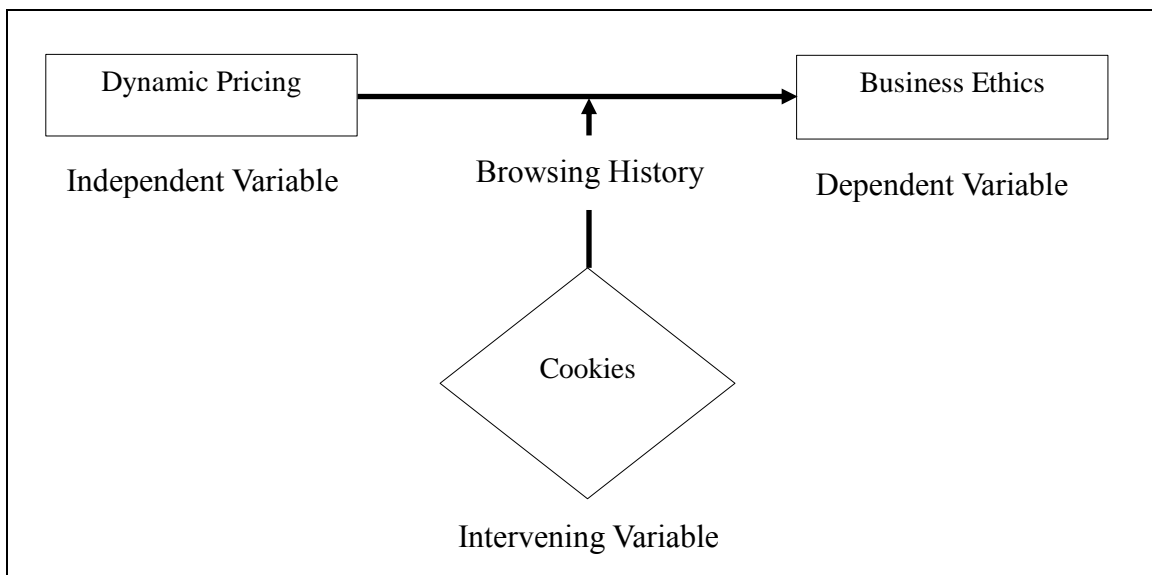
The following Hypothesis (H) are representing RQ2:

*Hypothesis 2o*            There is no relationship between dynamic pricing influenced by browsing history to business ethics.

*Hypothesis 2a*            There is a positive / negative relationship between dynamic pricing influenced by browsing history to business ethics.

**RO 2**                    To identify the relationship of dynamic pricing influenced by browsing history to business ethics.

Figure 1. Theoretical Framework of the relationship between Dynamic Pricing influenced by Browsing History to Business Ethics



## 5. Significance of Study

### A. Contribution to Practice: Reasons for Result is Important in the Field

In terms of practical contribution, this study provides public better perspective regarding the practice of pricing strategy in online business. Thus, it will improve the general public's future decision making. Secondly, this research may provide evidence on understanding the issue of computer cookies and the relationship with fairness and ethics. The evidence will provide e-commerce industry, better perspective regarding fairness and business ethics in relation to gain the customer trust. Besides that, regulators in the airline industry could use the evidence as a base to make policy changes on airlines' online pricing for future pricing strategy by the airline operators in line with consumer rights.

### B. Contribution to Theory: Reasons for Result is Important for Other Researchers

This research will contribute to academia in providing a general definition of business ethics which includes the use of browsing history on dynamic pricing that could be used across the board. It also expands the theories of distributive justice and rule-consequentialist ethics incorporating browsing history and business ethics. In addition, it will provide a broad theoretical framework on dynamic pricing relationship and provides quantitative perspective especially on business ethics to be further explored by future researchers.

## 6. Conclusion

Based on the literature review analysis and research gap, present literature lacks evidence on understanding the relationship between dynamic pricing influences by browsing history to business ethics. This provides an opportunity for a research to be conducted to explore the phenomenon. The study is expected to contribute to creating new knowledge on the impact of browsing history to the dynamic pricing to business ethics. Furthermore, the study also proposes a quantitative design on a theoretical framework which could be a significant contribution to academia. Ultimately, the phenomenon of global airlines operators worldwide has over pricing strategies especially on online booking provides the context for further exploration of the issue and the means to improve online booking in an ethical perspective.

## References

- Carsten Koch, (2010), "An ethical justification of profit maximization", *Society and Business Review*. Vol. 5. Iss 3 pp. 270 - 280
- Chavez, A. and Maes, P. (1996), "Kasbah: An agent marketplace for buying and selling goods", *Proceedings of the 1st International Conference on the Practical Application of Intelligent Agents and Multi-agent Technology*, London. pp. 75-90.
- Chen, Y. and Barnes, S. (2007), "Initial trust and online buyer behavior", *Industrial Management & Data Systems*. Vol. 107 No. 1, pp. 21-36.
- Corritore, C.L., Kracher, B. and Weidenbeck, S. (2003), "On-line trust: concepts, evolving themes, a model", *International Journal of Human-Computer Studies*. Vol. 58, pp. 737-758.
- Cox, J.L. (2001), "Can differential prices be fair?", *Journal of Product & Brand Management*, Vol. 10 No. 5, pp. 264-75.

- Elmaghraby, W. and Keskinocak, P. (2003), “Dynamic pricing in the presence of inventory considerations: Research overview, current practices, and future directions”, *Management Science*, Vol. 49 No. 10, pp. 1287-309.
- Fudenberg, D. and Tirole, J. (2001), “Customer poaching and brand switching”, *RAND Journal of Economics*, Vol. 31 No. 4, pp. 634-57.
- Gerard L. Rossy, (2011), “Five questions for addressing ethical dilemmas”, *Strategy & Leadership*, Vol. 39 Iss 6 pp. 35 - 42
- Gimeno, J. and Woo, C.Y. (1996), “Hyper competition in a multi-market environment: The role of strategic similarity and multi-market contact in competitive de-escalation”, *Organization Science*, Vol. 7 No. 3, pp. 322-341.
- Jennings, M.M. (2006), *The Seven Signs of Ethical Collapse: How to Spot Moral Meltdowns in Companies . . . Before It's Too Late*, St Martins Press, New York, NY.
- Kannan, P.K. and Kopalle, P.K. (2001), “Dynamic pricing on the internet: importance and implications for consumer behavior”, *International Journal of Electronic Commerce*, Vol. 5 No. 3, pp. 63-83.
- Kautz, H., Selman, B. and Shah, M. (1997), “Referral web: Combining social networks and collaborative filtering – An interactive system for restructuring, visualizing, and searching social networks on the web”, *Communications of the ACM* 40, Vol. 40 No. 3, pp. 63-5.
- Kephart, J.O., Hanson, J.E. and Greenwald, A.R. (2000), “Dynamic pricing by software agents”, *Computer Networks*. Vol. 32 No. 6, pp. 731-52.
- Kung, M., Monroe, K.B. and Cox, J.L. (2002), “Pricing on the internet”, *Journal of Product & Brand Management*, Vol. 11 No. 5, pp. 274-87.
- Martins, M. and Monroe, K.B. (1994), “Perceived price fairness: a new look at an old construct” in Allen, C.T. and John, D.R. (Eds), *Advances in Consumer Research*. Vol. 21. Association for Consumer Research, Provo, UT, pp. 75-8.
- Pitt, L.F., Berthon, P., Watson, R.T. and Ewing, M. (2001), “Pricing strategy and the net”, *Business Horizons*. Vol. 44, March/April, pp. 45-54.
- Reinartz, W.J. (2001), “Customising prices in online markets”, *European Business Forum*. Vol. 6, pp. 35-41.
- Robert A. Miller. (2014), “Profiles and Shadows in Business Ethics”, In *Moral Saints and Moral Exemplars Research in Ethical Issues in Organizations*, Volume 10, 97-115
- Roman, S. (2007), “The ethics of online retailing: A scale development and validation from the consumers’ perspective”, *Journal of Business Ethics*, Vol. 72 No. 2. pp. 131-48.
- Sangeeta Sahney, Koustab Ghosh, and Archana Shrivastava, (2013), “Conceptualizing consumer “trust” in online buying behaviour: an empirical inquiry and model development in Indian context”, *Journal of Asia Business Studies*. Vol. 7 Iss 3 pp. 278 – 298.
- Simon Lee, Abdou Illia, and Assion Lawson-Body (2011), “Perceived price fairness of dynamic pricing”, *Industrial Management & Data Systems*. Vol. 111 Iss 4 pp. 531 – 550
- Sundaram Nataraja and Abdulrahman Al-Aali, (2011), “The exceptional performance strategies of Emirate Airlines”, *Competitiveness Review: An International Business Journal*. Vol. 21 Iss 5 pp. 471 – 486
- Suter, T.A. and Hardesty, D.M. (2005), “Maximizing earnings and price fairness perceptions in online consumer-to-consumer auctions”, *Journal of Retailing*. Vol. 81 No. 4, pp. 307-17.
- The Star (2013), “MAS-AirAsia infringed Competition Act, fined RM10mil each”, Access on 6 May, 2015, from <http://www.thestar.com.my/Business/Business-News/2013/09/06/MASAirAsia-infringed-Competition-Act-fined-RM10mil-each/?style=biz>
- T.J. Hannigan, Robert D. Hamilton III, and Ram Mudambi. (2015), “Competition and competitiveness in the US airline industry”, *Competitiveness Review*. Vol. 25 Iss 2 pp. 134 - 155



- Weiss and Mehrotra (2001), “Online Dynamic Pricing: Efficiency, Equity and the Future of E-commerce”, Va. J. L. & Tech. 6, p.1.
- Yam B. Limbu Marco Wolf Dale L. Lunsford, (2011), “Consumers' perceptions of online ethics and its effects on satisfaction and loyalty”, *Journal of Research in Interactive Marketing*. Vol. 5 Iss 1 pp. 71 – 89.
- Youtube (2015), “How to get cheap airline ticket online”, Access on 5 May, 2015, from <https://www.youtube.com/watch?v=Mt9vRTUjNA0>

## Appendix

Table 1.

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No.	Contributory Factors to Formation of Consumer Trust for Online Buy Transaction
1.	<p><b><i>Prospective buyer</i></b></p> <p>Prior online experiences, consumers’ familiarity with online buying and resultant satisfaction develop consumers’ trust (Yoon, 2002; Chen and Barnes, 2007).</p>
2.	<p><b><i>Company competency</i></b></p> <p><u>Reputation.</u> Reputation of the company invokes trust in consumers (Resnick and Zeckhauser, 2001). A good reputation reduces the transaction risk involved in online buying (Constantinides, 2004).</p> <p><u>Willingness to customize.</u> The company’s willingness to customize has a positive relationship with consumers’ online trust and loyalty (Chen and Barnes, 2007) and further motivates consumers to buy online (Koufaris and Hampton-Sosa, 2004).</p> <p><u>Size.</u> It is believed that the larger a company, the more capable it is and better at fulfilling demands (Jarvenpaa et al., 2000; Chen and Barnes, 2007) and increasing their online trust (Koufaris and Hampton-Sosa, 2004).</p>
3.	<p><b><i>Web site competency</i></b></p> <p><u>Private and security.</u> Security and privacy elements are key drivers of online trust (Hoffman et al., 1999).</p> <p><u>Web site design.</u> A web site with good graphic design in terms of structure and content, as well as easy and quick navigation attracts potential buyers; navigation is an important aspect of web site design (Sultan et al., 2002).</p> <p><u>Reliability.</u> Reliability of a web site is measured in terms of credibility and consistency of service leading to customer loyalty.</p> <p><u>Ease of use, hedonic pleasure and perceived usefulness.</u> The easier the technology is to use, the more likely the consumer is to trust the organization behind it (Corritore et al., 2003).</p> <p><u>Legal and regulatory compliance.</u> The web site’s adherence to legal and regulatory norms, through acceptance and commitment of government regulation regarding misuse of personal and financial information, also lead to consumers’ trust in the web site.</p>
4.	<p><b><i>Process attributes</i></b></p> <p><u>Transaction security, data safety and privacy.</u> The web site owner must make clear promises at their sites and take measures to prevent misuses of data, be it personal or financial.</p>

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