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The Security of Transactions on E-Commerce as Media Business

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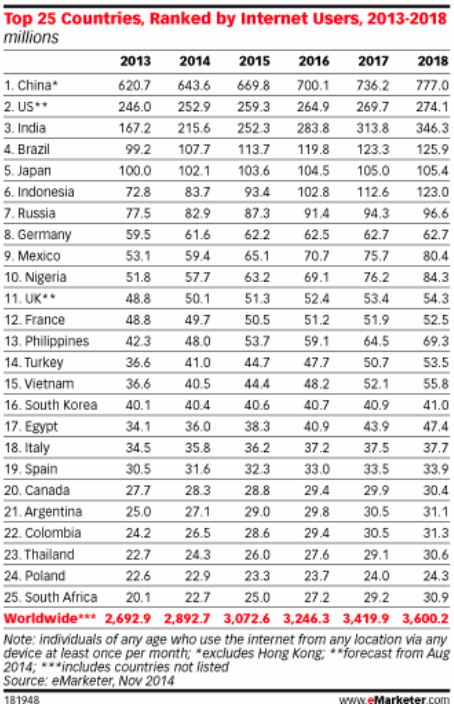
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Abstract. The purpose of this study is to analyses how the security of buying and selling on the site Tokopedia.com amid rampant online sales site that now comes with many excellent features. The method used was a qualitative research method, purely descriptive. Qualitative research is a study that does not use statistics, but through data collection, analysis, and then interpreted, the results of this study are to provide convenience to the public, especially in the field of business and provide comfort and security for the sale and purchase.

1. Introduction

Technology and information in this modern era, is now growing and providing positive benefits for everyone, especially the internet. The Internet is a global communication network that connects all computers in the world. Through the internet, people can spread information and delivery quickly. It can make people in the world using technology and information efficiently and easily only through the internet media. Some survey data show who is using the internet today. From various circles, professions, and gender. Based on a survey conducted by eMarketer, the number of internet users in Indonesia now reaches 100 million more people, which is ranked 6th in the world. It shows that the internet has become a basic human need other than clothing, food and boards. With that, Internet users and technological developments that allow access to information and communication is an opportunity that is used by some as a business media. In the digital era now, doing business is no longer done directly. However, it can be done through internet media that is e-commerce doing business with merchandise and merchandise in e-commerce. This type of market is now in high demand by the public. It is due to accessibility, time efficiency and cost that can be used by using internet media. (See Figure 1)

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Top 25 Countries, Ranked by Internet Users, 2013-2018
millions

	2013	2014	2015	2016	2017	2018
1. China*	620.7	643.6	669.8	700.1	736.2	777.0
2. US**	246.0	252.9	259.3	264.9	269.7	274.1
3. India	167.2	215.6	252.3	283.8	313.8	346.3
4. Brazil	99.2	107.7	113.7	119.8	123.3	125.9
5. Japan	100.0	102.1	103.6	104.5	105.0	105.4
6. Indonesia	72.8	83.7	93.4	102.8	112.6	123.0
7. Russia	77.5	82.9	87.3	91.4	94.3	96.6
8. Germany	59.5	61.6	62.2	62.5	62.7	62.7
9. Mexico	53.1	59.4	65.1	70.7	75.7	80.4
10. Nigeria	51.8	57.7	63.2	69.1	76.2	84.3
11. UK**	48.8	50.1	51.3	52.4	53.4	54.3
12. France	48.8	49.7	50.5	51.2	51.9	52.5
13. Philippines	42.3	48.0	53.7	59.1	64.5	69.3
14. Turkey	36.6	41.0	44.7	47.7	50.7	53.5
15. Vietnam	36.6	40.5	44.4	48.2	52.1	55.8
16. South Korea	40.1	40.4	40.6	40.7	40.9	41.0
17. Egypt	34.1	36.0	38.3	40.9	43.9	47.4
18. Italy	34.5	35.8	36.2	37.2	37.5	37.7
19. Spain	30.5	31.6	32.3	33.0	33.5	33.9
20. Canada	27.7	28.3	28.8	29.4	29.9	30.4
21. Argentina	25.0	27.1	29.0	29.8	30.5	31.1
22. Colombia	24.2	26.5	28.6	29.4	30.5	31.3
23. Thailand	22.7	24.3	26.0	27.6	29.1	30.6
24. Poland	22.6	22.9	23.3	23.7	24.0	24.3
25. South Africa	20.1	22.7	25.0	27.2	29.2	30.9
Worldwide* **	**2,692.9**	**2,892.7**	**3,072.6**	**3,246.3**	**3,419.9**	**3,600.2**

*Note: individuals of any age who use the internet from any location via any device at least once per month; *excludes Hong Kong; **forecast from Aug 2014; ***includes countries not listed*
Source: eMarketer, Nov 2014

181948 www.eMarketer.com

Figure 1. Internet user rating.

Since the launch of Tokopedia.com site officially on August 17, 2009, Tokopedia.com became one of the selling and selling sites that are widely accessed by the public, especially in Indonesia. According to survey data obtained by CNN Indonesia, Tokopedia was ranked 2nd with a total of 39.6 million visitors. It is undoubtedly an excellent opportunity for sellers to get more sales results and become more accessible for buyers in finding and getting the desired product. Tokopedia allows anyone who has a product or service to open and shop the shop for free, secure and comfortable with a variety of features provided complete and practical. The advantage of e-commerce utilisation as a business medium with this marketplace type of seller does not need to create a site or personal online store. This security system is very influential on the trust between sellers and buyers when making transactions. Online buying and selling activities are very vulnerable to crime and fraud. Therefore, a lousy transaction security system will harm both parties, resulting in loss of interest of the community to transact online. Recently the use of public key encryption to provide secure network communication has received considerable attention [1] and the current approaches to counter this problem are evaluated, and their relevance for secure electronic transactions is discussed [2]. Perceived service quality was found to have a significant impact on customer satisfaction, especially for security [3].

S M Furnell and T. Karweni explains checking the general requirements for security technologies to provide a basis for trust in e-commerce environments. This discussion is supported by findings from two surveys, conducted by the authors, among the general internet users (ie potential consumer targets) and commercial businesses. This survey considers both attitudes toward e-commerce in general and opinions related to related security requirements. Efforts are also made to assess respondents' knowledge of existing security safeguards that can be applied. Survey results show that, while there are significant concerns amongst Internet-based consumers about the safety of their purchasing activities, this is greater than the benefits offered by the media. The results also indicate a lack of awareness or understanding of available security technologies and concluded that addressing these issues will help build a broader foundation of trust in new technologies [4]. Ramhnat and Paul explain, Electronic Commerce (EC) transactions are subject to various information security threats. Propose that consumer trust in EC transactions is affected by perceived information security and distinguish it from objective assessments of security threats. Propose encryption, protection, authentication, and verification mechanisms as

perceived information security antecedents. This mechanism stems from technological solutions to the security threats seen by consumers and thereby contribute to an actual consumer perception. Testing the proposition in a study of 179 consumers and showing a significant relationship between perceived consumer information security and trust in EC transactions. Excavate the role of limited financial liability as a substitute for perceived security. However, the findings suggest that there is minimal effect of financial obligations on consumer confidence in the European Commission. Create some new insights regarding the perceived security role in EC transactions. While the growth of business-to-consumer electronics trade seems phenomenal in recent years, several studies show that a large number of people using the Internet have serious privacy issues, and that winning public confidence is a major hurdle for sustained growth in e-commerce [6] Today's dynamic and volatile business environment has forced competing companies in the global market to change their traditional methods of doing business [7].

Researchers on the use of the Internet and its relevance to security, Bomil and Ingoo explain the number of Internet users has increased dramatically, but many are reluctant to provide sensitive personal information to websites because they do not trust e-commerce security. This paper examines the impact of customer perceptions of security control on e-commerce acceptance. Trust is examined as research for sensitive information such as financial information. Internet banking user survey collected 502 cases. Statistical analysis, using structural equation modeling, suggests that nonrepudiation perceptions, privacy protection, and data integrity have a significant impact on trust in e-commerce. Trust also has a significant impact on e-commerce acceptance. Implications and direction of further research are presented [8]. In addition, according to Anthony and Ana Government and industry organizations have declared information and security privacy as a major obstacle in the development of consumer-related e-commerce. Risk perceptions about Internet privacy and security have been identified as facts. This paper explores the perceptions associated with online shopping activities. These findings provide evidence of a hypothesized relationship between the level of consumer Internet experience, the use of alternative long-distance purchasing methods (such as telephone and mail-order shopping), perceived risk from online shopping, and online purchasing activities. Implications for online trading and consumer welfare are discussed [9]. Social media technologies not only provide a platform for entrepreneurs to innovate but also enhance new issues for e-commerce [10]. Based on our previous research on material properties. The purpose of this study is to analyze how to buy and sell security at Tokopedia.com site. The method used is qualitative research method, purely descriptive to analyze the condition about the security.

2. Methods

The research method used descriptive qualitative research method. Then collect some data with the documentation method, by analysing the official website Tokopedia.com as well as some related articles.

3. Results and Discussion

Tokopedia.com is an online buying and selling website established on February 6, 2009, by William Tanuwijaya, a student from Indonesia who has completed his studies at Bina Nusantara University. Tokopedia.com then released on August 17, 2009, and successfully provide business opportunities online with revenue reaching 250 billion rupiahs.

This online buying and selling site has a full range of features that make it easy for sellers and buyers alike. The view was user-friendly so that users have no difficulty in accessing this Tokopedia.com website page. The seller sells merely the product by uploading and providing a description of the product. The products offered range from home appliances, electronic devices, musical instruments, clothing, food, beverages, body treatments, to digital products such as transportation tickets, bill payments, pulses and zakat are also available on this online sale site. In addition to a variety of products, Tokopedia offers relatively more affordable prices compared to conventional stores and other online selling sites. From different conventional stores, the transaction process is offered only limited cash and debt. As for who offers credit, but the transaction process is indeed more complicated. Tokopedia provides a variety of practical payment methods and allows buyers to make transactions. The process of

ordering products and transactions can be done anywhere and anytime because Tokopedia is accessible via the internet by using a computer or smartphone device. Here is a view of the main page of Tokopedia.com online buying and selling site. (See Figure 2)

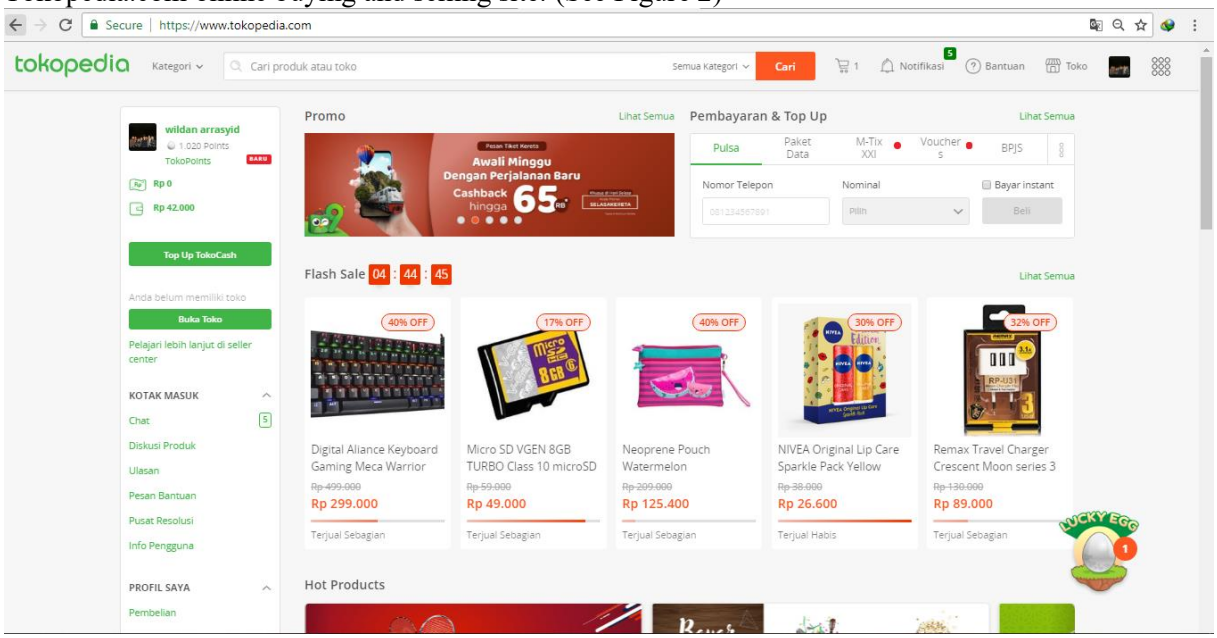


Figure 2. Main page.

On this page, there are various menus and submenus, search columns and promo columns. Both buyers and sellers can change user profile information as desired. Some products that use the TopAds feature will be displayed on this page so that buyers can immediately see without searching in the search field first. Also, the seller was benefited because the product is displayed on the main page where all users access the page. In this study, the author will only discuss the process of buying and selling transactions in Tokopedia.com as well as security guaranteed by the site in making sale and purchase transactions. (See Figure 3)

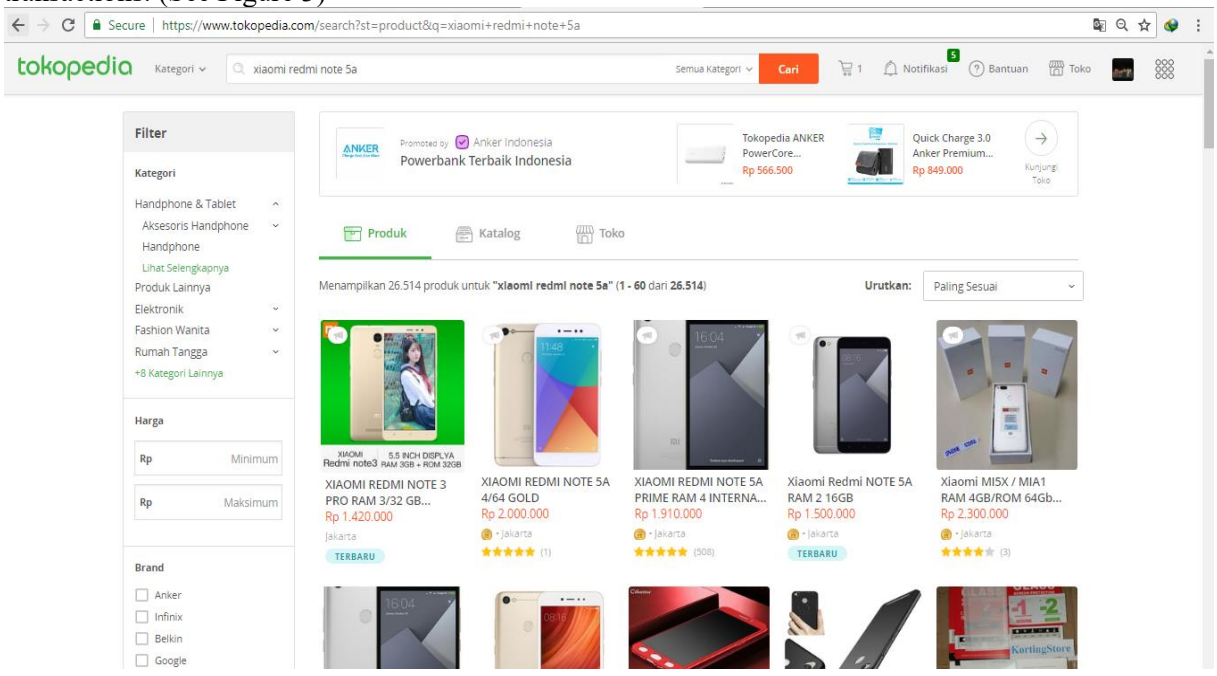


Figure 3. Display product pages by search.

The transaction will start when the buyer types in the product name in the search field, then a few relevant products appear with the keyword word or product name in the search field. The product is displayed along with the price and name of the store that sold the product. On this page also listed the reputation of a shop that sells products so that buyers can choose which store is more reliable. Figure 3. Views of product pages by search. (See Figure 4)

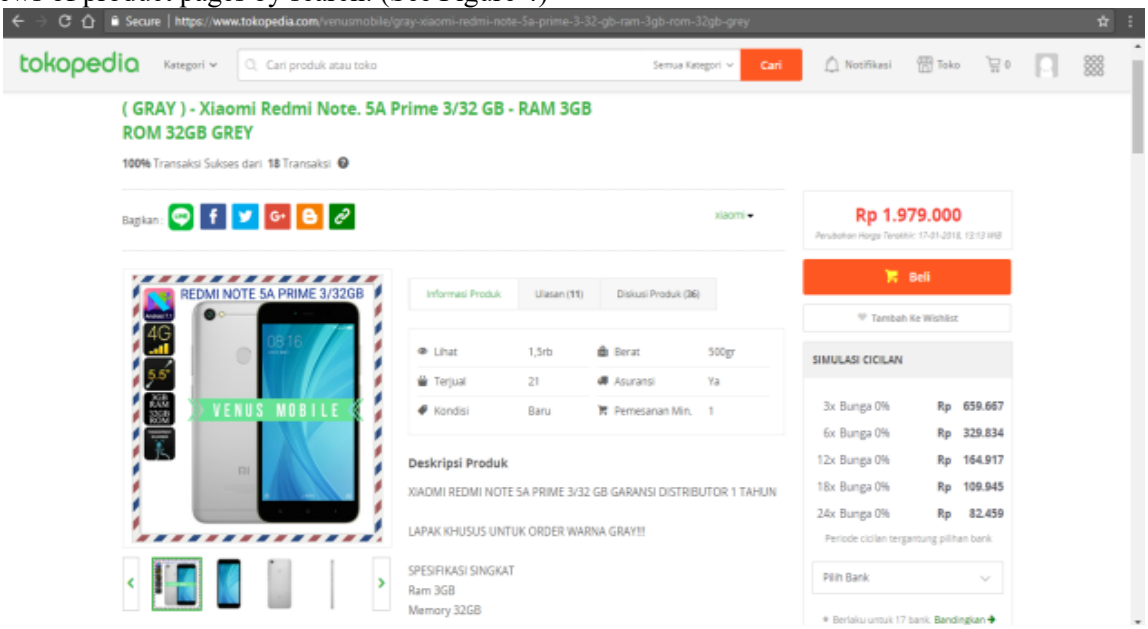


Figure 4. Display product information page.

The next stage buyers find the desired product. Buyers choose the product to be purchased. On this page, there is information about products such as specifications, prices, and some reviews from buyers who have already made transactions in the store. Some reviews about the product in the store may affect the buyer's interest and how secure the transactions are in the store. (See Figure 5)

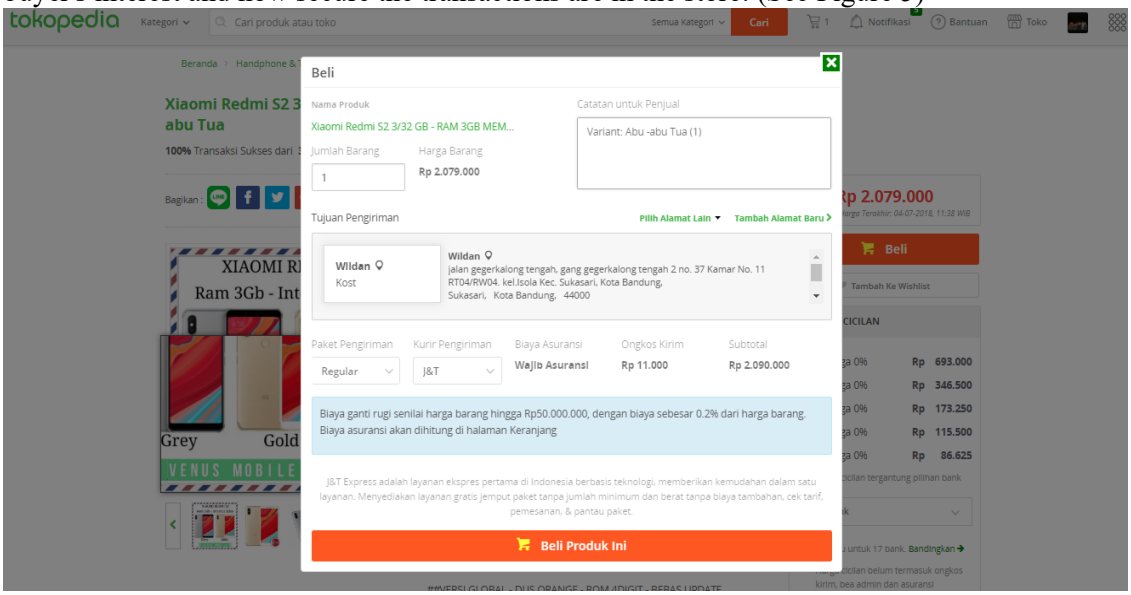


Figure 5. The page display process of ordering data entry.

On this page, the buyer fills in the address data, the courier type, the product number and the product details typed in the note column. Besides, there are details of the fee and the amount of money to be paid. After completing the complete data, the buyer proceeds to the payment process.

Tokopedia.com provides several payment methods including:

- Tokopedia Balance
- Credit Card / Installment
- Bank Transfer
- Virtual Account
- Instant Payments such as KlikBCA, BNI SMS Payment.
- Retail Stores such as Alfamart and Indomaret.

All payment transaction process using account owned by PT. Tokopedia so that security is guaranteed. In the event of any adverse transactions between the buyer and the seller, Tokopedia guarantees refunds or goods for convenience between the buyer and the seller. Here are the details of the account owned by PT. Tokopedia used for payment transfer method. (See Table 1)

Table 1. List of Account Number PT. Tokopedia.

Bank	Kantor Cabang	No. Rekening
BCA	Cab. Kedoya Permai	372 177 3939 372 178 5066 372 309 8781
	Cab. Permata Hijau	178 303 7878
Bank Mandiri	Cab. Kebon Jeruk	1650030073333 1650070070017
	Cab. Permata Hijau	102-00-0526387-3
BNI	Cab. Kebon Jeruk	800 600 6009
BRI	Cab. Kebon Jeruk	037 701 000 692 301 037 701 000 435 301
CIMB Niaga	Cab. Tomang Tol	1770100731002

If the order and transaction process is completed, Tokopedia will give the ordering time of the product. Tokopedia will automatically cancel the transaction and refund the funds if Seller does not respond to the order until the response time (2 days) and Seller does not confirm your order delivery until the response time (4 working days). (See Figure 6)

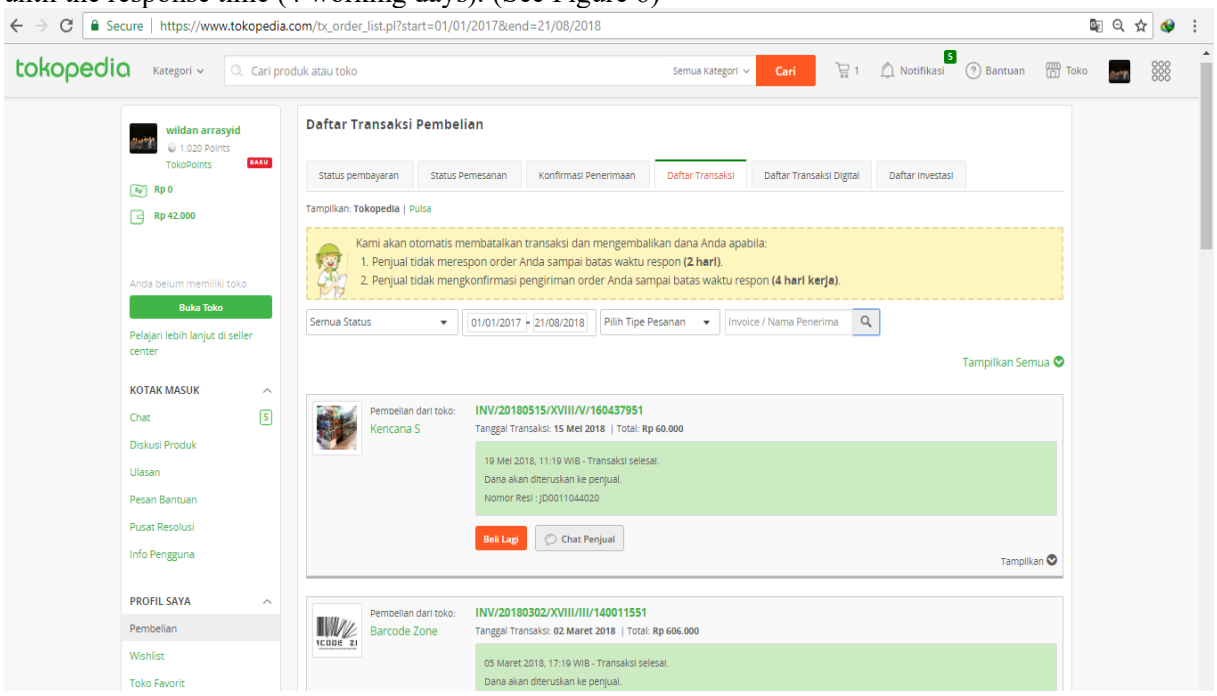


Figure 6. Display the transaction page.

Tokopedia provides convenience and security in transactions by providing payment status feature, order status, order confirmation and transaction details so that buyers do not have to hesitate in transacting on this trading site because all the transaction process in detail displayed on the page. (See Figure 7).

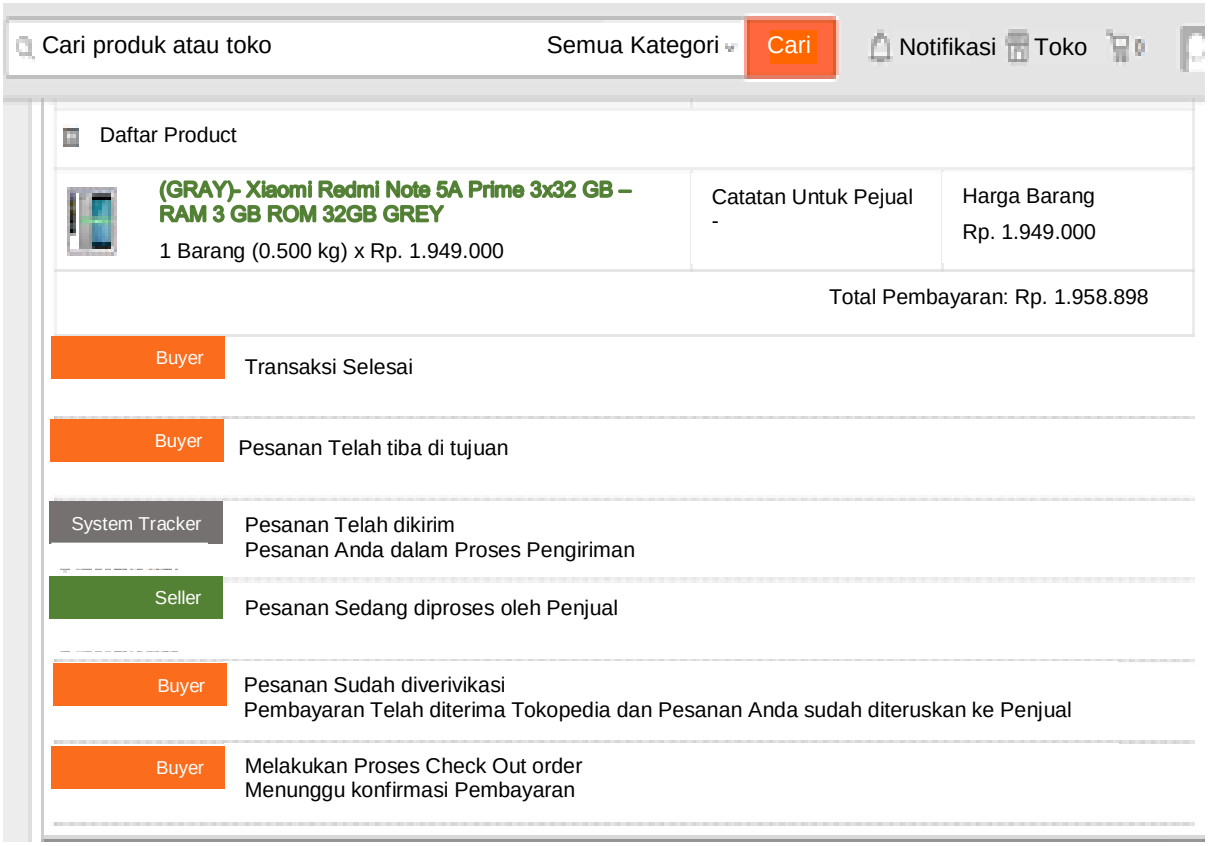


Figure 7. Display the transaction page.

In the detail page, this transaction shows in detail how the process of goods sent from the seller until received by the buyer. This feature indeed provides comfort and safety for the buyer because the buyer easily tracks the existence of the product he bought so that the possibility of small sellers to commit fraud by not sending goods that have been paid by the buyer. Therefore buyers no longer worry that the product he bought not to the purpose and money which has been paid is lost because Tokopedia guarantees the refund and will not give the proceeds to the seller if the buyer has not received the product. The seller will not feel disadvantaged by the buyer who is likely to commit an online crime. After all transaction processing is completed, the buyer is required to confirm receipt of goods so that the seller can receive the result of the sale of the product. If the buyer does not confirm receipt of goods for approximately five days, but the purchased item has been received, Tokopedia will automatically confirm that the goods have reached the destination and the seller is entitled to receive the proceeds from the sale of the product.

4. Conclusions

Based on the research that the current information technology provides convenience to the public, especially in the field of business. Also, buyers make it easy to shop and feel secure in making transactions because Tokopedia uses an individual account for fund transfer, so buyers do not worry about the possibility of fraudulent actions. For sellers, the advantage is that they can open a store for free without any commission requested by Tokopedia. Because Security in transactions is now a necessary thing, it is considered by prospective buyers in choosing where to shop.

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