The Effect of Demographic Factors on Intentions to Buy Domestic Products: Evidence from Indonesian Consumer

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Abstract

Free trade agreement between Indonesia and other countries created a threat for domestic entrepreneurs. Domestic products must face more intense competition in their own domestic markets because the Indonesian market is filled with imported products. This research aims to understand the effect of Indonesian consumer demographics on intentions to buy domestic products. This research decrypted the intentions of Indonesian to purchase domestic products based on demographic factors. The research method was a survey using a questionnaire. Samples were taken using judgment-sampling. There were 204 respondents involved in this research. This research found that Indonesian consumers’ gender and income influenced their intentions to buy domestic products. In contrast, age and education did not affect their intentions to buy domestic products.

Keywords: consumer demographic; intentions to buy; domestic product; consumer education.

1. Introduction

1.1. Background

International trade has entered a globalization era. It is marked by the rising number of Free Trade Agreements (FTAs), bilaterally or regionally. In 2010, the number of FTAs reached 221 [1].
It climbed from 69 in 2002. Figure 1 illustrates the growth of FTA from 1991 to 2010. Indonesia, as part of the international world, is also involved in many free trades, which include ASEAN-China in 2004, ASEAN-South Korea in 2007, ASEAN-Australia-New Zealand in 2010, ASEAN-India in 2010, Indonesia-Japan (IJ-EPA) in 2010 [2].

![Figure 1: The number of FTA 1991 – 2010](source: Study of Widyasanti [1])

FTA became increasingly accepted by countries because they brought comparative advantages for their members [3]. Their existence also created opportunities and threats for all countries involved. Domestic products have opportunities to be market in the international market, but domestic markets become more competitive [4]. For Indonesia, the existence of FTA encourages the infiltration of domestic products into international markets. On the other hand, Indonesia's domestic market is flooded by imported products.

1.2. Problem definition and research purpose

The increase in Indonesia's FTAs with various countries has pushed the volume of imported products. Data from Indonesia Statistics show that the value of imported products rises from 2000 to 2015 both in oil and gas and non-oil and gas [5]. Figure 2 depicts this growth. In 2000, the total value was $33,514.8 (oil and gas = $6,019.5; non-oil and gas = $27,495.3). In 2015, it became $142,695 (oil and gas = $24,613.2; non-oil and gas = $118,082). Figure 2 also shows that from 2000 to 2015, the non-oil and gas imports rose more significantly compared to their oil and gas counterpart. The value of consumer goods also tended to rise. It was $2,718.70 in 2000. It rose to $10,876.50 in 2015. Two types of consumers' goods rose during the 2000-2015 period, (1) foods and beverages, and (2) fuels and processed lubricants. The growth can be seen in Figure 3.
Based on the data, it can be seen clearly that the FTAs encouraged imports. Indonesia’s domestic market is flooded with products from other countries. The competition in Indonesia’s domestic market was getting fiercer. The probability of domestic products failing in their own markets was getting higher. So that the presence of FTA does not harm domestic products, it is important to educate consumers about the priority of buying domestic products. The consumer education is expected to help sales of domestic products, so that domestic products can compete with imports.
products can compete with imported products. The consumer education related to buying domestic product was conducted by some countries, for example Australia with ‘Go local First’ [7], United Kingdom with ‘Buy British’ [8], United States of America with ‘Buy American’ [9], and Malaysia with ‘Beli Barangan Malaysia’ [10]. In Indonesia, the government has also conducted consumer education program on the importance of buying domestic products. The education program is a “100% Cinta Indonesia” program. This educational program was launched in 2009 by the Ministry of Trade of the Republic of Indonesia. The education program is a non-formal education program that aims to increase the appreciation and pride of the Indonesian people in buying domestic products [11]. Even though the education program has been running for a long time, in reality, domestic products have not been able to increase the overall purchase of domestic products. Various researchers also support consumer education about the importance of buying domestic products [12 – 14]. One of the efforts that can be made to increase the purchase of domestic products in Indonesian market is understanding of Indonesian consumers. The importance of understanding consumers has also been supported by experts [16 – 18]. Therefore, a study that investigates how Indonesian consumers perceive domestic products is needed. The result can capture how Indonesian consumers view domestic products. One way to study consumers’ perceptions was to examine the relationship between consumers’ demographic profiles and their intentions to buy domestic products. By studying this relationship, we can map consumers’ perceptions of domestic products based on demographic factors [18]. Unfortunately, there is no current study that focused on this relationship in Indonesia. We were interested in studying the relationship between demographic factors and consumers’ intentions to buy domestic products. This research aims to map the demographic profiles of Indonesian consumers based on their intentions to buy domestic products. This research is essential because mapping consumers’ intentions can help government to improve consumer education program and local businesses to target more specific parts of the population when marketing their products.

2. Literature Review & Hypotheses

2.1. Buyers’ decision-making process

In consumer behavior, one of the most important concepts to learn is the consumers’ decision-making process [19]. This concept was important because it would inform us of why and when a consumer bought a product [19]. Aside from that, it would also inform us of consumers’ buying process [20].

![Figure 4: Buyers’ decision-making process](source: Solomon [19])

Generally, the decision to buy refers to the mechanism of how a consumer actually buys a product [21]. According to the author in [19], there are four steps that a consumer went through before he or she decided to buy a product (see Figure 4). The first step is problem recognition. This stage happens when consumers feel that...
there are problems in their life. They would try to fix it and arrive at the second step, which is an information search. They actively search for information related to products or services that could fulfill their needs and wants (i.e., solving their problems). The search might start from asking around (in family circles, friends, or experts), reading print media, or online media. The third step is the evaluation of alternatives. This is the point when consumers evaluate products or services available to them. They usually compare those products. The last step is the actual process of choosing a certain product [19].

2.2. Intentions to Buy

Intentions to buy is an essential concept in consumer behavior literature [19]. This concept determines how consumers decide to buy a product. Furthermore, it extended to The Theory of Reasoned Action (TRA) [22] or the Theory of Planned Behaviour (TPB) [23], which explain that consumers’ intentions to buy has a significant positive impact on their buying decisions. In other words, a higher intention to buy would lead to a higher probability of actual purchase. These theories are still being discussed and studied in consumer behavior literature [19, 21, 24]. In the consumer behavior literature, the concept of intentions to buy was defined as the accumulation of consumers’ intentions to buy a product in the future, repurchase the product, or connect with that particular product [25]. Furthermore, the authors in [25] explained that consumers’ intentions were related to four issues: having a plan to buy, having no doubt to buy a product, having an intention to buy in the future, and buying the product lines. The authors in [26] added that the buying phenomena was projected by consumers’ attitudes toward it. In the context of this research, the intention to buy is defined as consumers’ plans, projected by their attitudes, to buy domestic products.

2.3. Demographic Factors and The Intention to Buy Domestic Products (Ethnocentrism)

In their buying process, consumers are affected by many factors. One of them was their demographic profile [19, 21, 24]. This profile contains sex, age, income bracket, and education level [18]. Previous researchers stated that demographic factors impacted buyers’ behaviors [27 – 30]. Others went further by acknowledging that this relationship also works in the context of domestic products [31 – 33]. Several previous studies have found that female consumers have higher ethnocentrism compared to male consumers [18, 34, 35]. Studies by the authors in [36] found that compared to their male counterparts, female consumers have better attitudes toward Canada’s domestic products. A similar tendency was also happening in the United States [37]. Thus, this study’s first hypothesis is:

H₁: Female consumers have higher intentions to buy domestic products compared to male consumers

Another demographic factor that needs to be considered is age. Previous research found that age might have an important role in consumers’ decisions to buy domestic products [31]. Older people tend to be more ethnocentric and buy more domestic products [18]. Some researchers also concurred [38 – 41]. Thus, the second hypothesis is:

H₂: Age positively affects consumers’ intentions to buy domestic products
Several studies stated that someone’s level of education affected their judgment [27, 28, 40]. The author in [18] found that higher education tend to buy domestic products. This is because they tend to be less conservative [35 – 42] and more appreciative of their countries [35 – 43]. The third hypothesis is:

\[ H_3: \text{Level of education positively affects consumers’ intentions to buy domestic products} \]

Income is an important predictor of consumers’ intentions [27, 28]. Specifically, the author in [18] stated that higher income led to less ethnocentrism. People with high income usually like to travel abroad and try new products [35]. A similar sentiment was also stated by the authors in [38]. The fourth hypothesis is:

\[ H_4: \text{Level of income negatively affects consumers’ intentions to buy domestic products} \]

3. Research Method

Figure 5 depicts this study's research process. This is a quantitative study using a survey to collect data. This research used a questionnaire as an instrument. There were two aspects measured in this research, demographic variable, and consumers’ intentions to buy domestic products.

![Research process diagram](image)

**Figure 5:** Research process

3.1. Questionnaire

This research collected data on five variables, which were sex, age, level of education, level of income, and intentions to buy domestic products. From those five, one was a latent variable, which could not be measured directly and must be assessed using two or more indicators [44]. In this research, intentions to buy domestic products were assessed using measurement adopted from the authors in [45]. The operationalization of the variable can be seen in Table 1.

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>If available, I would like to buy products made in Indonesia.</td>
</tr>
<tr>
<td>2.</td>
<td>I am going to buy products made in Indonesia even though imported products with the same quality and price are available.</td>
</tr>
<tr>
<td>3.</td>
<td>There is a probability that I would buy products made in Indonesia.</td>
</tr>
<tr>
<td>4.</td>
<td>I tend to buy products made in Indonesia.</td>
</tr>
</tbody>
</table>
3.2. Data Collection

This research investigates Indonesian consumers' intentions to buy domestic products. Thus, the population is the entire Indonesian citizens. According to Statistics Indonesia, the 2010 census showed a population of 237,641,326 people [46]. Since the number was exceptionally large, this study decided to pull samples using judgment-sampling technique. According to the authors in [47], this technique was based on criteria determined by the researcher. The criterion was Indonesian citizen aged 18 or above. The researcher chose this criterion because citizens aged 18 or above were considered as adults. This is also aligned with the national regulation UU 13/2003. Central Jakarta was chosen as the data collection site because its residents are heterogeneous, which was a suitable representative of Indonesia. According to Slovin's formula in [48], the appropriate number of samples was 204 (margin-of-error = 7 %). The demographic profile can be seen in Table 2.

Table 2: Demographic profile

<table>
<thead>
<tr>
<th>Demographic Categories</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Male</td>
<td>94</td>
<td>46</td>
</tr>
<tr>
<td>• Female</td>
<td>110</td>
<td>54</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• 18 – 30</td>
<td>94</td>
<td>46</td>
</tr>
<tr>
<td>• 31 – 40</td>
<td>47</td>
<td>23</td>
</tr>
<tr>
<td>• ≥ 41</td>
<td>63</td>
<td>31</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• No education/only primary school</td>
<td>68</td>
<td>33</td>
</tr>
<tr>
<td>• Junior high school</td>
<td>38</td>
<td>19</td>
</tr>
<tr>
<td>• High school</td>
<td>69</td>
<td>34</td>
</tr>
<tr>
<td>• University education (under-/postgraduate)</td>
<td>29</td>
<td>14</td>
</tr>
<tr>
<td>Income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• &lt;Rp2,400,000</td>
<td>41</td>
<td>20</td>
</tr>
<tr>
<td>• Rp2,400,000 – Rp3,599,999</td>
<td>82</td>
<td>40</td>
</tr>
<tr>
<td>• ≥Rp3,600,000</td>
<td>81</td>
<td>40</td>
</tr>
</tbody>
</table>

3.3. Data Analysis

This study conducted several analyses, which were item-to-total correlation, Cronbach’s Alpha, and ANOVA (analysis of variance). Item-to-total correlation was used to test the validity of the research instrument with a latent variable [49]. The validity test assessed how well an instrument measured the intended concept [47]. The Cronbach’s Alpha evaluated the reliability (i.e., consistency) of the research instrument [47, 49]. Hypotheses were tested using ANOVA [39]. This study used SPSS.

4. Results & Discussions

4.1. Validity Test

The result of the validity test can be seen in Table 3. Based on the item-to-total correlation, the indicators for consumers’ intentions were valid. The analysis showed that each indicator has a positive and significant correlation with the total value. Table 3 shows the factor loadings for all indicators, which are KB1=0.593; KB2=0.719; KB3=0.687; and KB4=0.634. The results show that the indicators are accurate for measuring consumers’ intentions to buy domestic products. Cronbach's Alpha stated that the research indicators were
reliable. The value of Cronbach’s Alpha for consumers’ intention to buy domestic products was 0.564. According to the authors in [50], any value between 0.5 and 0.7 mean that the instrument was moderately reliable. On the other hand, the instrument used in this research was consistent.

Table 3: The results of the validity test

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Factor Loading (Sig.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>KB1</td>
</tr>
<tr>
<td>KB1</td>
<td>5.0</td>
</tr>
<tr>
<td>KB2</td>
<td>6.0</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
</tr>
<tr>
<td>KB3</td>
<td>7.0</td>
</tr>
<tr>
<td></td>
<td>(0.004)</td>
</tr>
<tr>
<td>KB4</td>
<td>8.0</td>
</tr>
<tr>
<td></td>
<td>(0.348)</td>
</tr>
<tr>
<td>TKB</td>
<td>9.0</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
</tr>
</tbody>
</table>

TKB = Total value KB1 – KB4

4.2. Hypotheses Tests

The first hypothesis test found that there was a significant difference between male and female consumers regarding their intentions to buy domestic products. $H_1$ is accepted. The p-value was below 5% (0.011) or the $F_{test}$ (6.576) was higher than the $F_{table}$ (3.89). The difference between female and male consumers can be seen in Figure 6. Female consumers have higher intentions to buy domestic products compared to males. The value difference between males and females was 0.16.

Table 4: The result of ANOVA

<table>
<thead>
<tr>
<th>Variables</th>
<th>Sum-of-squares</th>
<th>df</th>
<th>Mean-square</th>
<th>$F_{test}$</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>1.456</td>
<td>1</td>
<td>1.456</td>
<td>6.576</td>
<td>0.011</td>
</tr>
<tr>
<td>Age</td>
<td>0.752</td>
<td>2</td>
<td>0.376</td>
<td>1.664</td>
<td>0.192</td>
</tr>
<tr>
<td>Level of education</td>
<td>0.431</td>
<td>3</td>
<td>0.114</td>
<td>0.628</td>
<td>0.598</td>
</tr>
<tr>
<td>Income</td>
<td>1.960</td>
<td>2</td>
<td>0.980</td>
<td>4.454</td>
<td>0.013</td>
</tr>
</tbody>
</table>
For hypothesis 2, this study found that age did not affect consumers’ intentions to buy domestic products. The significance of p-value (0.192) was higher than 5% and the $F_{\text{test}}$ (1.664) was lower than the $F_{\text{table}}$ (3.89). $H_2$ was rejected. Figure 7 shows consumers’ intentions to buy domestic products based on their age brackets. The differences were not statistically significant. Consumers aged 31 to 40 have the highest intentions to buy domestic products.

The third hypothesis was rejected. The level of education has no impact on consumers’ intentions to buy domestic products. The significance of p-value (0.598) was higher than 5%, and the $F_{\text{test}}$ (0.628) was lower than the $F_{\text{table}}$ (3.88). The mean values of consumers’ intentions categorized by level of education can be seen in Figure 8. The chart shows that there were no statistically significant differences between the groups. However, the chart also implies that consumers’ intentions to buy domestic products trend up along with the level of education.
Unlike previous studies, this research found that level of income has a positive impact on consumers' intentions to buy domestic products. The p-value (0.013) was lower than 5%, and the F_{test} (4.454) was higher than the F_{table} (3.88). The H_0 was rejected. This research concluded that a higher level of income led to higher intentions to buy domestic products.

This research shows that female consumers have higher intentions to buy domestic products compared to male consumers. This finding aligns with previous studies [18, 35]. They concluded that women tended to be more ethnocentric. Several researchers found that women have more positive perceptions toward domestic products compared to men [36, 37], which might be because women were more conservative [51] and patriotic [52]. The authors in [53] added that compared to men, women pay more attention to their social environment. This research also found that there were no differences across age groups and level of education. The authors in [35, 38] also came to the same conclusion. However, unlike previous studies, this research discovered that level of
income positively correlates with consumers’ intentions to buy domestic products. The authors in [27, 28, 35, 38] found the opposite. It might happen because in this globalization era, many imported products offered more affordable prices compared to domestic products, and people with lower income levels were more sensitive to price. Consequently, people in lower-income brackets might prefer cheap imported products.

4.4. Implications

Based on the findings of this study, we suggest several research implications. First, for the government, consumer education program regarding the invitation to buying domestic products needs to be encouraged consistently. This is because the intention to buy domestic product is not at a high level. Furthermore, the consumer education should also be intensified to the man segment and low education. This is because these segments have a lower level of intention than other segments. Second, for local business, it is important to take demographic profiles into consideration when they market their products in Indonesia. Specifically, businesses must understand their target market correctly, especially in segmenting their markets based on gender. If a business would like to market its products to both male and female potential consumers, it must create a custom marketing strategy for each. Furthermore, businesses that target consumers in the lower-income bracket must be able to offer competitive prices relative to the imported products. They should consider implementing total quality management that focuses on production cost efficiency without sacrificing product quality.

5. Conclusion

One of the threats that must be faced by Indonesia in its FTA with other countries was the flood of imports. The competition between local and imported products in the domestic market became more ferocious. This research aims to assess the different levels of consumers’ intentions to buy domestic products based on demographic factors. This research concluded that female and male consumers and people with different income levels have diverse levels of intentions to buy domestic products. Female consumers have a greater intention than male consumers to buy domestic products. In addition, level of income positively affects consumers’ intentions to buy domestic products. On the other hand, no differences were found across different age brackets and levels of education. Therefore, in organizing the consumer education on the importance of buying domestic products, it is important to understand consumer characteristics based on gender and income levels.

6. Limitations & Recommendations

Even though this research has generated interesting findings, there are at least two limitations. First, this study was cross-sectional. The research might generate different findings if conducted at different times since there were other determiners that affected consumers’ perceptions. Future research should use a longitudinal approach. Second, this research only considered demographic factors. Future research should study other factors that theoretically, might affect consumers’ intentions to buy domestic products.

References


