INCOME INEQUALITY, REGIONAL CHARACTERISTICS AND HOUSEHOLD'S CONSPICUOUS CONSUMPTION: AN EMPIRICAL STUDY IN DEVELOPING MARKET

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Abstract

This study aims to analyze the effect of income inequality and regional characteristics such as ethnicity and religion on conspicuous consumption for visible and invisible good types of households in the Indonesian regions by dividing regions into regions with low and high-income inequality levels based on the value median Gini index in Indonesia. The data set deployed in this study were pooled data collected from households provided by the Indonesian Central Bureau of Statistics 2017 and 2018. Employing the OLS method, we find that 1) income inequality has a negative effect on visible goods, and positive effect on invisible goods, 2) ethnicity and religion give an effect on visible and invisible goods. The government should pay attention to the phenomena of conspicuous consumption because numerous problems will likely arise if this conspicuous consumption is ignored. High conspicuous consumption would tend to lead to a materialistic lifestyle causing a higher inequality. In addition, the crime rate could equally increase given the high risk of conspicuous consumption in attracting others' attention to individuals' wealth.

Keywords: Conspicuous Consumption, Income Inequality, Regional Characteristics

1. INTRODUCTION

Psychologically, individual behavior in consuming a good or service with conspicuous purposes can be explained through the motivation of "keeping up with the Joneses" where each individual always attempts to consume goods or services to become equal to other people who are considered to be in the same group level as the individual (Hicks & Hicks, 2014; Hwang & Lee, 2017). The phenomenon

of conspicuous consumption was first coined by Veblen in 1899 in his book entitled "The Theory of Leisure Class" (as cited in Veblen, 2007). Veblen (as cited in Veblen, 2007) argued that the initial goal of conspicuous consumption is rooted in the rich and wealthy who intend to differentiate themselves from the working class. In general, consumption has a positive impact, including being able to increase the level of national income. However, the existence of conspicuous consumption is also closely related to crime (Wright & Decker, 1997; Hicks & Hicks, 2014; Mejía & Restrepo, 2016).

In general, the standard Keynesian states that there is a negative relationship between income inequality and the level of consumption (Cuaresma, Kubala, & Petrivoka, 2018). This means that a decrease in income inequality will cause the level of consumption to increase at an aggregate level. Previous studies have indicated that income inequality may well explain conspicuous consumption behaviors (Jin, Li, & Wu, 2011; Jaikumar & Sarin, 2015; Hwang & Lee, 2017). However, these studies are limited to regional characteristics, such as ethnicity and religion. Both types of regional characteristics are able to influence household's conspicuous consumption (Fontes & Fan, 2006; Charles, Hurst, & Roussanov, 2009; Heffetz, 2011; Stillman, Fincham, Vohs, Lambert, & Philips, 2012; Kaus, 2013; Ryabov, 2016; Hu, Yang, Jing, & Nguyen, 2018). Furthermore, the number of scientific studies conducted in this field is relatively low, especially in developing countries.

Indonesia has one of the fastest increases in income generation in the East Asia regions, with the Gini coefficient increasing from 0.32 in 1999 to 0.41 in 2012. Regional inequalities also persist, which, in turn, contributes to national inequality. Eastern Indonesia, for instance, lags behind other parts of the country, especially Java (World Bank, 2015). Household consumption in Indonesia has apparently increased since 2000. The top-income group is the group most affected by the Asian financial crisis and recovered the slowest. Nevertheless, since 2003, 20% of the upper-income group in Indonesia has experienced significantly higher income and consumption growth (World Bank, 2015). This is identified as a highly consumptive society that represents the majority of those living in urban areas.

Not all communities can have access to consume goods and services identified for conspicuous consumption because access is limited and not shared by all community groups. This limited access can be due to an individual's initial condition at birth (initial condition), such as the conditions of a family categorized as poor, being in a rural or remote area that does not have access to schools and hospitals (World Bank, 2015).

The effect of income inequality on conspicuous consumption can also be explained through the term "cascade expenditure", where the consumption of people in the upper-income group affects the consumption of people in the income group just below it (Frank, 2007). Even when income inequality increases, households in the lower-income groups tend to use debt to keep pace with consumption with the income groups above (Christen & Morgan, 2005). It is also confirmed by Zheng, Baskin, and Peng (2018) which explain more about the motivation of "keeping up with the Joneses". They clarified that

there are three determinants that cause a person to want to consume conspicuous items, namely 1) relationship orientation, 2) social comparison, and 3) clarity of self-concept which then creates a sense of restoring excellence so that someone consumes conspicuously.

Conspicuous consumption is also discovered among the poor (Banerjee & Duflo, 2007) and in rural areas (Linssen, van Kempen, & Kraaykamp, 2011). This happens because, basically, consuming goods or services makes it easier for someone to compare themselves with others. One potential explanation that can link income inequality with conspicuous consumption is the motivation to seek social status which relates to pecuniary and non-pecuniary benefits. Indicators of social status are often described by a person's educational attainment which is associated with wealth when the credit market is imperfect (Jin et al., 2011).

Empirically, there is a positive and negative relationship between income inequality and conspicuous consumption, which remains an ongoing debate. Income inequality can increase conspicuous consumption, especially among underprivileged consumers, in an effort to keep up with the Joneses (Christen & Morgan, 2005). Income inequality, in general, causes unhappiness, which puts a psychological burden on inhabitants in the lower-middle-income class. Therefore, individuals will consume more conspicuous goods to make their selves happy (Wang, Cheng, & Smyth, 2019) demonstrate a higher status (Hwang & Lee, 2017).

This research aims to report a quantitative study of the effect of income inequality and regional characteristics such as ethnicity and religion on conspicuous consumption in rural-urban areas and low-high inequality areas in Indonesia. Therefore, this research seeks to answer the following research questions:

RQ1: Do income inequality and regional characteristics influence conspicuous consumption?

RQ2: How does it influence rural and urban areas with low and high-income inequality in Indonesia?

The remainder of this research is structured as follows. Section 2 discusses the literature review and the research hypotheses. Section 3 presents the research methodology. Section 4 documents the data analysis, both descriptive and empirical figures. Section 5 mentions the research results and discussion. Lastly, Section 6 concludes the research and mentions some of its implications.

2. LITERATURE REVIEW

According to Veblen (2007), conspicuous consumption or entertainment is a way to show one's superiority. The current conspicuous consumption has grown and does not only occur in the leisure class (rich group) but also occurs in the working class (poor group). It happens because when a person compares himself to the top, the process of self-evaluation or self-evaluation is achieved faster than comparing himself to others (Wood, 1989; Collins, 1996).

Veblen (as cited in Veblen, 2007) explained that conspicuous consumer goods or known as "Veblen goods" are luxury goods and are not affected by the income effect. If the law of demand (The Law of

Demand) says that if the price increases, the demand for goods or services will decrease, otherwise, Veblen's law of good contradicts that. Veblen good will increase along with the increase in one's income. Thus, Veblen good is goods with conspicuous status or is intended to signal to others that someone has a high social status (signalling effect).

At the macro level, an increase in income inequality will cause consumption levels to decrease. This is due to the non-linear relationship between income inequality and consumption levels at the micro or household level (Jin et al., 2011). One potential explanation that can link income inequality variables with conspicuous consumption is the motivation for social status-seeking related to pecuniary and non-pecuniary benefits.

Empirical research on conspicuous consumption is still limited, especially in developing countries. The research that has been carried out in both developed and developing countries still has debates, especially regarding the direction of the influence of income inequality on conspicuous consumption.

Hwang and Lee (2017) used the data of Consumer Expenditure Survey which contains data from 49,363 households taken in a number of states in the United States in 1983–2006 for the variable consumption conspicuous. Using the least square panel as an analytical tool, the research found 1) that the smaller income inequality will increase the average consumption of conspicuous individuals as a whole, not only individuals in the rich group, but also applies to individuals in the poor group, and 2) the greater income inequality, will increase the change in the amount of conspicuous consumption. This is because when there is an increase in income inequality, the decline in conspicuous consumption in the rich group is slower than the decrease in conspicuous consumption that occurs in the poor group.

Jaikumar and Sarin (2015) previously also investigated the effect of income inequality on conspicuous consumption in India. Jaikumar and Sarin (2015) used simple regression to analyze data obtained from the India Human Development Survey 2004–2005 and found a positive and significant relationship between income inequality and conspicuous consumption. Jaikumar and Sarin (2015) conclude that poor groups in rural areas also have conspicuous consumption due to the absence of alternative mechanisms to signal status, such as professional degrees or educational qualifications.

In human geography, Jones (2012) defines consumption as the use of all goods and services produced by labor. Consumption is generally defined as the elaboration of social, economic, and cultural processes in selecting goods and services for use. Individual decisions in consuming an item or service cannot be separated from the individual's social, economic, and cultural factors, both from within (internal) and the environment (external). Hoyer, Malcnnis, and Pieters (2013) also state that regional characteristics can generally influence consumer behavior. As well, each region has its own regional characteristics, one of which is the regional culture. Regional culture can be seen from the diversity of ethnicity (ethnicity), religion, language, and culinary preferences.

The cultural diversity factor is often associated with conspicuous consumption patterns, especially ethnicity (Fontes & Fan, 2006; Charles et al., 2009; Heffetz, 2011; Kaus, 2013; Ryabov, 2016) and religion (Stillman et al., 2012; Hu et al., 2018). The existence of ethnic and religious diversity in an area can affect the conspicuous consumption pattern of a household. Minority ethnic groups tend to spend more on conspicuous consumption than other ethnic groups (Fontes & Fan, 2006; Charles et al., 2009; Kaus, 2013; Ryabov, 2016).

Conspicuous consumption, which tends to be high in ethnic minority groups, signifies compensation for social status that individuals are unable to achieve from job prestige and income. This is in accordance with the theory of compensation consumption which was invented by Gronmo (1988) in economics. Previous research has also linked the influence of religion or spirituality to conspicuous consumption. Religion has become a strong social factor and frequent conflicts with owning or displaying wealth (Stillman et al., 2012; Hu et al., 2018).

Stillman et al. (2012) conducted an experimental test and discovered that individuals with a high level of spirituality tend to reduce the desire to consume conspicuously visible luxuries, one of which is the use of cell phones. Hu et al. (2018) relate the level of spirituality to conspicuous consumption through a sense of admiration (awe) for materialistic or conspicuous goods. For Keltner and Haidt (2003), admiration is a form of strong emotional responses to something and requires adjustments to mental structures to assimilate what is felt.

To sum up, this research examines two aspects. Firstly, this study shows the effect of income inequality and regional characteristics on conspicuous consumption. Secondly, the research examines how it influences rural and urban areas with inequality low and high incomes in Indonesia. Therefore, the following hypotheses are:

H1: There is a statistically significant effect of income inequality and regional characteristics that influence conspicuous consumption.

H2: There is a different influence in rural and urban areas with low and high-income inequality in Indonesia.

3. RESEARCH METHODOLOGY

3.1. The research and sample data

This study uses pooled and multilevel data for 2 (two) years, from 2017 to 2018, and the number of observations used is 538,420 households and 476 districts and cities. The explanation of the items included in the conspicuous items refers to the previous research (Charles et al., 2009; Hwang & Lee, 2017; Currid-Halkett, Lee, & Painter, 2019). The conspicuous consumption variables are divided into two classifications, namely 1) visible goods (clothes, housing, durable goods), and 2) invisible goods (food, cigarette, alcohol, telecommunication, personal care, health, education, transportation, accommodation, travel cost, insurance, and festival).

The conspicuous consumption variable is seen from the share of the total household expenditure for visible and invisible goods during the year. Income inequality is obtained from household data which is then aggregated at the district and city, and ethnicity and religion diversity in each regency and

city, which is calculated using the Herfindahl-Hirschman index (HHI), which is commonly used to calculate the measure of market concentration by squaring the market share of each firm competing in the market and then summing the resulting numbers.

The HHI is chosen to investigate the quantity of the distribution of ethnic and religious diversity in each district and city. In Indonesia, the number of ethnicities is very large; then we use the five largest ethnicities (Javanese, Sundanese, Bataknese, Sulawesinese, and Maduranese) to calculate HHI ethnicity. We use only the five largest religions in Indonesia (Islam, Christian, Catholic, Hindu, and Buddha) to calculate HHI religion. The data were obtained from population census Indonesia (SP) 2010, SUSENAS 2017 and 2018, PODES 2014 and 2018. All the data were provided by Central Bureau of Statistics Indonesia.

There are three control variables exploited in this study: 1) total household expenditure for a year; 2) population at district and city levels; 3) the number of amenities available at district and city (Currid-Halkett et al., 2019); 4) consumer price index, and 5) gender of household's head.

3.2. Statistical model

The statistical models were used to examine the effect of income inequality and regional characteristics on conspicuous consumption and its influence in rural-urban areas with low and high-income inequality. Because conspicuous consumption is divided into visible goods and invisible goods, and regional characteristics consist of ethnicity and religion, therefore, this research employs four regression models as follows:

1. The first model (Model 1) aims to find the effect of income inequality and ethnicity on visible goods.
2. The second model (Model 2) aims to find the effect of income inequality and religion on visible goods.
3. The third model (Model 3) aims to find the effect of income inequality and ethnicity on invisible goods.
4. The fourth model (Model 4) aims to find the effect of income inequality and religion on invisible goods.

Model 1

$$Vis_{ht} = \beta_0 + \beta_1 Gini_{it} + \beta_2 Ethnic_{it} + \beta_3 Expend_{it} + \beta_4 Pop_{it} + \beta_5 Amenities_{it} + \beta_6 CPI_{it} + \beta_7 Gender_{ht} + \beta_8 Urban_{it} + \beta_9 Dgini_{it} + \beta_{10} Ddistrict_{it} + \varepsilon_{it} \tag{1}$$

Model 2

$$Vis_{ht} = \beta_0 + \beta_1 Gini_{it} + \beta_2 Religion_{it} + \beta_3 Expend_{it} + \beta_4 Pop_{it} + \beta_5 Amenities_{it} + \beta_6 CPI_{it} + \beta_7 Gender_{ht} + \beta_8 Urban_{it} + \beta_9 Dgini_{it} + \beta_{10} Ddistrict_{it} + \varepsilon_{it} \tag{2}$$

Model 3

$$Invis_{ht} = \beta_0 + \beta_1 Gini_{it} + \beta_2 Ethnic_{it} + \beta_3 Expend_{it} + \beta_4 Pop_{it} + \beta_5 Amenities_{it} + \beta_6 CPI_{it} + \beta_7 Gender_{ht} + \beta_8 Urban_{it} + \beta_9 Dgini_{it} + \beta_{10} Ddistrict_{it} + \varepsilon_{it} \tag{3}$$

Model 4

$$Invis_{ht} = \beta_0 + \beta_1 Gini_{it} + \beta_2 Religion_{it} + \beta_3 Expend_{it} + \beta_4 Pop_{it} + \beta_5 Amenities_{it} + \beta_6 CPI_{it} + \beta_7 Gender_{ht} + \beta_8 Urban_{it} + \beta_9 Dgini_{it} + \beta_{10} Ddistrict_{it} + \varepsilon_{it} \tag{4}$$

where, *Vis* is the consumption share for visible good per household expenditure; *Invis* is the consumption share for invisible good per household expenditure; *Gini* is the Gini index value; *Ethnic* is HHI of five largest ethnicities; *Religion* is HHI of five religions; *Expend* for total household expenditure; *Pop* is the number of population; *Amenities* is the number of facilities or amenities available; *CPI* is consumer price index; *Gender* is a dummy variable for the gender of household's head with female = 0, male = 0; *Urban* is a location-based dummy variable in an area with a rural base = 0, urban area = 1; *Dgini* is a dummy variable for income inequality criteria based on inequality level low = 0, moderate level of inequality = 1, high level of inequality = 2; *Ddistrict* is a dummy variable for the province; *ε* is a disturbance (error term); *h* indicates the household; *i* indicates the area in the district or city, and *t* is the period of the year.

4. DATA ANALYSIS

4.1. Data descriptive

Descriptive data from the variables tested in this study showed variations in the share of the conspicuous consumption variable for visible good and invisible good per household expenditure, variations in the value of the independent variable, namely the income inequality variable as measured by the Gini index and regional characteristic variables described by ethnicity and religion through the value of the HHI, and control variables.

Table 1. Descriptive statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
Vis	538,420	4.9123	2.9174	0.0176	16.7277
Invis	538,420	1.8109	1.3131	0	15.8446
Gini	538,420	0.3402	0.0436	0.1807	0.5043
Ethnic	538,420	0.9312	0.8534	0	8.0691
Religion	538,420	0.8302	0.1766	0.3001	1
Expend	538,420	47.0264	43.3349	1.5314	2,234.306
Pop	538,420	70,1054.4	77,6288.3	13,763	5,809.252
Sport facilities	538,420	0.2881	0.1275	0.0217	0.9591
Sport clubs	538,420	0.2539	0.1071	0	0.9145
Markets and stores	538.420	8,594.958	8,895.921	130	59,919
Restaurants and food stalls	538.420	2,364.936	3,150.309	0	30,551
Hotels	538,420	77.5614	137.1787	0	1,542
Higher education	538,420	11.1776	16.5962	0	109
Health facilities	538,420	93.0512	91.8763	3	653
Schools	538,420	676.9595	580.2037	16	3,020
Banks	538,420	80.41458	98.26025	1	698
CPI	538,420	133.2696	3.922149	126.45	143.1

Table 1 presents the results of a descriptive analysis of variables including the average value, standard deviation, minimum value, and maximum value of 538,420 households in 476 districts and cities in Indonesia in 2017 and 2018. Variations in the share of conspicuous consumption per household expenditure for visible good types range from 0.017 percentage points to 16.72 percentage points per year with an average value of 4.91 percentage points per year. The variation of conspicuous consumption share for the lowest invisible good is 0–15.84 points with an average value of 1.81 percentage points per year.

The variation of the Gini index variable ranges from 0.18 to 0.50 with an average value of 0.34. Regional characteristic variables consist of ethnic and religious variables in their concentration distribution as measured by the HHI at the district and city levels. The greater the value of the HHI, the greater the distribution of concentrations in the area, and vice versa, the smaller the value of the HHI, the smaller the distribution of concentrations in the area. For ethnic variables, the HHI is the sum of the squares of the ethnic percentages in each region. The HHI of ethnic variables has an average value of 0–8.07. The average value of the HHI of religion is 0.83, with the lowest value being 0.30 and the highest value being 1.

4.2. Estimation result

To test the first hypothesis (*H1*), the researchers used the whole model to obtain the effect of the independent variables (income inequality, ethnic and religion) on visible goods and invisible goods. In Table 2, Model 1 showed that the F-value is 6,833.7085, respectively, and the statistical significance at 1%. This result indicates that the independent variables have a statistically significant effect at the 1% level. The result analysis in Model 1 and Model 2 showed that Adj. R^2 value is equal to 0.3240 and 0.3244, which means that the research variables explain 32% of the variance in visible and invisible goods. Meanwhile, Model 3 and Model 4 showed that Adj. R^2 value equals 0.1113 and 0.1114, which means that the research variables explain 11% of the variance in visible and invisible goods.

The beta coefficient of Gini in Model 1 and Model 2 showed a negative and significant (1.0544 and 1.3197) correlation on visible goods. Otherwise, the beta coefficient of Gini in Model 3 and Model 4 showed a positive and significant (0.6379 and 0.5696) correlation on invisible goods. The coefficients of ethnicity are negative and significant (0.0319) of the variance in visible goods and were not significant at the 1% level of the variance in invisible goods. The coefficient of religion is negative and significant (0.5818 and 0.1218) of the variance in both visible and invisible goods. Using rural area as a base of the dummy variable indicates that visible good consumption in urban areas is 40% lower than in rural areas both in Model 1 and Model 2. Meanwhile, invisible goods consumption in urban areas is 30% higher than in rural areas in Model 3 and Model 4.

Table 2. Estimation result for Models 1–4

Variables	Visible goods		Invisible goods	
	Model 1	Model 2	Model 3	Model 4
Gini	-1.0544***	-1.3197***	0.6379***	0.5696***
	(0.1392)	(0.1411)	(0.0719)	(0.0723)
Ethnic	-0.0319***		0.0048	
	(0.0063)		(0.0033)	
Religion		-0.5818***		-0.1218***
		[0.0322]		[0.0159]
Urban	-0.4786***	-0.4828***	0.3383***	0.3378***
	[0.0074]	[0.0074]	[0.0041]	[0.0041]
Intercept	70.1569***	70.8984***	0.9544***	1.1220***
	[0.1306]	[0.1351]	[0.0713]	[0.0745]
Obs.	538,420	538,420	538,420	538,420
Adj. R^2	0.3240	0.3244	0.1113	0.1114
F-stat.	6833.7085	6929.7948	713.4446	714.2964

Notes: All regressions include control variables: expenditure, population, amenities, gender, consumer price indices, dummy of Gini, dummy of the province. Robust standard errors are presented in parentheses.
, * indicate 5% and 1% level of significance, respectively.

To test the second hypothesis (*H2*), researchers firstly divided the data into two groups (low and high-income inequality area) based on the mean value of Gini. The low-income inequality area is a district that has a Gini index < mean of Gini (*Gini* < 0.3402) and the high-income inequality area is a district that has a Gini index ≥ mean of Gini (*Gini* ≥ 0.3402). Then, Models 1–4 estimation results are used.

Table 3. Estimation result for low-income inequality area

Variables	Visible goods		Invisible goods	
	Model 1	*Model 2*	*Model 3*	*Model 4*
Gini	-10.5073***	-10.5486***	1.3295***	1.2811***
	(0.2561)	(0.2583)	(0.1039)	(0.1053)
Ethnic	-0.1081***		0.0184***	
	(0.0092)		(0.0037)	
Religion		-0.3289***		-0.0033
		(0.0509)		(0.0209)
Urban	-0.2693***	-0.2714***	0.3355***	0.3363***
	(0.0122)	(0.0122)	(0.0057)	(0.0057)
Intercept	9.1618***	9.6766***	1.5584***	1.5922***
	(0.2752)	(0.2912)	(0.1148)	(0.1232)
Obs.	263,446	263,446	263,446	263,446
Adj. R^2	0.0724	0.0721	0.1036	0.1036
F-stat.	864.1054	862.7845	356.2285	355.0221

Notes: All regressions include control variables: expenditure, population, amenities, gender, consumer price indices, dummy of Gini, dummy of the province. Robust standard errors are presented in parentheses.
, * indicate 5% and 1% level of significance, respectively.

Table 3 summarizes the effect of the independent variables (income inequality, ethnic, and religion) on visible and invisible goods in low-income inequality areas. In Table 2, Model 1, it is shown that the F-value is 864.1054, respectively, and the statistical significance at 1%. This result indicates that the independent variables have a statistically significant effect at the 1% level. The result analysis in Model 1 and Model 2 showed that Adj. R^2 value equals 0.0724 and 0.0721, which means that the research variables explain 7% of the variance in visible and invisible goods in low-income inequality areas. Meanwhile, Model 3 and Model 4 showed that Adj. R^2 value is equal to 0.1036, which means that the research variables explain 11% of the variance in visible and invisible goods.

The beta coefficient of Gini in Model 1 and Model 2 showed a negative and significant (10.5073 and 10.5486) correlation on visible goods. Otherwise, the beta coefficient of *Gini* in Model 3 and Model 4 showed a positive and significant (1.3295 and 1.2811) correlation on invisible goods. The coefficients of *Ethnic* are negative and significant (0.1081) of the variance in visible goods, and positive and significant (0.0184) level of the variance in invisible goods. The coefficient of *Religion* is negative and significant (0.3289) of the variance in visible goods and was not significant at a 1% level in invisible goods. By using the rural area as a base of the dummy variable, this result indicates that visible good consumption in an urban area is 20% lower than in rural area both in Model 1 and Model 2. Meanwhile, invisible good consumption in an urban area is 30% higher than in rural area both in Model 3 and Model 4.

Table 4. Estimation result for high-income inequality area

Variables	Visible goods		Invisible goods	
	Model 1	*Model 2*	*Model 3*	*Model 4*
Gini	4.4355***	4.1209***	0.2422**	0.2841**
	(0.2401)	(0.2413)	(0.1108)	(0.1107)
Ethnic	0.5300***		-0.0400***	
	(0.0164)		(0.0076)	
Religion		-0.2084***		-0.3357***
		(0.0629)		(0.0271)
Urban	-0.5145***	-0.4989***	0.3374***	0.3305***
	(0.0124)	(0.0125)	(0.0059)	(0.0059)
Intercept	2.9093***	4.3890***	1.0475***	1.2968***
	(0.3285)	(0.3327)	(0.1519)	(0.1529)
Obs.	274,974	274,974	274,974	274,974
Adj. R^2	0.0500	0.0467	0.1142	0.1146
F-stat.	503.9478	478.9383	408.4930	411.9583

Notes: All regressions include control variables: expenditure, population, amenities, gender, consumer price indices, dummy of Gini, dummy of the province. Robust standard errors are presented in parentheses.
, * indicate 5% and 1% level of significance, respectively.

Table 4 summarizes the effect of the independent variables (income inequality, ethnic, and religion) on visible and invisible goods in high-income inequality areas. The result analysis in Model 1 and Model 2 showed that Adj. R^2 value is equal to 0.05 and 0.0467, which means that the research variables explain 5% of the variance in visible and 4.67% invisible goods in low-income inequality area. Meanwhile, Model 3 and Model 4 showed that Adj. R^2 values are equal to 0.1142 and 0.1146, which means that the research variables explain 11% of the visible and invisible goods variance.

The beta coefficient of Gini in Model 1 and Model 2 showed a positive and significant (4.4355 and 4.1209) correlation on visible goods. Likewise,

the beta coefficient of Gini in Model 3 and Model 4 showed a positive and significant (0.2422 and 0.2481) correlation on visible goods. The coefficients of *Ethnic* are positive and significant (0.53) of the variance in visible goods, and negative and significant (0.04) level of the variance in invisible goods. The coefficient of *Religion* in Model 2 and Model 4 are negative and significant (0.2084 and 0.3357) of the variance in visible and invisible goods. Using rural area as a base of the dummy variable indicates that visible good consumption in urban areas is about 50% lower than in rural areas both in Model 1 and Model 2. Meanwhile, invisible good consumption in urban areas is about 33% higher than in rural areas in Model 3 and Model 4.

5. DISCUSSION

The estimation results of Table 2 showed an effect of *Gini* on conspicuous consumption — visible and invisible goods. This was confirmed by previous studies (Jaikumar & Sarin, 2015; Hwang & Lee, 2017; Matos, 2019) which state that income inequality affects conspicuous consumption. However, previous studies have not added a regional dummy control variable to capture the time-invariant problem. There are differences in the analysis of income inequality results on conspicuous consumption for visible goods and invisible goods. By separating the regression between visible and invisible goods, a difference in the direction of the correlation was found. An increase in income inequality will be followed by an increase in invisible goods, but there will be a decrease in visible goods.

Table 2 also showed the negative and significant effect of ethnicity on visible goods (Model 1) and positive and significant on invisible goods (Model 2). This indicates that the more concentrated the ethnic distribution in an area, the greater will be the consumption of invisible goods and the smaller consumption of visible goods. This result differs from previous research which shows different connections between ethnicity in conspicuous consumption (Charles et al., 2009; Ryabov, 2016; Kaus, 2013). These studies discovered that conspicuous consumption tends to increase among ethnic minority groups. This different result is probably due to differences in individuals' lifestyles in the Indonesian multicultural societies to showcase affluence through invisible goods, rather than visible goods.

As seen in Table 2, there are adverse and significant effects of religion on visible and invisible goods. This result was confirmed by Hu et al. (2018) that found that the higher spirituality level of individual will reduce the sense of admiration (awe) for materialistic or conspicuous good.

In urban areas, in Model 1 and Model 2, it is found that there is a lower share of conspicuous consumption for visible goods compared to rural areas. The compensation consumption theory may result from the likely more inadequate access and level of welfare in rural areas than in urban areas. Consequently, rural groups tend to spend more conspicuous consumption on visible goods than their counterparts in urban areas as compensation for this. Meanwhile, the result also showed a higher share of invisible goods in urban areas than in rural areas. This is probably because there is a more

convenient way and access to the amenities in an urban area (and also with high quality), rather than in urban areas.

Table 3 showed that in a low-income inequality area there is a negative and significant effect of *Gini* on visible goods, meanwhile, there is a positive and significant effect of *Gini* on invisible goods. This result indicates that in an area with more equal income distribution, households' expenditure share of invisible goods is higher than visible goods. This is probably due to the more equal income inequality, the incentives of signaling status are low, therefore, households reduce the spending of visible goods and divert it to invisible goods. Otherwise, in Table 4, it is found that in a high-income inequality area that means the more unequal income distribution, the incentives of signaling status is high, therefore, the household spends more visible and invisible goods.

In the low-income inequality area, the ethnic concentration distribution represents a negative and significant effect on visible goods, while the positive and significant effect on invisible goods (Table 3). Meanwhile, in the high-income inequality area, the ethnic concentration distribution represents a positive and significant effect on visible goods, while the negative and significant effect on invisible goods (Table 4). This result differs from previous research (Fontes & Fan, 2006; Charles et al., 2009; Heffetz, 2011; Kaus, 2013; Ryabov, 2016) which found the more distributed ethnic concentrations are, the more the effect tends to decrease the share of visible goods. On the other hand, the more the minority groups are, the more conspicuous consumption share will be for visible goods.

Table 3 showed that in the low-income inequality area, the religion concentration only affects the visible good (negative and significant effect), while in Table 4, religion gives negative and significant effect on both visible and invisible goods. These results do not completely support the previous studies (Stillman et al., 2012; Hu et al., 2018).

However, previous studies that link ethnicity (Fontes & Fan, 2006; Charles et al., 2009; Heffetz, 2011; Kaus, 2013; Ryabov, 2016) and religion (Stillman et al., 2012; Hu et al., 2018) have not divided the sample into low- and high-income inequality area, so that there are differences in the results of the analysis of ethnicity or religion on conspicuous consumption for visible goods and invisible goods.

The intercept for all model regressions in Tables 2, 3, and 4 showed a higher value than the coefficient of other variables. It indicates the initial condition of the consumption — visible and invisible goods, and it can be influenced by another variable that cannot be caught in the regression model, such as preference and lifestyle.

6. CONCLUSION

This study aims to analyze the effect of income inequality and regional characteristics such as ethnicity and religion on conspicuous consumption for visible and invisible good types of households in the Indonesian regions by dividing regions into regions with low- and high-income inequality levels based on value median Gini index in Indonesia.

Based on the estimation results in this study, we find that 1) income inequality has a negative effect on visible goods, and a positive effect on invisible goods, 2) ethnicity and religion give an effect on visible and invisible goods.

This study is limited to the classification of visible and invisible goods only refers to previous theoretical and empirical reviews without considering the income and price elasticity of these goods. Moreover, this study cannot cover all ethnic groups in Indonesia and is almost not limited to the five largest ethnic groups. Besides, the research only focuses on 2 years of data, while it may take more years to research household behavior.

The finding of income inequality, regional characteristics, and conspicuous consumption may suggest that income inequality influences social welfare through many different channels (Hwang & Lee, 2017), and in odd moments, conspicuous consumption makes the individual consume something that is not really needed more than it should be because it is often regarded as a waste of resources (Veblen, 2007). Therefore, it needs to ensure appropriate community network, services, and support for all individuals with a wide range of ethnic and religious backgrounds to minimize the social status gap in society.

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