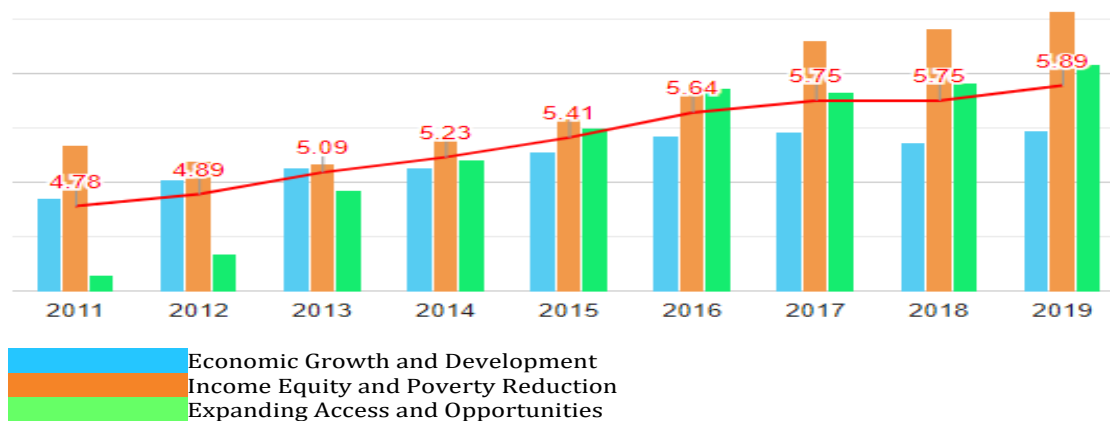




development in Indonesia, which have three pillars. (1) the first pillar, namely economic growth and development with sub-pillars of economic growth, employment opportunities, and economic infrastructure; (2) the second pillar, namely income equality and poverty reduction with sub-pillars inequality and poverty; and (3) the third pillar, namely expanding access and opportunities with sub-pillars human capability, basic economic infrastructure, and financial inclusion.



Source: Bappenas, 2020

**Figure 1. Indonesia's Inclusive Economic Development Index 2011-2019**

The development of Indonesia's inclusive, as presented in Figure 1, shows that for nine years, Indonesia has experienced an increase in the achievement of inclusive economic development, which amounted to 4.78 in 2011 to 5.89 in 2019. From the three pillars, it appears that the pillar of equity income and poverty reduction (after this referred to as the income distribution pillar in this paper) has a fairly high difference compared to the total index. The achievement of the income distribution, especially for the last three years, is relatively high. However, the other two pillars of inclusive economic development are also experiencing an increasing trend.

Based on the economic literature, there is a relationship between the three pillars of inclusive development. Income distribution (inequality and poverty) has a positive relationship with economic performance. Income inequality correlates with economic growth (Amar and Zghidi, 2016; Dudzeviciute and Prakapiene, 2018). Economic growth has a significant and negative effect on poverty levels (Jonnadi et al., 2012; Purnomo and Istiqomah, 2019). Economic growth can encourage the achievement of the income distribution. Previous studies have linked access to public services with income distribution but using different indicators. Studies on the effect of public service access on welfare using basic infrastructure variables have been researched before (such as Pramono and Marisno, 2018; Nugraheni and Priyarsonoa, 2012). Others studies used the human capability variable

(such as Andriani & Wahyudi, 2015; Islami, Nadin and Anis, 2019). Moreover, use financial inclusion variables (e.g. Zia and Prasetyo, 2018) as a factor that drives income distribution in Indonesia.

Previous studies examined the impact of growth and access to public services separately as factors affecting welfare or income distribution. This study examines the interrelationships between the three pillars of inclusive development in Indonesia: economic performance, expansion of access and income distribution as pillars of inclusive economic development. This study also estimates the effect of economic performance and the expansion of access to income distribution in Indonesia.

## **Method**

This study uses secondary data published by the National Development Planning Agency (Bappenas). The unit of analysis for regencies and cities in Indonesia is 464 regencies and cities with an estimated period of 2019. The model is based on the trickle-down effect paradigm where economic growth ( $X_1$ ) impact on welfare ( $Y$ ). On the financial side, inclusiveness, as part of expanding public access ( $X_2$ ), encourages income distribution ( $Y$ ). Furthermore, the vicious circle of poverty theory shows that the poor will remain in the cycle of poverty. This theory implies that the distribution of income ( $Y$ ) will be influenced by the distribution of previous income ( $Y_{t-1}$ ). Therefore, the research model is presented as equation (1).

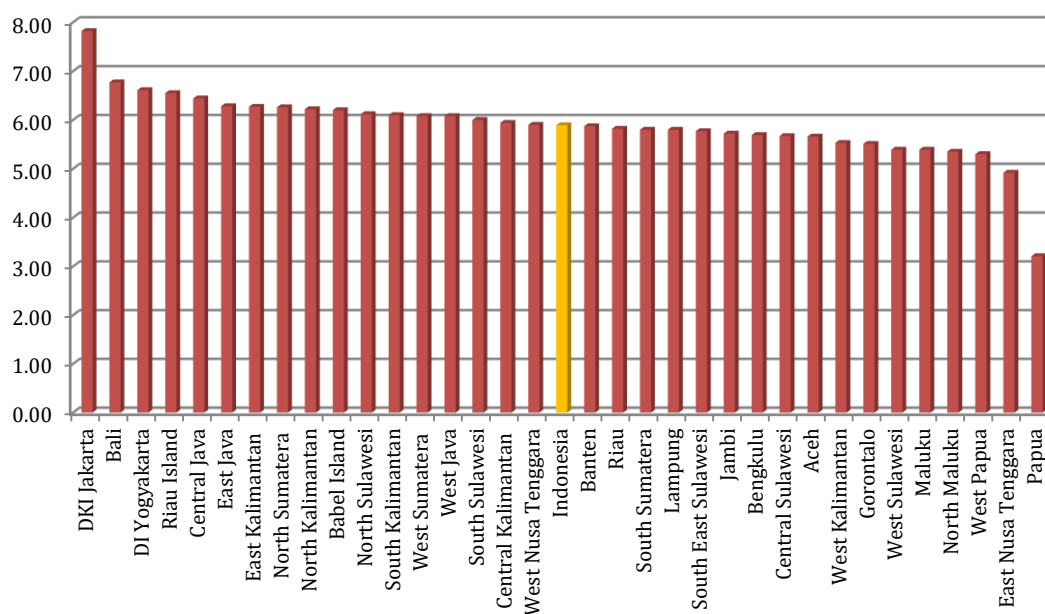
$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_{t-1} + e \quad (1)$$

Where  $Y$  is income distribution (index);  $X_1$  is economic performance (indeks);  $X_2$  is access expansion (indeks);  $t-1$  is previous period;  $e$  is error term;  $\alpha$  is constant;  $\beta_1, \beta_2, \beta_3$  is estimated parameters

Income distribution ( $Y$ ) is measured by income equality and poverty reduction index, while the expansion of access ( $X_2$ ) is measured by the expansion of access and opportunity index, while the expansion of access ( $X_2$ ) is measured by the index of expansion of access and opportunity. Economic performance ( $X_1$ ) is measured by the index of economic growth and development. The data is analyzed using multivariate regression, processed using SPSS. The interpretation of the data estimation results is carried out after testing the classical assumptions consisting of normality, heteroscedasticity and multicollinearity. The normality test of the data was carried out through the Kolmogorov-Smirnov Test with a significance  $>0.05$ . A heteroscedasticity test was carried out through the Glejser Test with a significance criterion of  $>0.05$ . Meanwhile, the multicollinearity test uses the criteria of Collinearity Statistics  $VIF < 10$ .

## Results

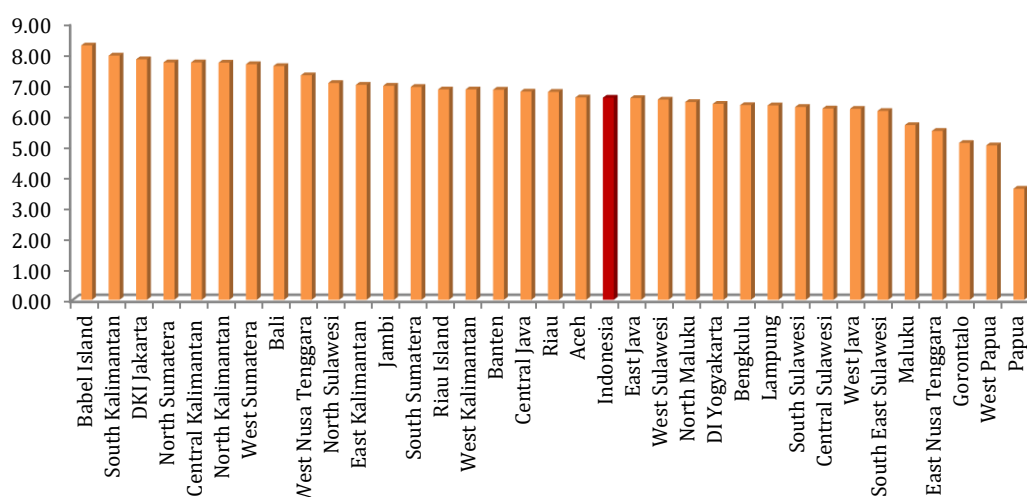
Indonesia's inclusive economic development varies across provinces. Figure 2 shows a map of the province's inclusive development achievements with four categories: 0-4; 4-5,5; 5.5-6; 6+. Provinces in the highest class index category or 6+ consist of DKI Jakarta, Bali, DI Yogyakarta, Riau Islands, Central Java, East Java, East Kalimantan, North Sumatra, North Kalimantan, Babel Islands, North Sulawesi, South Kalimantan, West Sumatra, West Java and South Sulawesi. On the other hand, provinces with an inclusive economic development index class 0-4 are Papua. Meanwhile, West Kalimantan, Gorontalo, West Sulawesi, Maluku, North Maluku, West Papua, and East Nusa Tenggara have an inclusive economic development index of 4 -5.5. The remaining 11 provinces have an inclusive economic development index in the range of 5.5-6.0.



Source: Bappenas (2020), processed

**Figure 2. Inclusive Economic Development Index by Province in 2019**

Indonesia's inclusive development pillars of income distribution and poverty reduction by province are presented in Figure 3. The national income distribution and poverty reduction index is 6.57. Nineteen provinces are above the national average, and 15 others are still below the national average. The highest index in income distribution and poverty reduction was achieved by the Province of the Babel Islands, followed by South Kalimantan and DKI Jakarta. On the other hand, the lowest income distribution index is owned by Papua Province, followed by West Papua and Gorontalo. The provinces of East Nusa Tenggara and Maluku took the next position.



Source: Bappenas (2020), processed

**Figure 3. Income Distribution Index by Province in 2019**

Table 2 presents descriptive statistics of research variables. On average, the income distribution index regencies and cities in Indonesia in 2019 is 6.41, increasing from 6.35 in the previous year. The highest income distribution achievement in 2019 was 7.68, namely Tapin Regency, while Yahukimo Regency achieved the lowest at 4.26. On the other hand, the average economic performance ( $X_1$ ) of regencies and cities in Indonesia is 4.88, with a maximum index of 6.48 achieved by Kediri City, while Deiyai Regency achieves the lowest of 2.52.

**Table 2. Descriptive Statistics**

<i>Variable</i>	<i>Min</i>	<i>Max</i>	<i>Mean</i>	<i>Std. Deviation</i>
$X_1$	2.52	6.48	4.88	0.58
$X_2$	2.45	8.18	5.46	1.03
$Y_{t-1}$	4.24	7.55	6.35	0.42
$Y$	4.26	7.68	6.41	0.46

Source: secondary data, processed

Meanwhile, access expansion ( $X_2$ ) for regencies and cities in Indonesia was 5.46 on average, with the highest index of 8.18 achieved by Magelang City, while Tolikara Regency achieved the lowest index of 2.45. The distribution of regencies and cities inclusive development achievements in Indonesia shows that the income distribution of regencies and cities in Indonesia is more even than economic performance and expansion of access. The expansion of access shows a standard deviation of 1.03, indicating the unequal expansion of access and opportunities in regencies and cities in Indonesia.

The classical assumption test consists of normality, heteroscedasticity, and multicollinearity tests. Table 3 presents the data normality test using the Kolmogorov-

Smirnov test, which shows the Kolmogorov-Smirnov Z significance of  $0.142 > 0.05$ , or the data is normally distributed. On the other hand, the results of the Glejser test, as shown in Table 4, show that all the variables estimated for absolute residuals, namely  $X_1$ ,  $X_2$  and  $Y_{t-1}$ , show a significance value greater than 0.05. Thus, the estimated model is free from heteroscedasticity symptoms or is homoscedastic.

**Table 3. Kolmogorov-Smirnov Normality Test**

		Unstandardized Residual
N		464
Normal Parameters	Mean	0.000
	Std. Deviation	0.230
Most Extreme Differences	Absolute	0.053
	Positive	0.029
	Negative	-0.053
Kolmogorov-Smirnov Z		1.150
Asymp. Sig. (2-tailed)		0.142

Source: secondary data, processed

Table 4 also presents multicollinearity statistics of all variables estimated to have VIF values less than 10. All dependent variables included in the model are free from multicollinearity symptoms.

**Table 4. Heteroscedasticity and Multicollinearity Test**

Variabel	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	S.E	Beta			Tolerance	VIF
Konstanta	0.068	0.105		0.650	0.516		
X <sub>1</sub>	-0.018	0.016	-0.071	-1.116	0.265	0.529	1.891
X <sub>2</sub>	-0.003	0.009	-0.017	-0.288	0.773	0.595	1.681
Y <sub>t-1</sub>	0.033	0.018	0.094	1.844	0.066	0.822	1.217

Source: secondary data, processed

The correlation between research variables presented in Table 5 shows that all variables have a significant and positive correlation but different levels. The economic performance variable ( $X_1$ ) has a strong relationship with the expansion of access ( $X_2$ ), then a moderate relationship with income distribution ( $Y$ ). On the other hand, the relationship between access expansion ( $X_2$ ) and poverty ( $Y$ ) is weak. Furthermore, the income distribution in the previous period ( $Y_{t-1}$ ) has a very strong relationship with income distribution in the next period ( $Y$ ).

The results of the estimation are presented in Table 6. The F value of 423.440 with .000 or less than .010 indicates that together the variables of economic performance ( $X_1$ ), expansion of access ( $X_2$ ), and income distribution for the period previously ( $Y_{t-1}$ ) had a significant effect on the distribution of income in regencies and cities in Indonesia. The

significance value of the  $X_1$  variable is .000 or less than .010, indicating that economic performance has a significant effect on income distribution in regencies and cities in Indonesia.

**Table 5. Correlation Coefficient**

		$X_1$	$X_2$	$Y_{t-1}$	$Y$
$X_1$	Pearson Correlation	1			
	Sig. (2-tailed)				
$X_2$	Pearson Correlation	0.637	1		
	Sig. (2-tailed)	0.000			
$Y_{t-1}$	Pearson Correlation	0.422	0.276	1	
	Sig. (2-tailed)	0.000	0.000		
$Y$	Pearson Correlation	0.476	0.322	0.847	1
	Sig. (2-tailed)	0.000	0.000	0.000	

Source: secondary data, processed

The significance value of the  $X_2$  variable is  $.459 > .100$ , which indicates that the expansion of access does not affect income distribution in regencies and cities in Indonesia. Furthermore, the significance value of the  $Y_{t-1}$  variable is .000 or less than .010, indicating that the distribution of income in the previous period has a significant effect on income distribution in regencies and cities in Indonesia. The interpretation of the estimated variables are:

1. The coefficient of economic performance variable ( $X_1$ ) = .100 can be interpreted that an increase of 1 unit of economic performance index will increase .100 units of income distribution index in regencies and cities in Indonesia.
2. The coefficient of the previous period's income distribution variable  $Y_{t-1}$  = .826 can be interpreted that an increase of 1 unit of income distribution index in the previous period will increase .100 units of income distribution index in regencies and cities Indonesia in the next period.

**Table 6. Estimation Results**

Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	S.E.	Beta		
Constant	0.623	0.163		3.825	0.000
$X_1$	0.100	0.025	0.130	3.923	0.000
$X_2$	0.010	0.014	0.023	0.741	0.459
$Y_{t-1}$	0.826	0,028	0.785	29.614	0.000
R	0.857 F				423.440
R Square	0.734 Sign. F				0.000
Adjusted R Square	0.732				

Source: secondary data, processed

The R Square coefficient of 0.734 shows that the variation in income distribution can be explained by 73.4 per cent by economic performance variables ( $X_1$ ), access expansion ( $X_2$ ), and income distribution in the previous period ( $Y_{t-1}$ ). The remaining 26.6 per cent is explained by other variables not included in the model.

## **Discussion**

The study's findings indicate that economic performance has a significant positive effect on the creation of income distribution in regencies and cities in Indonesia. The sub-indicators of the pillars of economic performance are economic growth, job opportunities and infrastructure. Meanwhile, the sub-pillars of the income distribution are inequality and poverty reduction. This study is in line with previous research. Several previous studies have shown that economic growth can reduce poverty levels (Ishak et al., 2020). Job opportunities create poverty reduction (Jamaliah and Said, 2017), and unemployment will drive poverty (Ernawati and Asri, 2020; Saifuloh et al., 2019; Muhammad and David, 2019). Regarding the effect of economic infrastructure on income distribution, several studies have also justified this. The availability of electricity infrastructure and infrastructure for health, sanitation, and high school buildings will reduce the poverty rate (Pramono and Marisno, 2018). The quantity of roads and telecommunications tends to increase the income gap. Meanwhile, the quantity of electricity, quantity and quality of airports shows the opposite effect, reducing the income gap (Makmuri, 2017).

The study's findings indicate that the income distribution in the previous period has a significant positive effect on creating income distribution in the next period in regencies and cities in Indonesia. The distribution coefficient value of the previous period of .826, which is almost close to 1, indicates the high impact of the distribution of the previous period in creating poverty in subsequent periods. Income distribution is not only influenced by improving economic performance and access to opportunities. However, it can also be affected by the distribution of the initial income. Poverty alleviation is a long-term effort. In the short term, the initial status of inequality and poverty will affect income distribution for the next period. According to the Vicious Circle of Poverty theory, that the cause of poverty is poverty itself. Poverty is characterized by backwardness, and lack of capital, so that this limitation will result in low productivity. Low productivity will lead to low income, which in turn has low savings. Savings are a source of investment. If savings are low, then the investment is low and ultimately lacks the capital to increase productivity. This process keeps happening repeatedly and is difficult to break; therefore, it becomes an endless circle.

The research findings show that the expansion of access does not significantly affect



income distribution in regencies and cities in Indonesia. The sub-pillars of expanding access are human capability (education), basic infrastructure, and financial inclusion. This finding is not in line with the previous findings (e.g. Andriani and Wahyudi, 2015; Ishak et al., 2020; Islami, Nadin and Anis, 2019; Swamy, 2014; Zia and Prasetyo, 2018) who found that the expansion of public access such as human capability, basic infrastructure, and financial inclusion improved the welfare of the community.

## **Conclusion**

Indonesia's inclusive development has increased over the last ten years. However, there are differences between regions. Maluku, North Maluku, West Papua, East Nusa Tenggara and Papua are the five provinces with the lowest inclusive economic development index. Meanwhile, the five provinces with the highest inclusive development index are DKI Jakarta, Bali, DI Yogyakarta, Riau Islands, and Central Java. Indonesia's inclusive development has three pillars, namely: (1) economic growth and development, (2) income equality and poverty reduction, and (3) expansion of access and opportunities. These three pillars are interrelated and positively correlated. The development of the income distribution pillar as one of the development goals shows that in 2019 the national income distribution and poverty reduction index was 6.57. Fifteen provinces have an equity index below the national one, with the five lowest provinces in a row starting from the lowest, namely: Papua, West Papua, Gorontalo, East Nusa Tenggara, and Maluku. Several factors significantly affect income distribution and poverty reduction, namely: economic performance and previous conditions of the income distribution. These factors show a positive coefficient value, meaning that an increase in economic performance and the previous condition of the income distribution will encourage income distribution and poverty reduction. Therefore, the government needs to consider appropriate policies to encourage growth pro-poor and growth pro-equality in Eastern Indonesia.

Meanwhile, the variable of access expansion estimated in this study shows a positive but not significant effect. This research implies that increasing access and opportunity must be in line with efforts to create prosperity, especially income distribution and poverty reduction. This study has limitations that have not separated the distribution of income as measured by income inequality and income distribution from the level of poverty. On the other hand, it is necessary to study the differences in inclusive growth between regions in Indonesia and how changes in economic performance over time affect income distribution. Therefore, further research is expected to examine the differences in inclusive growth in Indonesia through dynamic models.

## REFERENCES

- Amar, M. ., & Zghidi, N. (2016). The relationship between inclusive growth, inequality and poverty in Africa. *Theoretical and Applied Economics*, 23(1), 117–126.
- Andriani, E., & Wahyudi. (2015). Pengaruh Tingkat Pendidikan, Kesehatan dan Pendapatan Terhadap Kemiskinan di Provinsi Jambi. *Journal of Chemical Information and Modeling*, 15(9).
- Bappenas. (2020). Indeks Pembangunan Ekonomi Inklusif.
- Dudzeviciute, G., & Prakapiene, D. (2018). Investigation of the economic growth, poverty and inequality inter-linkages in the European Union Countries. *Journal of Security and Sustainability*, 7(4), 839–854.
- Ernawati, & Asri, M. (2020). Growth Pro Poor Indonesia Periode 2015-2018. *Seminar Nasional Kualitas Sumber Daya Manusia*. Surabaya: Universitas Wijaya Kusuma.
- Ishak, R. A., Zakaria, J., & Arifin, M. (2020). Pengaruh Pertumbuhan Ekonomi, Pendidikan dan Pengangguran Terhadap Tingkat Kemiskinan di Kota Makassar. *Paradoks: Jurnal Ilmu Ekonomi*, 3(2).
- Islami, Nadin and Anis, A. (2019). Pengaruh Upah Minimum Provinsi, Pendidikan Dan Kesehatan Terhadap Kemiskinan Di Indonesia. *Jurnal Kajian Ekonomi Dan Pembangunan*, 1(3).
- Jamaliah, & Said, M. (2017). The effect of employment development index on economic growth and poverty level in Indonesia. *Problems and Perspectives in Management*, 15(2). [https://doi.org/10.21511/ppm.15\(2-2\).2017.06](https://doi.org/10.21511/ppm.15(2-2).2017.06)
- Jonnadi, A., Amar, S., & Aimon, H. (2012). Analisis Pertumbuhan Ekonomi Dan Kemiskinan Di Indonesia. *Jurnal Kajian Ekonomi*, 1(1).
- Makmuri, A. (2017). Infrastructure and inequality: An empirical evidence from Indonesia. *Economic Journal of Emerging Markets*, 9(1), 29–39.
- Muhammad, U. ., & David, J. (2019). Relationship between Poverty and Unemployment in Niger State. *Signifikan: Jurnal Ilmu Ekonomi*, 8(1), 71–78.
- Nugraheni, & Priyarsonoa, D. . (2012). Kinerja Keuangan Daerah, Infrastruktur, dan Kemiskinan: Analisis Kabupaten/Kota di Indonesia 2006–2009 Local Financial Performance, Infrastructure, and Poverty: An Analysis of Districts/Municipalities in Indonesia 2006–2009. *Jurnal Ekonomi Dan Pembangunan Indonesia*, 12(2), 148–167.
- Pramono, G., & Marisno, W. (2018). Availability of Infrastructure for Poverty Reduction in Indonesia: Spatial Panel Data Analysis. *Economics and Finance in Indonesia*, 64(2), 157–180.
- Purnomo, S. D., & Istiqomah, I. (2019). Economic Growth and Poverty: The Mediating Effect of Employment. *JEJAK*, 12(1). <https://doi.org/10.15294/jejak.v12i1.18591>
- Saifuloh, N. ., Ahmad, A. ., & Suharno. (2019). The Effect of Employment Aspects on Poverty in Central Java Indonesia. *EKO-REGIONAL*, 14(1), 1–9.
- Swamy, V. (2014). Financial Inclusion, Gender Dimension, and Economic Impact on Poor Households. *World Development*, 56. <https://doi.org/10.1016/j.worlddev.2013.10.019>
- Zia, I. Z., & Prasetyo, P. E. (2018). Analysis of Financial Inclusion Toward Poverty and Income Inequality. *Jurnal Ekonomi Pembangunan: Kajian Masalah Ekonomi Dan Pembangunan*, 19(1). <https://doi.org/10.23917/jep.v19i1.5879>