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THE IMPACT OF ASYMMETRIC DECENTRALIZATION ON PUBLIC HEALTH: A SYNTHETIC CONTROL ANALYSIS OF SPECIAL AUTONOMY IN ACEH AND PAPUA

Tengku Munawar Chalil*
Policy Planning and Development Management Research Group, School of Architecture, Planning, and Policy Development, Institut Teknologi Bandung, Bandung
Email: tengku.munawar@itb.ac.id
*Corresponding author

ABSTRACT

Research Originality — This study introduces a novel methodological framework utilizing the synthetic control method to assess the causal impact of Indonesia's special autonomy policies in Aceh and Papua on health outcomes, explicitly accounting for unobserved confounders (e.g., economic and social trends) that earlier before-after comparisons overlooked.

Research Objectives — The paper aims to quantify the impact of Aceh's and Papua's special autonomy status on key health indicators—immunization coverage, birth attendance by health workers, and morbidity rates—by comparing each province to its constructed synthetic counterpart. The policy impacts were observed by comparing the changes with synthetical Aceh and Papua, which do not receive any special autonomy intervention.

Research Methods — The study employs the synthetic control method by constructing weighted composites of non-autonomous provinces as counterfactuals, estimating differences in health outcomes in Aceh and Papua before and after the introduction of special autonomy.

Empirical Results — For Aceh, the performance of the morbidity rate is no better than that of its comparable synthetic control. Moreover, Aceh performs better than its synthetic control for the health provision indicators, specifically birth attendances by health workers and immunization coverage. For Papua, the performance of health outcomes such as morbidity rates, birth attendance by health workers, and immunization coverage is worse than that of its comparable synthetic peers.

Implications — The result implication should support the continuity of asymmetric decentralization for Aceh and Papua, together with the sustainability of special autonomy grants for Aceh and Papua, as the government takes the momentum of revision for special autonomy law for Aceh and Papua.

Keywords: Health development, asymmetric decentralization, Papua, Aceh, Synthetic Control Methods
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INTRODUCTION
Background

The Constitution 1945 Article 18B recognized the existence of specific and distinctive local governments. The constitution has become the fundamental law of asymmetric decentralization in Indonesia. The law acknowledged five sub-national governments with special powers or privileges in implementing their authorities: Nangroe Aceh Darussalam, Papua, West Papua, DI Yogyakarta, and DKI Jakarta. Aceh, West Papua, and Papua are regulated in Law 18/2001 on The Government of Aceh and Law 21/2001 on Special Autonomy to Papua Province. The recognition of special autonomy in Aceh and Papua was based on recognizing the historical value, ethnic specificity, and economic growth acceleration in the regions. The status of special autonomy endows special authorities and assignments on implementing their governance, for example, establishing cultural institutions, stipulating local regulations in accordance with local values, and facilitating local parties' participation in election contests. Following the specific autonomy, the national government provides a mechanism of transfers.

Up to two decades after the implementation of special autonomy in Aceh and Papua, both regions are reaching the expiration of their special autonomy status as the law implicitly mandates an evaluation after twenty years of special autonomy. Many studies have attempted to evaluate the success of Indonesia's asymmetric decentralization. For example, Lele (2019) argues that, while Yogyakarta's special autonomy has significantly boosted economic and human development, welfare in Papua and West Papua has seen slight improvement. He suggests that the success of special autonomy endowments depends on the local governance's accountability and performance. Ananto et al. (2020) list the problem of implementing a decade of Aceh's special autonomy. They surveyed the annual reports from the national audit agency about fiscal management in Aceh's government and concluded that the province's special autonomy funds for Aceh are not optimally managed. Even though the responsibilities of public provision are dominantly under the provision of municipal and city governments, the provincial government manages the special fund. The development performance in Aceh remains similar to that of other local entities that do not receive special funds as health, education, and infrastructure development indicators still lag behind the national standard.

APPLICATIONS FOR PRACTICE
• The Synthetic Control Methods (SCM) answers the causal impacts of asymmetric decentralization for Aceh and Papua for health outcomes.
• Asymmetric decentralization has significant impacts on health outcomes for Aceh, but not as great for Papua.
• The government should carefully design the asymmetric decentralization for Aceh and Papua after almost two decades of its implementation lead to different results.

The literature about the evaluation of Papua and Aceh special autonomy mostly accentuates governance, spending management, and macro-oriented evaluation on assessing the impact of special autonomy in Aceh and Papua (cf. Vidriza et al., 2022; Setiawan, 2022; Setiawan & Rita Widyana, 2022; Yusri, 2022). However, no study could be found to answer the fundamental question of impact evaluation, which is the impact of special autonomy on Aceh and Papua compared to the condition if they did not receive special status. The assumption of ceteris paribus needs to be met in order to understand the true impact of special autonomy status of Aceh and Papua on human development and welfare. Therefore, synthetic control methods is used to create a region resembling Papua and Aceh, where the only different treatment is the special autonomy status. This study focuses on health outcomes since both provinces put health services as local development priorities. Moreover, the special autonomy law encourages regions with special treatment to achieve good performance on basic public services, such as education, health, and infrastructure.

By comparing the performance of health outcomes in actual and synthetic conditions, a robust conclusion can be withdrawn about the impact of special autonomy on health outcomes, ceteris paribus. The findings should address recent issues in Indonesia's development, specifically the effectiveness and efficiency of special autonomy in Aceh and Papua after two decades of Indonesia's asymmetric decentralization. The following sections are organized as follows; The next section reviews the earlier studies about the evaluation of special autonomy in Aceh and Papua. After that, a discussion about the achievement of health outcomes in Aceh and Papua is presented. The further section elaborates the utilized data, methodology, and analysis results. The final section withdrew the study's conclusion and recommendation for future research.

LITERATURE REVIEW
Asymmetric Decentralization in Indonesia

Decentralization in public governance is a transfer made to carry out planning, management, revenue generation, and resource allocation from the central government and its agencies to those in the field (vertical organizations), local units, semi-autonomous organizations and corporations, local governments, and organizations. Oates (1968) departs from the discussion of fiscal federalism focusing on the Musgraves' objectives of public economic policy, which are to establish an efficient allocation of resources, achieve wealth distribution, and maintain a high level of employment. The three objectives should be shared within the central and local government responsibilities. The central government ideally provides efficient products of the national public goods, while the local governments offer unique products of local public goods.

Decentralization addresses development issues such as income and economic growth, poverty, and other development issues. The second generation of federalism argued that the production of public goods is inefficient if carried out by one unit (central government) and therefore needs to be delegated. The fiscal decentralization policy aims to enable regional finance and provide the authority for regions to optimally manage all potential regional finances (Rondinelli, et.al, 1983).

In Southeast Asia, Indonesia favours the federalism of a unitary state as a heritage from Dutch colonialism. The concept of federalism emerged after the fall of Soeharto's new order regime in 1999 (Ferrazzi, 2000). When the Asian financial crisis in 1999 hurt the economies, the central government could not do much for political stability and national security because of the dissatisfaction of local entities. Therefore, after the resignation of the new order cabinet, Indonesia was put in a status quo. The transitional government gave the draconian implementation of decentralization law (Aspinall, 2003). The primary motive behind reforming the decentralization policy is to bring the government closer to the sub-national level (Talitha et al., 2019).

Indonesia's decentralization policy is unique and has many appealing points. First, decentralization in Indonesia is different from federalization in the federal country. Indonesia adopted a unitary system, so the role of the central government is tenacious, even though most authorities have been devolved to local governments. Ferrazzi (2000) points out that central government control in the implementation of Indonesia's decentralization is relatively high. Second, the implementation of decentralization policy in Indonesia is accompanied by local democratization. Thus, local voters directly elect the leader in their local administration. Third, Indonesia focuses on vertical instead of horizontal types of decentralization. Vertical decentralization emphasizes the devolution of authority from central to local governments, while horizontal decentralization aims to reduce regional development inequality. Indonesia's decentralization framework accentuates the reduction of the central government's burden by empowering local governments to execute government works and manage fiscal resources, while paying less attention to controlling rising development inequality. Fourth, the Indonesian fiscal decentralization design promotes expenditure decentralization instead of revenue decentralization. The endorsement of expenditure decentralization means the central government allows local governments to manage their spending while limiting their local taxing power. The income tax, ad-valorem tax, and import tax are still in the account of the national government even after two decades of Indonesia's decentralization.

Indonesia also implements asymmetric decentralization. Ethnicity, linguistics, culture, history, and economic value become the primary causes of asymmetric decentralization policy (Bird, 2003). Papua was annexed to Indonesia during the 1950s, post-World War II. The region of Papua has its local ethnicity, cultural, and historical value that makes it special to Indonesia. The Aceh region has its kingdom before the creation of the Republic of Indonesia. The local kingdom played a significant role in Indonesia's struggle for independence. The reward for the people of Aceh from the Indonesian government is the acknowledgment of special autonomy for the Aceh region. The special autonomy status granted Aceh and Papua discretion for implementing their local authority by integrating local values and democracy. They also received special access to fiscal resources, including a higher share of natural resource income and specific fund transfers from the central government.

Special Autonomy (*Otonomi Khusus*/Otsus) refers to the development of decentralization or regional autonomy that the central government grants to certain regions as these regions possess privileges that other regions in Indonesia do not have. Until now, regions that have been granted special autonomy status are Aceh, Yogyakarta, Jakarta, West Papua, and Papua Province. These regions obtained special autonomy status due to the privileges that existed in the area. In the end, the central government granted them special autonomy status, stipulated by autonomy constitutions. The utilization of the Provincial Special Autonomy Fund of Papua and West Papua primarily aims to finance education and health (Paulina, 2016). The special autonomy status was given to Papua as a peace construction by the government (Pamungkas, 2022). Papua and West Papua received a higher share of revenues from the forestry, fisheries, mining, oil, and gas sectors than the other provinces in Indonesia as a consequence of special autonomy. Furthermore, they receive additional special autonomy funds (dana otsus) that account for about 2 percent of the national aggregate of general allocation funds (Resosudarmo, et. al., 2014).
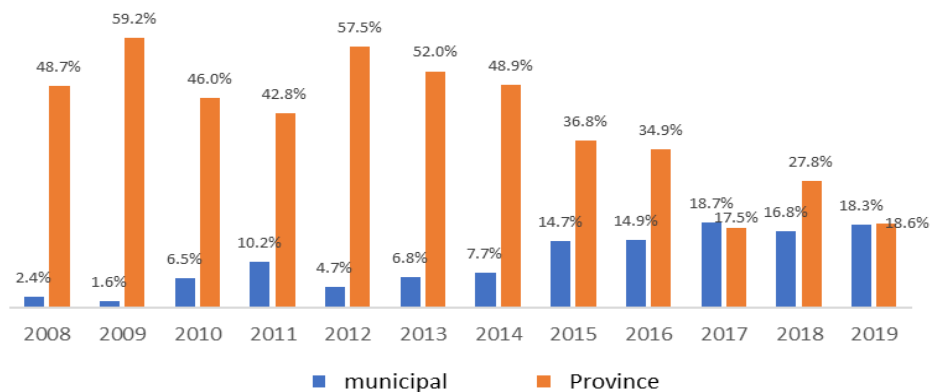
Special Autonomy in Papua and Aceh

Special Autonomy status for Aceh was given by the stipulation of Law No. 18 year 2001 concerning the Special Autonomy for the Special Region of Aceh as the Province of Aceh, which was later amended into Law No. 11 year 2006 concerning the Government of Aceh. Granting special autonomy status is intended to widen the opportunities for region of Aceh to implement the uniqueness of its cultural and social values, a society that is rooted in Islamic teaching.

As for the special autonomy of the Aceh government, first, the central government gives privileges to the Aceh government to implement local values in its government system. The privileges include the implementation of Islamic law for adherents in Aceh, the implementation of traditional life, the education system under Islamic law, and the role of the clergy in Aceh's policy. Second, the formation of a government system patterned on local values, such as the Aceh government, the Aceh People's Representative Council (DPRA), sharia courts, sharia police, and the use of Qanun as regional regulations. Third, recognition of local

Acehnese political parties. Fourth, the provision of special autonomy funds and profit sharing for the Aceh administration.

Aceh has a higher share of tax and natural resources shares. The law stated that from 2006 to 2026, Aceh receives the special autonomy fund, with the details of from 2006 to 2023, the amount is equivalent to 2% of the national General Allocation Fund (DAU) ceiling, and from 2023 to 2029, the amount is equal to 1% of the national DAU ceiling. The special autonomy fund share is quite significant in both provinces and municipalities within Aceh. As illustrated in Figure 1, the special autonomy fund accounts for 18.6% of provincial revenue and 18.3% of municipal revenue in the fiscal year 2019.

Figure 1 Share of Special Autonomy Fund in Aceh Revenue

Source: Ministry of Finance, 2022 (processed by the author)

Similar to Aceh, Papua's special autonomy was given because of the specificity of the area. The special autonomy in Papua is in the form of compensation to two provinces (Aceh and Papua) to join the Republic of Indonesia during the unification of Indonesia (Suwanda & Suwanda, 2022). Papua formally became part of Indonesia at the time of annexation in 1969, where the region was renamed West Irian (Irian Barat) with the Jayapura as its capital. Through a long and bitter process, sporadic and only intermittent violence has consistently challenged the legitimacy of Indonesia's unification (McGibbon, 2006). To soften the internal conflict inside Papua, the practitioners consider Papua's special autonomy as a cooperation contract between the Government of Indonesia and the native Papua. The people of Papua have to decide their destiny after the end of the special autonomy (Drake, 2019).

The rules regarding special autonomy in Papua are regulated in the Law No. 21 year 2001, and was amended into Law No. 1 year 2008, and Law No. 21 year 2021 at the latest. The granting of special autonomy in Papua is aimed at improving services, accelerating development, and empowering all people in the Papua Province to be on par with other regions. So far, the administration and implementation of development in Papua Province have not been effective. The management and utilization of the region's natural resources have yet to significantly improve the standard of living of indigenous Papuans. This has led to a persistent development gap between Papua and other regions, and to the neglect of the basic rights of the indigenous population.

Following the special autonomy status, Papua received special transfers from the central government, which has a significant portion of its revenue. In the last ten years, special autonomy transfer has contributed around 15.93% and 24.97% of the total government revenue of West Papua and Papua province, respectively. The share of special transfer on city/municipal revenue is lower than that at the provincial level, which is 16.6% for cities/municipalities within West Papua and 13.3% for cities/municipalities within Papua province (Figure 2).

Five things distinguish autonomy in Papua from local autonomy status in other regions. First, the provinces in Papua have more dominant authority in terms of standardization and development in the economy, education, socio-cultural aspects, health, environment, and social security. Second, the central government provides special funding in the form of special autonomy funds, additional infrastructure funds (*Dana Tambahan Infrastruktur*/DTI), and additional oil and gas natural resources sharing (*Dana Bagi Hasil*/DBH) in the context of special autonomy. The Special Autonomy Funds account for two percent of the national general allocation funds ceiling for 20 years. Third, Papua has the special right to promote local values as a unique identity. Papua has the right to determine songs and symbols as regional symbols. Native Papuans should occupy the positions of governors in the provinces of Papua. Fourth, Papua has the right to form unique regional institutional systems, such as the local native councils. Local government organization

are given special terms that reflect Papuan identities, such as the Papuan People's Council (MRP), the Papuan People's Representative Council (DPRP), provincial regulations, and special regional regulations. Fifth, the Papuan people are given the right to form local political parties (Tryatmoko, 2016).

Lele (2019) mentions that the implementation of asymmetric decentralization in Papua and Aceh has different results. Despite prioritizing the health and education sectors, Papua and West Papua still recorded a Human Development Index (HDI) in 2019 that was below the national average, as presented in Table 1. Aceh also spends the government expenditure on health and education as a priority, but the achievement of HDI is almost near the national average. Another proxy that could be used to assess the achievement of asymmetric decentralization is the poverty rate and Gini ratio. The poverty rate in Aceh in 2019 is 15.01%, above the national average (9.22%). The poverty rate in Aceh rose significantly during 2000 to 2004, when Aceh suffered a civil war during 2000-2003 and the tsunami disaster on December 26, 2004. The poverty rate in 2004 was 32.6% and decreased by half in 2019. The inequality rate in Aceh is better than national, where the Gini Ratio is only 0.321.

Figure 2 Share of Special Autonomy Transfer to Total Municipal Revenue
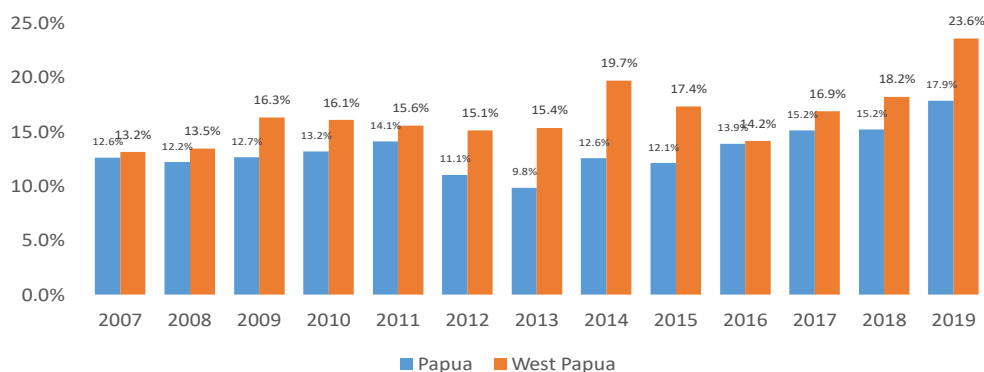
Source: Ministry of Finance, 2022 (processed by the author)

Papua, the eastern part of Indonesia, is considered a left behind area since the socioeconomic development still lagged behind the national average. The poverty ratio decreases gradually but the poverty rate is higher than national. The province of West Papua is relatively more developed than the province of Papua, with a GDP per capita of Rp 87.54 million in 2019. The cities in West Papua are relatively more connected to the national logistic networks, such as the metropolitan of Sorong and Manokwari, in comparison with the major cities in Papua, such as Jayapura and Merauke. HDI in West Papua is higher than in Papua due to the high fiscal capacity of government of West Papua in delivering public services. The government of West Papua receives higher revenue from tax bases and revenue share from central government. The central government claimed that about one quadrillion Rupiah have been given to Papua as a form of special autonomy fund since 2001. However, the people in Papua still suffer from poverty and lack of development. The fact that the success of special autonomy in Papua and Aceh could invite many questions, The paper tries to evaluate the achievement of the special autonomy using the recent and appropriate methodology.

Table 1 Development Achievement in Aceh and Papua (2019)

Aspect	Aceh	West Papua	Papua	National
Human Development Index	71.9	64.7	60.84	71.92
GDRP Per Capita (Rp 000)	30,879.06	87,542.37	56,618.95	59,317.91
Poverty rate (%)	15.01	21.51	26.55	9.22
Gini Ratio	0.321	0.381	0.391	0.38

Source: Statistics Indonesia (2021a, 2021b, 2021c, 2021d)

METHODS

The dataset is taken from the Indonesia Database for Economic Research (INDO-DAPOER) – The World Bank. The data cover the period 2000-2017 with 34 provinces but unbalanced by several restraints, especially the province that split during the observed period; for example, the proliferation of Riau Island, West Sulawesi, North Kalimantan Province, and West Papua in early 2000. Since the synthetic control methods is utilized in the analysis, the data should be strongly balanced to run the model. It is crucial to the model that the observation data in the pre-treatment period is strongly balanced to smooth the prediction post-treatment period (Abadie et al., 2012). Therefore, the split provinces are merged into the parent

Table 2 Descriptive Statistics

Variable name	Mean	Variance	Minimum value	Maximum value
Health outcome indicators				
Immunization Coverage for Children under 5 years old (in % of children population)	92.596	18.401	70.131	99.821
Morbidity Rate (in %)	29.021	40.091	15.342	49.664
Birth attended by Skilled Health worker (in % of total birth)	75.003	293.102	27.864	100
Predictors				
log Monthly Per Capita Household Health Expenditure	9.129	.708	7.391	10.994
log Total Own Source Revenue/log PAD	27.287	2.352	21.474	31.413
log total General Allocation Grant/log DAU	26.955	.724	23.606	28.967
log Total Special Allocation Grant/log DAK	24.902	2.967	17.716	29.841
log Natural Resource Revenue/log DBH	27.287	2.352	21.474	31.413
log special autonomy fund and other transfers	27.787	1.326	23.563	29.978

Source: Processed by the author

provinces, resulting in a total of 30 provinces. Table 2 shows the descriptive statistics of the employed variables. I replace the missing data with time trend prediction to deal with missing observations in the dataset. The data interpolation should smooth the analysis using Synthetic Control Methods (SCM).

The synthetic control methods (SCM) for this study was introduced by Abadie et al., (2012). They used SCM to estimate the impact of 1988 California's tobacco control law on tobacco consumption. They compared tobacco consumption in California in 2000 with comparable synthetic control region in 2000 to estimate the actual effect of the law. Gharehgozli (2017) used the SCM to evaluate the economic sanctions on Iran's economic growth. He argues that SCM could provide a condition of observation that hypothetically did not receive any intervention, where, in fact, the observation received the intervention. Synthetic control is primarily used in empirical strategies to estimate the causal impact of an intentional intervention (e.g.Abadie et al., 2012; Barone & Mocetti, 2014; Gharehgozli, 2017; Kreif et al., 2016; Sommers et al., 2014). McLelland & Gault (2017) argue that the synthetic control method is a popular analysis among policy analysts for studying the effect of a policy treatment on a particular outcome in a state. The synthetic control method consists of 6 (six) steps: (1) Identify the predictors of the outcome variables; (2) Identify possible

Figure 3 Flow diagram for the Synthetic Control Method (SCM)
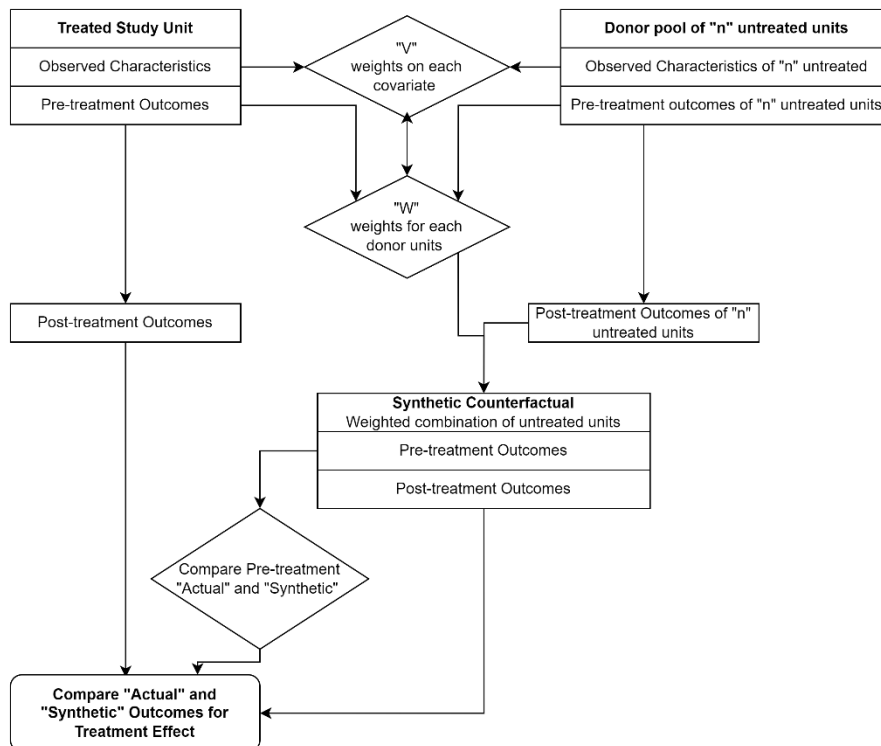
Source: Sills et al. (2015)

donor observation to synthesize the control state; (3) Choose a method for selecting predictor weights; (4) Assess the pre-treatment period goodness of fit of the synthetic control state; (5) Conduct placebo test on states in the donor pool to evaluate the significance of the results for the treated state; and (6) Conduct sensitivity analyses to test the credibility of the results further. Figure 3 shows the procedure for the synthetic control method.

A formal description of the application of SCM in this study follows Abadie et al., (2012). There are J + 1 observations and let the first observations be the province that receives special autonomy rights. Let y_{it}^1 as the outcome of interest to be observed in province *i* (*i=1, …, J+1*) at time *t* (*t= 1, …, T*), which in this study are health development indicators, and y_{it}^0 if the observation does not receive any special autonomy rights. Let T_0 be the number of periods before the special autonomy rights are effective (*1 ≤ T0≤ T*). Assume that the aggregate trend of the outcome variable for the treated province and the untreated provinces has the similar trend before the special autonomy is granted so that $y_{it}^0 = y_{it}^1$ for any provinces *i* and any period *t <* T_0. Let $\alpha_t = y_{it}^1 - y_{it}^0$ be the effect of special autonomy for period *t > T0*. Let D_t be an indicator variable that has value 1 if *i=1* and *t > T0*. Then, the observed outcome of interest in the special autonomy region can be written as $y_{it}^1 = y_{it}^0 + \alpha_t D_t$. It follows that for *t > T0*, $\alpha_t = y_{it}^1 - y_{it}^0$ but y_{it}^0 is not observed and has to be estimated. The condition of y_{it}^0 for *t > T0* is a counterfactual. Abadie et al., (2012) estimate α_t with $\hat{\alpha}_t = y_{it} - \sum_{j=2}^{J} w_j y_{it}$ for *t > T0* where weights w_j are chosen to minimize a certain penalty function (given by the Mean Squared Prediction Error - MSPE) that depends on the pre-special autonomy pattern in all outcomes of interest in all regions and pre-special autonomy predictor variables.

RESULT AND DISCUSSION

Findings

Impact of Special Autonomy Status on Health Outcomes in Aceh and Papua

This section discusses the analysis for each region of interest: Aceh and Papua. The analysis begins with the selection of predictors for health outcomes. Local government revenue components were chosen as predictors, including own-source revenue, general allocation grant, special allocation grant, natural resource revenue, and special autonomy fund along with other affirmative transfers. Per capita household health expenditure was also included to capture private contributions. All predictors were transformed into a logarithmic scale to address potential non-linear relationships. The results are presented in the following subsection.

Impact of Special Autonomy Status on Health Outcomes in Aceh

Aceh received its special autonomy status under Law 18/2001 on Special Autonomy of the Province of Aceh, which was later revised by Law 11/2006 on the Government of Aceh. Law 11/2006 provided a clearer foundation for special autonomy by allocating specific autonomy funds and formally recognizing Aceh's cultural institutions within the local governance structure. Given that the law was stipulated in 2006, the year 2007 was assumed to mark the full implementation of the special autonomy status. Accordingly, the years before 2007 were treated as the pre-treatment period, while the years from 2007 onward were considered the post-treatment period.

This study examine the performance of immunization coverage in Aceh along with its comparable synthetic version of Aceh. The model has a Root Mean Square Percentage Error (RMSPE) 2.16; the synthetic version of Aceh in the pre-treatment period has slight differences from the real Aceh. The top three SCM-selected donor pools are Papua, Yogyakarta, and North Sulawesi, with their respective weights shown in figure 4. By the end of 2018, Aceh performed worse than its comparable peers, where the special autonomy status decreased immunization coverage by 10.91 percent. Figure 5 agrees that special autonomy status positively contributes to health outcomes, where the birth attended by health workers is 4.62 percent higher in Aceh than in its comparable synthetic peer. However, figure 6 shows the contrasting finding. The morbidity rate is 3.67 percent higher for Aceh than its comparable peers.

### Impact of Special Autonomy Status on Health Outcomes in Papua

Law 21/2001 on special autonomy for Papua granted Papua the special autonomy status, however, according to The Ministry of Home Affairs, it was fully implemented in 2003, when Papua established the local institutions and received the funding via special autonomy transfers. Later, the law was revised by Law 35/2008 on the revision of Law 21/2001 and Law 35/2008 emphasized the proliferation of West Papua Province and the implementation of special autonomy by both Papua and West Papua Provinces. Since special autonomy was fully granted in 2003, the year 2003 was used as the cut-off period for the analysis. The years before 2004 (2000–2003) were treated as the pre-treatment period, while the years from 2003 to 2017 were considered the post-treatment period. The analysis was then conducted using the Synthetic Control Method.

This study examine the impact of special autonomy status on immunization coverage in Papua. Figure 7 plots the comparison of immunization coverage in Papua with its synthetic version. The immunization coverage in Papua is 11.42 percent lower than that of its synthetic peer. This study then analyze birth attended by health workers as the outcome of public provision, as shown in Figure 8. While it has an RMSPE of 12.45%, the performance of Papua on this indicator is 3.95 percentage points higher than the synthetic Papua average for the period 2004-2017. Figure 9 compares the morbidity rate between Papua and its synthetic version. From 2004 to 2010, the synthetic peer performed better than Papua, with a morbidity rate 2.71 percent lower on average. However, after 2010, Papua performs better than its peers, with 7.41 percent lower on average from 2010 to 2017.

Discussion

There are different conclusions on the impact of special autonomy for Aceh and Papua. The performance of Aceh's immunization coverage and birth attended by health worker indicators are slightly better than its comparable synthetic version. However, from the graph in Figure 4 to Figure 6, the synthetic model does not perform well in modelling the real data before the special autonomy in Aceh becomes effective. If the period of data could extend at least 10 years, as a rule of thumb of statistics, it should provide a better synthetic model for the analysis.

Figure 4 Comparison of Aceh and Synthetic Aceh on Immunization Coverage
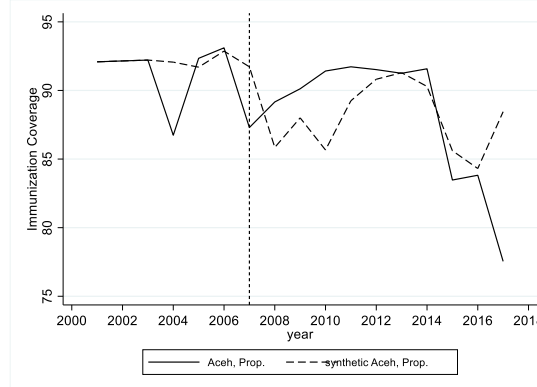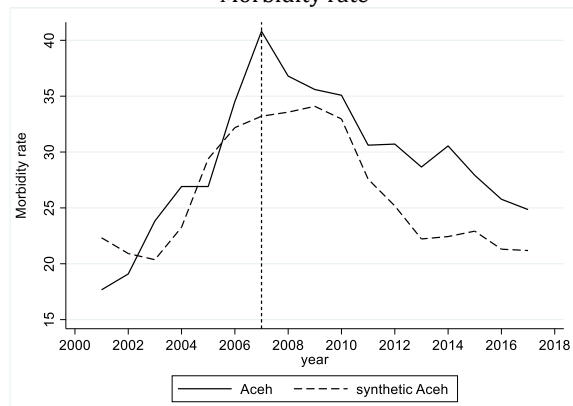

RMSPE: 2.19 Top 3 Control (Weight): Papua (0.476), Yogyakarta (0.36), North Sulawesi (0.164)

Figure 5 Comparison of Aceh and Synthetic Aceh on Birth Attended by Health Worker
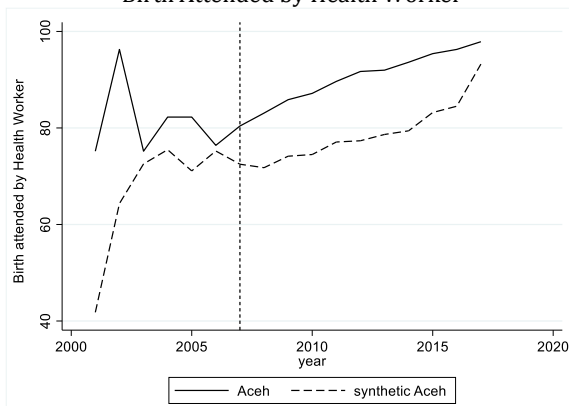
RMSPE: 19.68 Top 3 Control (Weight): Papua (0.366), East Kalimantan (0.37), Yogyakarta (0.113)

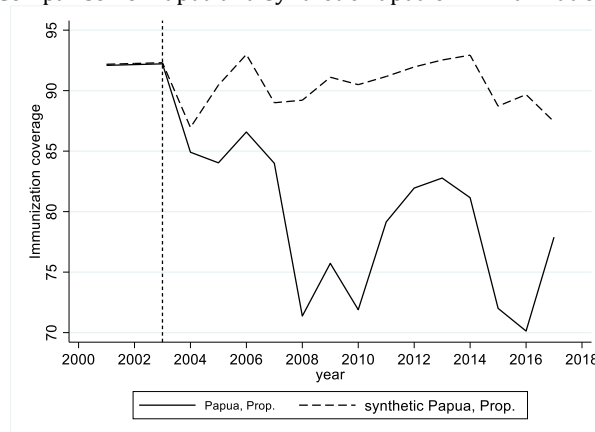Figure 6 Comparison of Aceh and Synthetic Aceh on Morbidity rate

RMSPE: 3.21 Top 3 Control (Weight): Papua (0.646), Riau (0.236), Yogyakarta (0.118)

Source: Processed by the author

Despite the lack of observation, the estimation finds that special autonomy in Aceh provides better public health service provision than if Aceh did not receive special autonomy. For Aceh, asymmetric decentralization should promote better outcomes in development since the local government has greater access to income and manages expenditures to match with the local citizen demand. The asymmetric decentralization induces upward accountability where local leaders receive a better chance of political appreciation and administrative power if their public performance improves (Chien, 2010). Lele (2019) argues that the special autonomy in Aceh performs at a mild level in improving people's welfare, compared

with the success of special autonomy in Yogyakarta, which is substantially promising in terms of asymmetric decentralization. While the results show that the achievement of Aceh special autonomy has a positive impact for health services, the similar finding is also shown by Yusri (2022) where special autonomy fund plays a role in lowering the poverty rate in Aceh, increases safe sanitation access, and positively influences the net enrollment ratio of senior secondary school.

Figure 7 Comparison of Papua and Synthetic Papua on Immunization Coverage

RMSPE: 0.00 Top 3 Control (Weight): Aceh (0.445), Maluku (0.272), Jakarta (0.227)

Figure 8 Comparison of Papua and Synthetic Papua on Birth Attended by Health Worker
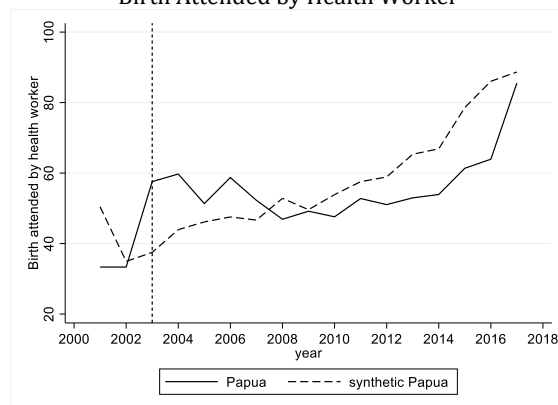
RMSPE: 12.15 Top 3 Control (Weight): Southeast Sulawesi (0.903), East Nusa Tenggara (0.063),

Figure 9 Comparison of Papua and Synthetic Papua on Morbidity rate
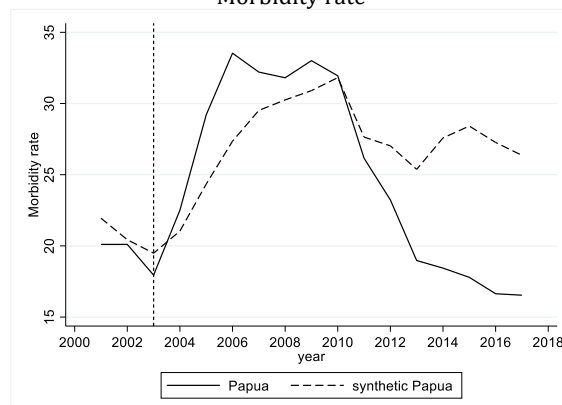
RMSPE: 1.32 Top 3 Control (Weight): Central Kalimantan (0.502), Riau (0.218), Jakarta (0.252)

There is contrasting finding in Papua after the implementation of special autonomy. The results show that Papua's immunization coverage and birth attendance by professional medical workers is not better than that of its synthetic peers, which forms an argument that the special autonomy status granted to Papua after two decades is not completely successful. Concurring with the findings, Setiawan (2022) points out that the factor of public services in Papua in various sectors has not been touched evenly and widely. He further calls for a critical review of the special autonomy scheme and a careful development plan for public services in Papua. Public service administration in Papua over two decades of special autonomy has not improved as violence, repression, and expropriation influenced public services, such as education (Beneite-Martí, 2022). There is indeed a slight improvement in welfare in Papua after the implementation of special autonomy, hence the central government has put much attention on the development of Papua. The estimation shows that the morbidity rate in Papua is lower than its synthetic peers, which suggests an improvement in Papua's development outcome.

CONCLUSION

The impact of special autonomy status on health outcomes was analyzed in two special autonomy regions in Indonesia: Aceh and Papua. The special autonomy status impacts differ on each province. For Aceh, the performance of the morbidity rate is lower than that of its synthetic peers. Moreover, the Aceh province performs better than its synthetic control for the health provision indicators i.e., birth attendances by health workers and immunization coverage. To sum up, Aceh's special autonomy status contributes to enhancing health service provision but fails to improve health outcomes.

For Papua, the performance of health outcomes, such as morbidity rates, birth attendances by health workers, and immunization coverage are worse than that of its comparable synthetic peers. The proliferation of West Papua in 2008 may have taken a toll on development, as the government focused more on establishing administrative institutions than on preparing health provisions. The synthetic version of Papua could perform better since the synthetic one does not account for the event of proliferation and special autonomy status.

The implication of this paper's results should support the continuity of asymmetric decentralization for Aceh and Papua, together with the sustainability of special autonomy grants for Aceh and Papua, as the government seek the momentum of the implementation of Law No. 2/2021 on the revision of Law No. 21/2001 of the special autonomy for provinces in Papua. The central government should take excellent and careful development planning for the future of Papua, as the past two decades of special autonomy in Papua have not yielded optimal results. Law 2/2021 has mandated a long-term development plan for Papua (*Rencana Induk Percepatan Pembangunan Papua / RIPPP*), becoming a grand design of special autonomy for Papua. Furthermore, the central government recently ratified the proliferation of four new autonomous provinces in the land of Papua, namely province South Papua, province Central Papua, Southwest Papua, and province Highland Papua. Future research should evaluate the developmental implications of Papua's recent regional proliferation, focusing on whether such restructuring has significantly enhanced or impeded progress in public service delivery and regional welfare.

Furthermore, the government of Aceh has urged an amendment to Law No. 11/2006 on the government of Aceh, primarily in response to the significant reduction in its special autonomy funding. The special autonomy fund of Aceh will be reduced by 50% in 2023 but Aceh's development problems are not yet resolved. While the results show that the special autonomy policy positively impacted the development in Aceh, if the local government's budget were abruptly cut in half, it would deteriorate the performance of the local government. The central government should take a gradual transition policy to reform the autonomy status in Aceh, so that good development performance in Aceh can be sustained.

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