

Recorded Homicide as Lethal Violence and Subnational Spending Priorities in Indonesia

Zul Khaidir Kadir¹

¹Universitas Muslim Indonesia, Indonesia

Correspondence: zulkhaidir.kadir@umi.ac.id

Article Info

Article History:

Received Aug 15th, 2026

Revised Aug 21th, 2026

Accepted Aug 30th, 2026

Keyword:

Decentralization; Fiscal priorities;
Indonesia; Provincial expenditure;
Recorded homicide.

ABSTRACT

This study examined whether police-recorded homicide was associated with realized provincial spending priorities in Indonesia. A cross-sectional ecological design used secondary official data for 2018. Homicide events reported by Statistics Indonesia were aligned with provincial jurisdictions and converted to rates per 100,000 population. Provincial expenditure shares for public order and security, health, and social protection were drawn from the Directorate General of Fiscal Balance. Descriptive statistics and ordinary least squares models with robust standard errors were estimated with population and gross regional domestic product per capita as basic adjustment variables. Recorded homicide varied substantially across the 31 aligned jurisdictions. Higher homicide was not associated with consistently larger expenditure shares. The public order estimate was negative and uncertain, the health estimate was also negative, and the social protection estimate was close to zero. The findings suggested that recorded homicide did not map directly onto provincial spending composition, partly because policing authority and provincial fiscal responsibility were institutionally separated.



© 2026 The Authors. Published by Punggawa Legacy Center. This is an open access article under the CC BY license (<https://creativecommons.org/licenses/by/4.0/>)

INTRODUCTION

Inequality, concentrated disadvantage, welfare institutions, and state capacity have long shaped explanations of homicide at the macro level. The literature is large because homicide varies sharply across places and because fatal violence is often treated as a comparatively reliable marker of serious interpersonal violence. Work across countries and subnational units has shown that the correlates of homicide are neither singular nor invariant across social settings (Land, McCall, & Cohen, 1990, Fajnzylber, Lederman, & Loayza, 2002, Pridemore, 2008, Nivette, 2011). Aggregate homicide also conceals substantial variation in relationships and immediate situations (Kadir, 2026g). Yet homicide usually appears as the outcome, while the fiscal behavior of governments facing different homicide burdens receives much less attention.

Government spending and violence are related in more than one direction. Public investment may shape conditions associated with violence, while violence may also create pressure for safety and social spending. Evidence remains mixed across institutional settings (Rodrigues Gomes, 2018, Ramdayani, Kharisma, & Wibowo, 2019, Hazra & Aranzazu, 2022, Lund, Schleimer, Reeping, & Pear, 2025). Recent county-level work likewise finds that spending tradeoffs do not map neatly onto homicide outcomes (Gottlieb et al., 2025). More violence therefore does not imply more spending. The relationship depends on which government spends, what the budget category finances, and when expenditure is observed.

Subnational budgets also operate within an assignment of authority that may separate the place where a problem occurs from the level of government that finances the closest response. Fiscal decentralization can improve responsiveness when local governments possess both information and

usable authority, but decentralization does not remove coordination problems or legal limits on what subnational governments can finance (Oates, 1999, Bardhan, 2002, Besley & Coate, 2003, Faguet, 2004). Spending composition may consequently reflect institutional responsibility as much as local need. A provincial government can face a serious public problem and still have only limited control over the budget category that appears most closely related to that problem. This issue is especially important when security institutions remain centrally organized.

Budgets change unevenly. Previous allocations, legal obligations, and limited administrative attention create friction in annual expenditure decisions. Public spending often remains incremental until political attention changes enough to disturb an established pattern (Jones, Sulkin, & Larsen, 2003, Jones & Baumgartner, 2005, Breunig & Koski, 2006). Crime does not automatically command attention in proportion to its measured level. Shi, Lu, and Pickett (2020) show that public salience can diverge from observed crime trends. Policy attention can also be shaped by fear rather than by the measured scale of a threat (Kadir, 2025). A homicide rate may therefore be socially serious without producing a contemporaneous shift in a broad provincial spending share.

Indonesia combines extensive subnational spending authority with a nationally organized police system. Decentralization changed local government formation, spending, electoral incentives, and public investment, although the practical effects have varied across places and functions (Fitriani, Hofman, & Kaiser, 2005, Lewis, 2005, Sjahrir, Kis-Katos, & Schulze, 2013, Martinez-Bravo, 2014, Kis-Katos & Sjahrir, 2017). The Indonesian National Police are not financed as a provincial police service. Expenditure reported by provincial governments under public order and security should therefore not be interpreted as police expenditure. Recent analysis of Indonesian criminal policy also describes a persistent state-centered penal orientation (Kadir, 2026e). In that setting, a provincial budget comparison should not be expected to capture the whole governmental response to homicide.

Recorded homicide is used rather than a broader measure of lethal violence. The source is police administrative data reported by BPS-Statistics Indonesia, so it captures events known to and classified by police. It does not measure every form of fatal violence, and an event count is not necessarily a victim count. A BPS-based ecological mapping of homicide in Indonesia makes the same distinction between territorial burden and official visibility (Kadir, 2026c). Aggregation and classification can alter macro-level homicide estimates (Baller, Anselin, Messner, Deane, & Hawkins, 2001, Kubrin, 2003, Pridemore, 2011). The empirical claim is therefore restricted to police-recorded homicide.

The three expenditure outcomes are not assumed to represent equivalent mechanisms. Public order and security is the closest provincial fiscal category to a safety response, although it still does not measure Polri spending. Health is broader and any relationship with homicide would be indirect because provincial health expenditure covers a much wider service burden. Social protection is included as a contrast outcome. Prior homicide research often treats welfare provision as a structural condition associated with violence rather than as a short-run response to violence (Savolainen, 2000, Pratt & Godsey, 2003, Rogers & Pridemore, 2013, 2017). A parallel positive association across all three categories would therefore be a strong empirical pattern, not an assumption built into the design.

Cross-sectional evidence cannot show whether homicide changes a budget. It can still establish whether provinces with different recorded homicide burdens display different expenditure composition after basic adjustment for population and economic level. Many studies in the spending and violence literature place expenditure on the explanatory side and violence on the outcome side (Lund et al., 2025). This study asks the reverse empirical question without reversing the causal claim. It examines whether a provincial spending gradient is present. Even a weak gradient matters because the assumption that visible social harm should appear in subnational budgets is often made more readily than it is tested.

Two questions guide the analysis. How unevenly was police-recorded homicide distributed across Indonesian provincial jurisdictions in 2018. Was recorded homicide associated with the realized provincial expenditure shares for public order and security, health, and social protection. Official secondary data and a small cross-sectional model are used. The analysis does not claim that homicide causes fiscal reallocation or that a null association proves an absence of governmental response. Its purpose is narrower. It tests whether a visible cross-sectional spending pattern exists before any stronger account of fiscal response is considered.

RESEARCH METHODS

The study uses a cross-sectional ecological design based on secondary official data for 2018. The unit of analysis is the provincial jurisdiction. Police statistics are reported by regional police jurisdiction, while fiscal and socioeconomic data are reported by civil province. DKI Jakarta, West Java, and Banten were excluded because Polda Metro Jaya covers parts of all three provinces and its published homicide total cannot be reallocated without false precision. The analytical sample contains 31 jurisdictions. The 2018 cross-section provides the cleanest common jurisdictional frame. A 2017 homicide lag was not used because North Kalimantan had no separate Polda observation in that source year.

Police-recorded homicide events come from Crime Statistics 2020 published by BPS-Statistics Indonesia, which compiles administrative crime data from the Indonesian National Police for 2017 to 2019 (BPS-Statistics Indonesia, 2020). The exposure is the number of recorded homicide events divided by the corresponding 2018 provincial population and multiplied by 100,000. Population figures come from BPS national statistics for 2018 (BPS-Statistics Indonesia, 2019). The rate should be read as recorded homicide events rather than true homicide prevalence because the source only observes incidents registered and classified by police. This wording also avoids treating an incident count as if it were necessarily identical to the number of homicide victims.

Realized expenditure data come from the Directorate General of Fiscal Balance in the Ministry of Finance. Only provincial government rows from the 2018 realized APBD table were used (DJPK, 2021). Public order and security, health, and social protection expenditure were each divided by total realized provincial expenditure and expressed as percentages. Shares are used because the question concerns spending composition rather than fiscal size. Public order and security refers to the provincial functional classification and not to Indonesian National Police expenditure. Two adjustment variables are included. Provincial population and GRDP per capita at current market prices are entered in natural logarithms, with GRDP data taken from BPS-Statistics Indonesia (2023).

Table 1 Variables and Data Sources

Construct	Operational measure	Analytical role	Source
Recorded homicide	Police-recorded homicide events per 100,000 population	Exposure	BPS Crime Statistics 2020 and Polri
Public order and security	Realized functional expenditure divided by total realized provincial expenditure multiplied by 100	Outcome share	DJPK Ministry of Finance
Health	Realized health expenditure divided by total realized provincial expenditure multiplied by 100	Outcome share	DJPK Ministry of Finance
Social protection	Realized social protection expenditure divided by total realized provincial expenditure multiplied by 100	Contrast outcome share	DJPK Ministry of Finance
Population	Provincial population entered as natural log	Adjustment variable	BPS-Statistics Indonesia
Economic level	GRDP per capita at current market prices entered as natural log	Adjustment variable	BPS-Statistics Indonesia

The analysis begins with descriptive statistics and the distribution of recorded homicide across jurisdictions. Three ordinary least squares models then estimate the association between homicide rate

and each expenditure share after adjustment for logged population and logged GRDP per capita. HC3 robust standard errors are used because the cross-sectional sample is small (Long & Ervin, 2000). The North Sumatra public order entry is shown as a dash in the source table and is treated as missing rather than zero. The public order model therefore uses 30 observations, while the health and social protection models use 31. Coefficients are interpreted as percentage-point differences in spending share associated with a one-unit difference in recorded homicide per 100,000 residents.

All data are aggregated and publicly available. The design does not establish temporal ordering and does not observe how budget decisions were made. Unmeasured provincial differences may also contribute to the estimated associations. The models are therefore descriptive and associational. They are used to assess the direction, size, and uncertainty of the observed spending gradients, not to identify policy effects or governmental responsiveness. No individual records, interviews, surveys, or confidential administrative files are used.

RESULTS AND DISCUSSION

Recorded homicide varied markedly across the 31 jurisdictions. The mean event rate was 0.73 per 100,000 population and the median was 0.56. Rates ranged from 0.05 to 2.74, with a standard deviation of 0.59. Most jurisdictions remained below one recorded event per 100,000, while a smaller group occupied the upper tail. North Sulawesi had the highest recorded rate. Picture 1 shows this dispersion without treating the ranking as a complete ordering of underlying homicide risk. Police recording and classification remain part of the observed variation.

The spending categories differ greatly in scale. Health accounted for an average of 8.55 percent of realized provincial expenditure and ranged from 1.60 to 15.46 percent. Public order and security averaged 0.81 percent among the 30 provinces with reported values. Social protection averaged 1.14 percent. An identical percentage-point coefficient would therefore represent a much larger relative shift in public order or social protection than in health. Table 2 retains the original spending-share metric so that the results remain interpretable in ordinary fiscal terms.

Table 2 Descriptive Statistics for Provincial Jurisdictions in 2018

Variable	N	Mean	SD	Median	Min	Max
Homicide events per 100,000	31	0.73	0.59	0.56	0.05	2.74
Public order and security share percent	30	0.81	0.37	0.74	0.12	1.74
Health share percent	31	8.55	2.90	8.70	1.60	15.46
Social protection share percent	31	1.14	0.40	1.11	0.53	2.20
Population in thousands	31	6,231.43	8,737.00	3,648.80	716.40	39,500.90
GRDP per capita in thousand Rp	31	54,800.45	33,674.27	48,105.00	18,418.00	174,165.00

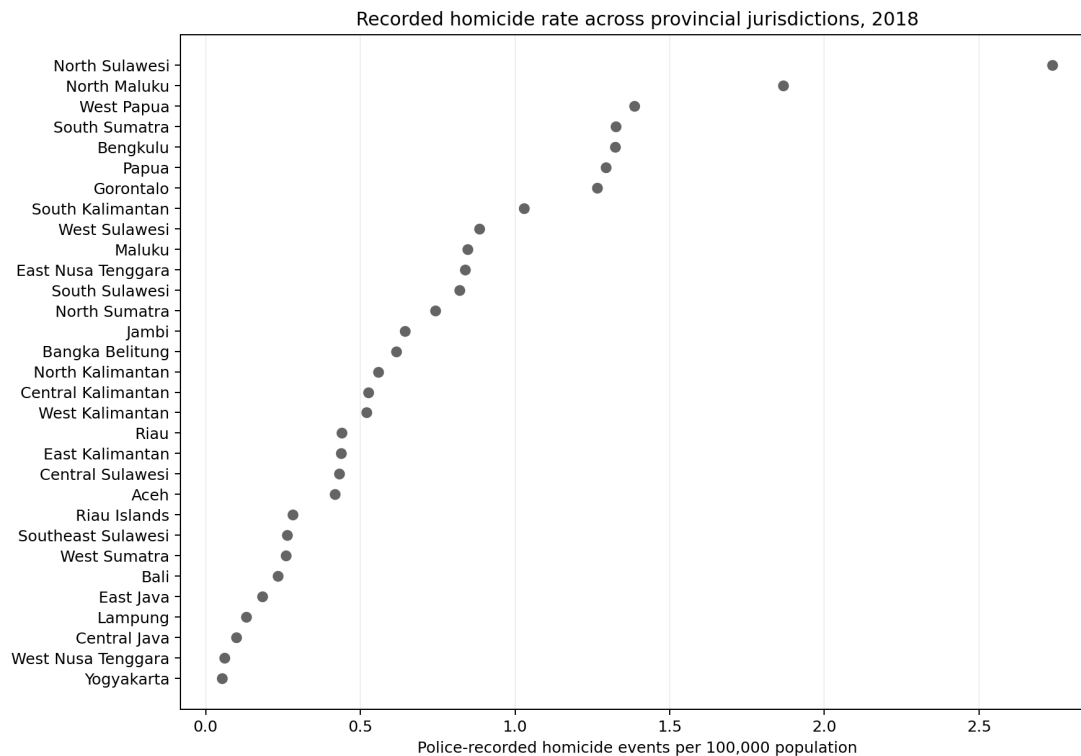


Figure 1 Police-Recorded Homicide Event Rates across Provincial Jurisdictions in 2018

Public order and security produced the most notable coefficient, although not in the expected positive direction. The adjusted homicide estimate was minus 0.284 percentage points with an HC3 standard error of 0.151 and a 95 percent confidence interval from minus 0.580 to 0.012. The estimate is large relative to the average size of the public order share, but the interval still includes zero. It would therefore be inappropriate to claim that homicide reduces public order spending. The more defensible reading is narrower. Provinces with higher recorded homicide did not show the positive public order gradient that a direct fiscal response account would anticipate.

Health showed a larger negative point estimate and much greater uncertainty. The homicide coefficient was minus 1.509 percentage points with an HC3 standard error of 1.148. Its 95 percent confidence interval ran from minus 3.758 to 0.740, and model fit was low. The estimate does not support a larger health share in provinces with more recorded homicide. The interval is also too wide to treat the negative point estimate as evidence of a negative fiscal response.

The social protection estimate was also close to zero. A one-unit difference in recorded homicide was associated with a 0.058 percentage-point difference in the social protection share, with a 95 percent confidence interval from minus 0.143 to 0.258. This outcome was included as a contrast rather than as a direct response category. The near-zero estimate is consistent with that cautious role and does not suggest a simple contemporaneous welfare-spending response to homicide. It also discourages reading welfare expenditure as an automatic downstream consequence of a higher homicide rate.

Across the three models, the pattern is more important than any single threshold of statistical significance. Two point estimates are negative and one is near zero. Every homicide confidence interval includes zero. The results therefore provide no consistent evidence that a higher recorded homicide burden corresponds to a larger provincial spending share in the selected functions. This does not imply that violence has no fiscal consequences. It means those consequences are not visible as a common positive cross-sectional gradient in these broad provincial categories.

Table 3 OLS Estimates of Provincial Expenditure Shares with HC3 Robust Standard Errors

Predictor	Public security	order and Health	Social protection
Recorded homicide rate	-0.284† (0.151)	-1.509 (1.148)	0.058 (0.102)

Predictor	Public security	order and Health	Social protection
ln Population	-0.305*** (0.059)	-0.287 (0.699)	-0.140* (0.059)
ln GRDP per capita	-0.252* (0.124)	0.272 (1.185)	-0.265* (0.126)
Constant	8.341*** (1.667)	11.050 (15.825)	6.067** (1.890)
R-squared	0.538	0.087	0.229
N	30	31	31

The public order result deserves particular attention because that category appears to be the most direct place to look for a budget response. Indonesian institutional design complicates that intuition. Polri remains a national organization, while the dependent variable is a provincial government expenditure share. A province can experience a high recorded homicide rate even when the principal coercive response is financed outside the provincial APBD. The weak association may therefore reflect the division of governmental responsibility rather than indifference to violence. The data cannot test the budget decision process behind that division. Homicide investigation also depends on capacities within policing institutions, including whether available evidence can be converted into actionable case information (Kadir, 2026a). Provincial public order spending is therefore institutionally different from the resources most directly connected with homicide investigation and enforcement.

Research on decentralization reaches a similar conclusion from a different direction. Local responsiveness is most plausible when authority, financing, and information are located at the same governmental level (Oates, 1999, Faguet, 2004). Indonesia has substantial subnational discretion, yet that discretion varies by function within a complex intergovernmental system (Fitriani et al., 2005, Lewis, 2005, Kis-Katos & Sjahrir, 2017). A locally observed problem should not be expected to leave the same budget imprint in every function. Without attention to responsibility, a null coefficient can be misread as policy inaction when the more direct expenditure may sit in another governmental budget.

The more direct spending and crime literature gives little reason to expect a uniform relationship. Ramdayani et al. (2019) examined security and social protection spending in West Java with crime as the outcome, while Rodrigues Gomes (2018) studied security spending and homicide in Brazil. Both address the reverse empirical direction. Hazra and Aranzazu (2022) also report different relationships across welfare, law enforcement, and correctional spending in the United States. Comparative homicide policy similarly shows that prevention is distributed across institutions rather than reducible to penal expansion or one security budget (Kadir, 2026f). Lund et al. (2025) likewise find substantial variation across spending categories and designs.

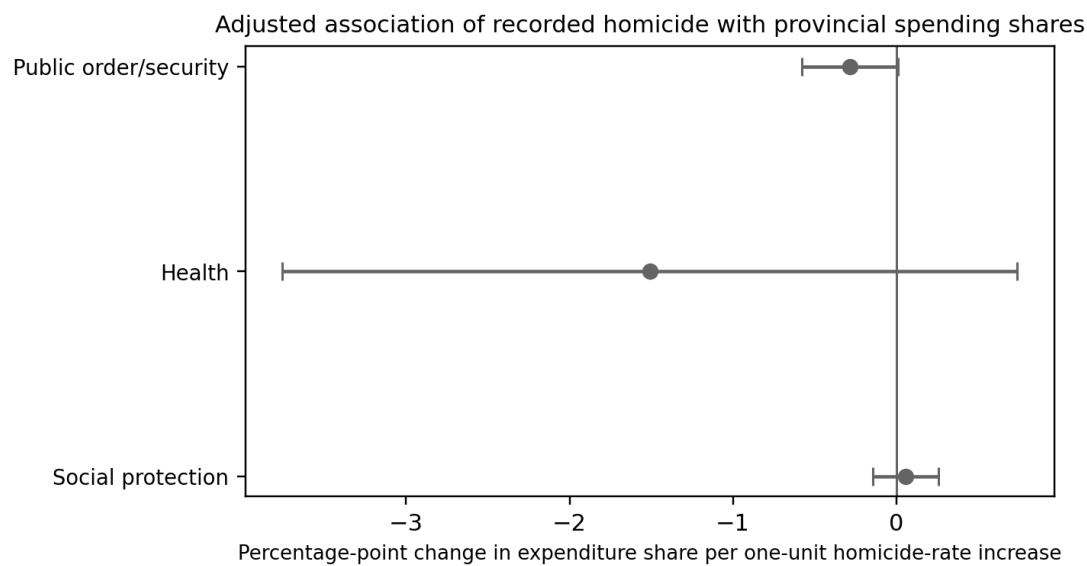


Figure 2 Adjusted Homicide Coefficients and 95 Percent Confidence Intervals across Expenditure Functions

Recent local evidence reinforces that caution. Gottlieb et al. (2025) found no homicide association with criminal legal versus community investment tradeoffs across large counties in the United States, even though other violent-death outcomes showed a different pattern. The comparison is not offered as a direct benchmark for Indonesia. It illustrates a broader point that spending categories can have different relationships with different forms of violent death. A null homicide pattern is not unusual enough to require a new theoretical construct simply to explain its existence. Mixed findings are already part of the empirical literature on public spending and violence, especially when spending categories and governmental units are broad.

Health is especially difficult to interpret as a direct response category. Serious violence can create emergency and treatment costs, but provincial health expenditure also covers routine services, facilities, personnel, disease burdens, and obligations unrelated to homicide. A homicide signal would have to be strong enough to alter the composition of that much larger portfolio before it could appear in an annual expenditure share. The wide confidence interval in the health model is therefore unsurprising. It leaves open both modest positive and substantially negative associations. The result is better read as imprecision around an indirect fiscal relationship than as evidence for a particular direction of response.

Social protection is further removed from a short-run response mechanism. Macro-homicide research usually places welfare provision on the explanatory side of the relationship. Stronger social protection has been associated with lower homicide under some national settings, although the results depend on context and specification (Savolainen, 2000, Rogers & Pridemore, 2013, 2017). Nothing in that literature implies that a province experiencing more homicide should immediately devote a larger share of its budget to social protection. Treating the outcome as a contrast helps avoid that reversal of causal logic. Its purpose is to show whether the homicide pattern extends beyond the spending category most closely connected with public order, not to claim that social protection is normally allocated in reaction to homicide.

Budget processes offer another reason for weak contemporaneous gradients. Annual spending is built on existing programs and legal commitments rather than reconstructed from current social indicators. Punctuated-equilibrium research emphasizes friction and selective attention in public budgeting (Jones et al., 2003, Jones & Baumgartner, 2005, Breunig & Koski, 2006). A homicide problem may be recognized without producing an observable change in the functional share of an annual budget. Spending can also be carried through central agencies or embedded inside broad programs that are invisible in the categories used here. This makes annual functional shares a coarse measure of fiscal prioritization even when the underlying source data are accurately reported.

Measured crime and political attention are not interchangeable either. Shi et al. (2020) found that public salience of crime did not simply track crime rates over time. That distinction matters for

fiscal arguments because budget pressure depends on what institutions notice and process, not only on the numerical level of an indicator. The present study does not measure public concern, media attention, or political agenda setting. Recorded homicide should therefore not be treated as a direct measure of the pressure faced by provincial budget actors. A province with a high recorded rate may receive little political attention, while an exceptional case in a lower-rate province may become highly salient.

The homicide measure has its own limits. Police registration captures incidents visible to the administrative system, and recording practices may differ across places. Homicide is less vulnerable to nonreporting than many nonfatal offenses, yet classification and jurisdiction still matter. Broad territorial rates can hide concentration at micro-locations (Kadir, 2026b), while temporal or spatial clustering does not establish transmission without an event-dependent mechanism (Kadir, 2026d). The provincial rates used here are recorded events rather than a complete measure of lethal violence. The title and claims are therefore restricted to recorded homicide.

The use of 2018 also imposes a temporal limit. Provincial spending and homicide are observed in the same year, so the models cannot show whether one preceded the other. A lagged 2017 homicide specification would appear attractive, but it creates a new jurisdiction problem because North Kalimantan has no separate Polda observation in the 2017 series. Rather than mixing units across years, the study keeps the cleaner 2018 cross-section and accepts the narrower inference. A harmonized longitudinal series would be preferable if consistent Polda boundaries can be reconstructed.

The sample is small and the adjustment set is intentionally limited. Population and GRDP per capita do not remove all differences among provinces, and the reported coefficients may reflect omitted factors. Adding many controls would not solve that problem without a stronger identification strategy. It would mainly consume degrees of freedom and make the model look more causal than it is. The restrained specification is therefore a limitation, but it is also consistent with the purpose of the analysis. The model is meant to reveal whether a simple adjusted association exists before stronger explanations are considered.

Homicide scholarship usually asks which social or institutional conditions are associated with homicide. Here recorded homicide is treated as part of the provincial context and the outcome is spending composition. Serious recorded violence does not automatically appear as a larger provincial share for public order and security, health, or social protection. The Indonesian case also shows why the governmental level attached to a budget must be identified before a spending response is inferred. That point is easily lost when crime data and fiscal data are joined only because they share a geographic label.

CONCLUSION

Police-recorded homicide differed substantially across Indonesian provincial jurisdictions in 2018, but those differences were not accompanied by a consistent positive pattern in provincial spending shares. The adjusted public order coefficient was negative with an interval that narrowly crossed zero. Health was negative and imprecise. Social protection was close to zero. None of these estimates supports a claim that provinces with more recorded homicide devoted a systematically larger share of expenditure to the three functions examined.

The result is most informative when kept within the institutional limits of the data. Provincial public order expenditure is not a police budget, health has many competing claims, and social protection is better treated as a contrast outcome than as an immediate homicide response. Polri remains nationally organized, so the level of government that records and responds directly to homicide is not identical to the level whose spending composition is measured here. The absence of a positive provincial gradient therefore cannot be read as governmental indifference or as evidence that violence has no public cost.

A stronger test would require harmonized Polda boundaries over time and more detailed expenditure categories. Until those data are available, simple secondary-data designs remain useful if their claims remain narrow. For Indonesia, the present evidence supports one conclusion. Recorded homicide burden and provincial spending composition were not closely aligned in 2018. Any future account of fiscal response to violence should begin with the actual allocation of governmental responsibility rather than assuming that social severity will be visible in provincial budgets.

REFERENCES

- Baller, R. D., Anselin, L., Messner, S. F., Deane, G., & Hawkins, D. F. (2001). Structural covariates of U.S. county homicide rates: Incorporating spatial effects. *Criminology*, 39(3), 561-590. <https://doi.org/10.1111/j.1745-9125.2001.tb00933.x>
- Bardhan, P. (2002). Decentralization of governance and development. *Journal of Economic Perspectives*, 16(4), 185-205. <https://doi.org/10.1257/089533002320951037>
- Besley, T., & Coate, S. (2003). Centralized versus decentralized provision of local public goods: A political economy approach. *Journal of Public Economics*, 87(12), 2611-2637. [https://doi.org/10.1016/S0047-2727\(02\)00141-X](https://doi.org/10.1016/S0047-2727(02)00141-X)
- BPS-Statistics Indonesia. (2019). Statistical Yearbook of Indonesia 2019. BPS-Statistics Indonesia.
- BPS-Statistics Indonesia. (2020). Crime Statistics 2020 [Statistik Kriminal 2020]. BPS-Statistics Indonesia.
- BPS-Statistics Indonesia. (2023). Gross Regional Domestic Product of Provinces in Indonesia by Industry 2018-2022. BPS-Statistics Indonesia.
- Breunig, C., & Koski, C. (2006). Punctuated equilibria and budgets in the American states. *Policy Studies Journal*, 34(3), 363-379. <https://doi.org/10.1111/j.1541-0072.2006.00177.x>
- Directorate General of Fiscal Balance (DJPK), Ministry of Finance of the Republic of Indonesia. (2021). Realized local government expenditure of 34 provinces in Indonesia by function, 2015-2019 [Realisasi Belanja Pemerintah Daerah 34 Provinsi di Indonesia Berdasarkan Fungsi Tahun 2015-2019].
- Faguet, J.-P. (2004). Does decentralization increase government responsiveness to local needs? Evidence from Bolivia. *Journal of Public Economics*, 88(3-4), 867-893. [https://doi.org/10.1016/S0047-2727\(02\)00185-8](https://doi.org/10.1016/S0047-2727(02)00185-8)
- Fajnzylber, P., Lederman, D., & Loayza, N. (2002). Inequality and violent crime. *Journal of Law and Economics*, 45(1), 1-39. <https://doi.org/10.1086/338347>
- Fitriani, F., Hofman, B., & Kaiser, K. (2005). Unity in diversity? The creation of new local governments in a decentralising Indonesia. *Bulletin of Indonesian Economic Studies*, 41(1), 57-79. <https://doi.org/10.1080/00074910500072690>
- González Alegre, J. (2010). Decentralization and the composition of public expenditure in Spain. *Regional Studies*, 44(8), 1067-1083. <https://doi.org/10.1080/00343400903365151>
- Gottlieb, A., DiMonte, C., Bocanegra, K., Hong, Y. S., & Peck-Block, A. R. (2025). Local government spending tradeoffs in the Great Lakes Region: Criminal legal spending, community investments, and violent death. *Social Science & Medicine*, 382, 118280. <https://doi.org/10.1016/j.socscimed.2025.118280>
- Hazra, D., & Aranzazu, J. (2022). Crime, correction, education and welfare in the U.S. – What role does the government play? *Journal of Policy Modeling*, 44(2), 474-491. <https://doi.org/10.1016/j.jpolmod.2022.03.007>
- Jones, B. D., & Baumgartner, F. R. (2005). A model of choice for public policy. *Journal of Public Administration Research and Theory*, 15(3), 325-351. <https://doi.org/10.1093/jopart/mui018>
- Jones, B. D., Sulkin, T., & Larsen, H. A. (2003). Policy punctuations in American political institutions. *American Political Science Review*, 97(1), 151-169. <https://doi.org/10.1017/S0003055403000583>
- Kadir, Z. K. (2025). Fear and control: Rethinking criminal policy through the lens of moral panic. *International Journal of Law Analytics*, 3(2), 201-218. <https://doi.org/10.59890/ijla.v3i2.13>
- Kadir, Z. K. (2026a). Better forensics, fewer solved murders? Explaining the homicide clearance paradox. *Punggawa Social Inquiry: Journal of Crime, Culture, and Social Dynamics*, 1(2), 1-10. <https://doi.org/10.67707/psi.v1i2.99>
- Kadir, Z. K. (2026b). Konsentrasi pembunuhan pada lokasi mikro: Analisis kriminologi komparatif atas risiko kematian di berbagai kawasan dunia. *Media Hukum Indonesia*, 4(2), 372-383. <https://doi.org/10.5281/zenodo.20604599>
- Kadir, Z. K. (2026c). Mapping recorded homicide in Indonesia: An ecological criminological analysis using BPS data. *Punggawa Law Review*, 1(2), 9-18.
- Kadir, Z. K. (2026d). Meninjau kembali konsep penularan pembunuhan (homicide contagion): Membedakan transmisi dan pengelompokan kekerasan mematikan. *Journal of Research and Publication Innovation*, 4(3), 8-15.

- Kadir, Z. K. (2026e). Paradigma kebijakan kriminal dalam KUHP nasional Indonesia. *ALADALAH: Jurnal Politik, Sosial, Hukum dan Humaniora*, 4(1), 300-315. <https://doi.org/10.59246/aladalah.v4i1.1803>
- Kadir, Z. K. (2026f). Preventing murder without expanding punishment: Rethinking homicide policy beyond deterrence. *Punggawa Law Review*, 1(3), 49-58. <https://doi.org/10.67707/plr.v1i3.40>
- Kadir, Z. K. (2026g). The social anatomy of homicide: Relationships, situations, and legal categories in Indonesia. *SOCILEXIA: Journal of Social Sciences and Legal Studies*, 1(1), 1-10.
- Kis-Katos, K., & Sjahrir, B. S. (2017). The impact of fiscal and political decentralization on local public investment in Indonesia. *Journal of Comparative Economics*, 45(2), 344-365. <https://doi.org/10.1016/j.jce.2017.03.003>
- Kubrin, C. E. (2003). Structural covariates of homicide rates: Does type of homicide matter? *Journal of Research in Crime and Delinquency*, 40(2), 139-170. <https://doi.org/10.1177/0306624X03251124>
- Land, K. C., McCall, P. L., & Cohen, L. E. (1990). Structural covariates of homicide rates: Are there any invariances across time and social space? *American Journal of Sociology*, 95(4), 922-963. <https://doi.org/10.1086/229381>
- Lewis, B. D. (2005). Indonesian local government spending, taxing and saving: An explanation of pre- and post-decentralization fiscal outcomes. *Asian Economic Journal*, 19(3), 291-317. <https://doi.org/10.1111/j.1467-8381.2005.00214.x>
- Long, J. S., & Ervin, L. H. (2000). Using heteroscedasticity consistent standard errors in the linear regression model. *The American Statistician*, 54(3), 217-224. <https://doi.org/10.1080/00031305.2000.10474549>
- Lund, J. J., Schleimer, J. P., Reeping, P. M., & Pear, V. A. (2025). Public funds, public safety: A scoping review of government spending decisions and their impact on interpersonal violence and suicide. *Injury Epidemiology*, 12, 86. <https://doi.org/10.1186/s40621-025-00624-7>
- Martinez-Bravo, M. (2014). The role of local officials in new democracies: Evidence from Indonesia. *American Economic Review*, 104(4), 1244-1287. <https://doi.org/10.1257/aer.104.4.1244>
- Neumayer, E. (2003). Good policy can lower violent crime: Evidence from a cross-national panel of homicide rates, 1980-97. *Journal of Peace Research*, 40(6), 619-640. <https://doi.org/10.1177/00223433030406001>
- Nivette, A. E. (2011). Cross-national predictors of crime: A meta-analysis. *Homicide Studies*, 15(2), 103-131. <https://doi.org/10.1177/1088767911406397>
- Nivette, A. E., & Eisner, M. (2013). Do legitimate polities have fewer homicides? A cross-national analysis. *Homicide Studies*, 17(1), 3-26. <https://doi.org/10.1177/1088767912452131>
- Oates, W. E. (1999). An essay on fiscal federalism. *Journal of Economic Literature*, 37(3), 1120-1149. <https://doi.org/10.1257/jel.37.3.1120>
- Ouimet, M. (2012). A world of homicides: The effect of economic development, income inequality, and excess infant mortality on the homicide rate for 165 countries in 2010. *Homicide Studies*, 16(3), 238-258. <https://doi.org/10.1177/1088767912442500>
- Pare, P.-P., & Felson, R. (2014). Income inequality, poverty and crime across nations. *The British Journal of Sociology*, 65(3), 434-458. <https://doi.org/10.1111/1468-4446.12083>
- Pratt, T. C., & Godsey, T. W. (2003). Social support, inequality, and homicide: A cross-national test of an integrated theoretical model. *Criminology*, 41(3), 611-644. <https://doi.org/10.1111/j.1745-9125.2003.tb00999.x>
- Pridemore, W. A. (2008). A methodological addition to the cross-national empirical literature on social structure and homicide: A first test of the poverty-homicide thesis. *Criminology*, 46(1), 133-154. <https://doi.org/10.1111/j.1745-9125.2008.00106.x>
- Pridemore, W. A. (2011). Poverty matters: A reassessment of the inequality-homicide relationship in cross-national studies. *British Journal of Criminology*, 51(5), 739-772. <https://doi.org/10.1093/bjc/azr019>
- Pridemore, W. A., & Rogers, M. L. (2026). Market orientation and national homicide rates. *Criminology*, 64(1), 88-112. <https://doi.org/10.1111/1745-9125.70023>
- Ramdayani, S. S., Kharisma, B., & Wibowo, K. (2019). Local Government Spending on Social Protection, Security Order, and Crime. *Jurnal Economia*, 15(2), 259-274. <https://doi.org/10.21831/economia.v15i2.26828>

- Rennó Santos, M., Testa, A., & Weiss, D. B. (2018). Where poverty matters: Examining the cross-national relationship between economic deprivation and homicide. *British Journal of Criminology*, 58(2), 372-393. <https://doi.org/10.1093/bjc/azx013>
- Rodrigues Gomes, C. (2018). Crime and Government Expenditure in Brazil: Estimating the Impact of Government Security Spending on Homicide Rates. Inter-American Development Bank. <https://doi.org/10.18235/0001365>
- Rogers, M. L., & Pridemore, W. A. (2013). The effect of poverty and social protection on national homicide rates: Direct and moderating effects. *Social Science Research*, 42(3), 584-595. <https://doi.org/10.1016/j.ssresearch.2012.12.005>
- Rogers, M. L., & Pridemore, W. A. (2017). How does social protection influence cross-national homicide rates in OECD nations? *The Sociological Quarterly*, 58(4), 576-594. <https://doi.org/10.1080/00380253.2017.1367265>
- Savolainen, J. (2000). Inequality, welfare state, and homicide: Further support for the institutional anomie theory. *Criminology*, 38(4), 1021-1042. <https://doi.org/10.1111/j.1745-9125.2000.tb01413.x>
- Shi, L., Lu, Y., & Pickett, J. T. (2020). The public salience of crime, 1960–2014: Age–period–cohort and time–series analyses. *Criminology*, 58(3), 568-593. <https://doi.org/10.1111/1745-9125.12248>
- Sjahrir, B. S., Kis-Katos, K., & Schulze, G. G. (2013). Political budget cycles in Indonesia at the district level. *Economics Letters*, 120(2), 342-345. <https://doi.org/10.1016/j.econlet.2013.05.007>