

# THE COVID-19 PANDEMIC AS A DESTABILIZING EVENT: DID IT PUNCTUATE THAILAND'S LOCAL BUDGET DYNAMICS?

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## ABSTRACT

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Current studies state that budget dynamics in many developed countries have followed the assumptions of the Punctuated Equilibrium Theory. However, the budget dynamics of developing countries remain inadequately examined. This research, which concentrates on public health spending in Thailand's local government, serves as a theory-testing case study to confirm the Punctuated Equilibrium Theory's external validity. Integrating with the focusing events of the Multiple Streams Framework, this study examines whether and how the COVID-19 pandemic punctuated public health spending among sixty-eight Thai local governments at the provincial level during 2013–2023, covering three timeframes—up until the first year of, during, and after the COVID-19 pandemic. The descriptive statistics portraying the data's leptokurtic distribution confirm that, over a lengthy period, the local public health spending followed the Punctuated Equilibrium Theory and featured a policy stasis which was occasionally interrupted by budget punctuations or large-scale departures from the past. Meanwhile, the results from the Chi-Square test and ANOVA underscore the statistically significant association between the arrival of the COVID-19 pandemic and the surge in the number of positive punctuations. These findings reject the default assumption that budget dynamics are incremental, especially for long-term policy analysis. Instead, they urge local policymakers to be actively aware of focusing events and to constantly (re)build fiscal competency to guarantee a smooth and effective response and recovery plan when a locality faces crises or impactful occurrences.

**Keywords:** Budget dynamics; Punctuated Equilibrium Theory; focusing events; public health; COVID-19 pandemic

## 1. INTRODUCTION

Given the inevitability of change, one may assume that the ability to adapt to unforeseen changes stands as a tested measure of intelligence. Under the realm of public policy, one of the classic questions is whether or how a political system initiates policy changes particularly in terms of budget allocations to fund public policies as a response to an ever-changing social, political, and economic environment (Davis et al., 1966; Lindblom, 1979; Sabatier, 1986). Ideal political system must modify or change its policies, adjusting its budget allocations proportionately to address changes in citizens' preferences and demands at both the local and

global level. Nevertheless, extant policy research, based on the Punctuated Equilibrium Theory (PET), has found that budget allocations for both total and program spending fail to proportionally change following such trends (Baumgartner & Jones, 1993). Instead, budget allocations usually witness several marginal changes over a long period. However, the occasional impactful event can interrupt such stasis, creating a dramatic change in public policies and budget allocation patterns alike.

The COVID-19 pandemic, a global and viral respiratory disease first identified in Wuhan, China, has impacted the social, political, and economic development of every country at a scale not seen since the Spanish flu. Thailand reported its first COVID-19 case in January 2020, promptly adopting early policy measures such as lockdowns and contact tracing. These instant policy changes were deployed simultaneously to contain COVID-19 and revitalize the nation's socio-economic development. Given the impact that the COVID-19 pandemic has inflicted on the country, several studies investigated how Thailand's public sector changed its policies in response to the pandemic, specifically through policy instruments such as financial management (Sachdev et al., 2022), family healthcare, school closure (Mayurasakorn et al., 2020; Pudpong et al., 2022), perceived health risk management (Pothisiri et al., 2022), and economic coping mechanisms (Turner et al., 2021). However, no current studies have measured and analyzed the drastic pandemic-driven changes in Thailand's public policy under the assumptions of the PEF (Desmarais, 2019). Although this theory has been validated extensively in the developed world, both in the United States (Breunig & Koski, 2006; Ecton & Dzieszinski, 2022; Jones et al., 2003; True, 2000) and European countries (Baumgartner et al., 2009; Kuhlmann & van der Heijden, 2018), only a few studies, in countries such as Mexico (Meza, 2022) and Nepal (Guragain & Lim, 2019), have applied this theory to the developing world.

Addressing such a research gap, this analysis serves as a theory-testing case study, assessing the validity of a theoretical foundation (Sena, 2024), the Multiple Streams Framework (MSF), and PET, within the understudied context of Thailand's local spending. In other words, this study asks whether and how PET, through the COVID-19 pandemic, can explain budget punctuations, while concentrating on Thailand, which represents a developing ASEAN member country (Gerring, 2017). Statistically analyzing such stasis and punctuation related to the COVID-19 pandemic, this case study has two objectives: first, to test PET within the context of a developing country's local budget allocation to assess its external validity; and second, to describe the budget dynamics of local governments vis-a-vis a MSF focusing event (the COVID-19 pandemic). The results from this explanatory case study research an account of political systems to provide a causal explanation or to explicitly examine possible causal relationships between variables (a pandemic and budget punctuation) (Eller et al., 2018), contribute to the field of public administration, through testing the external validity or generalizability of PET outside the context of developed countries. The results also serve to further explain the potential association between a focusing event and budget punctuations witnessed over the last decade.

## 2. LITERATURE REVIEW

This literature review draws mainly from two strands of public policy theories MSF and PET with the former concentrating on focusing events and their significant implications for policy changes, while the latter analyzes how policies shift over an extended period of time. It is important to note that PET takes MSF's focusing events to another methodological level by measuring their impact on policy prioritizations and budget patterns.

### 2.1 The multiple streams framework and focusing events

The basis of MSF explicates policy initiation from issues to agendas, policy proposals, and eventually public policy. Originally based on Kingdon's classic works on policy agendas and policymaking (Kingdon, 2003), this framework argues that there are three independent streams (problem, policy, and political streams) (Protopsaltis, 2010; Zahariadis, 2014). Simultaneously, these three streams enter the opportunity window, pressuring a political system to consider a policy issue and respond to it. Out of ambiguity (a state of having multiple conflicting solutions to a loosely defined problem), problematic policy priorities or preferences, and fluid participation (ever-changing policy actors with limited attention involved in a lengthy policymaking process) (Herweg et al., 2023; Zahariadis, 2016), a political system may abandon previous policy measures, adjust incrementally, or create new projects and policy instruments in the hope of handling such issues more effectively. Specifically with the problem stream, public policy scholars refer to focusing events as jarring and sudden incidents such as terrorist attacks, nuclear incidents, mass shootings, political and economic crises, natural disasters, and global pandemics, warranting policymakers' direct attention and their prompt policy and administrative reactions (Jones et al., 2016; Kingdon, 2003; Zahariadis, 2016).

Several MSF studies have identified focusing events, describing how each of them significantly impacts policymaking, and, consequently, policy changes. Prime examples of focusing events include natural disasters,

wars, and political crises. Natural disasters, such as widespread fires caused by slash-and-burn practices in Argentina, have attracted overwhelming attention from a wide range of policy actors who subsequently initiated several new policy forums to elicit new ideas for governance arrangements as policy solutions (Berardo et al., 2015). Epidemics are also considered focusing events notably the COVID-19 pandemic. This has posed a wide range of challenges to governments across the world. For instance, the focus on German meat-processing companies which became classified as COVID-19 hotspots, shed light on temporary employees who had long been exposed to contagious diseases. Under constant social pressure from the mass media criticizing such unacceptable work conditions and inadequate safety measures, the German government amended the Work Safety Control Act to prohibit service contracts and temporary employment without fair overtime compensation and housing provision, and to include intensive monitoring to ensure policy compliance (Möck et al., 2023).

## **2.2 Punctuated Equilibrium Theory and budget punctuation**

Based on incrementalism, public expenditures and annual budgets show only marginal change over time and prefer maintaining the status quo or their policy stasis (Davis et al., 1966; Wildavsky, 1964). Challenging incrementalism, PET reconciles policy stasis and policy change within the same framework and posits that even though policymaking frequently witnesses stability, it occasionally experiences large-scale departures from the past (Baumgartner et al., 2023; Workman et al., 2022). With path dependence (Sanders, 2008) and risk-averse attitudes (Hindmoor, 2006), a political system preserves its status quo or implements marginal, insignificant policy changes over time. Nonetheless, government programs occasionally face unprecedented, impactful events (Ugyel et al., 2024) or rare episodes of accumulated external and internal pressures, which suddenly draw enormous attention and information into the policymaking process (Robinson, 2010). Subsequently, these events usually demand a swift response from the government. Based on the Garbage Can Model (Cohen et al., 1972), PET assumes that rational government decision-makers are cognitively overwhelmed by such attention and information overload and, thus, their political system erratically overreacts to such events by producing drastic policy changes (Baumgartner et al., 2023; Ecton & Dziesinski, 2022). In fiscal terms, these dramatic changes are referred to as budget punctuations—budget allocations which witness more than twenty-five percent change compared to the previous year (Baumgartner & Jones, 1993).

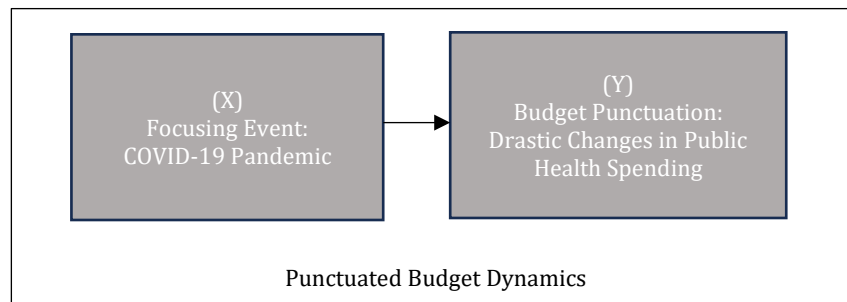
Recent research applying PET to the budget dynamics in the US (Koski & Workman, 2018), Canada (Amri & Drummond, 2021), China (van den Dool & Li, 2023), Mexico (Meza, 2022), and Nepal (Guragain & Lim, 2019) has empirically shown that policy outcomes exhibit a long period of stasis which is randomly interrupted by drastic changes. It also investigates punctuations produced by political systems at different levels. At the international level, research analyzing a dataset of financial crises in seventy countries over the last sixty years found that such crises sometimes led to undesirable punctuations or a policy disaster—a perceived policy fiasco where the decision-makers are blamed for poor and avoidable outcomes, ranging from typical errors to acute disasters (Fagan, 2023). Meanwhile, the economic crises across thirteen European countries were unlikely to produce punctuations in social, environmental, and morality policies, although such rare punctuations tended to be particularly extreme (Fernández-i-Marín et al., 2022). At the national level, wars and international security tend to trigger substantial policy changes in many political systems. For instance, the combination of war debates and presidential transitions caused dramatic increases in US defense spending during 1950–2015 (Sharp, 2019). Lastly, at the local level, US local governments experienced punctuations more frequently in non-allocational policies (parks, highways, and public buildings) than in allocational functions (police, fire, and sanitation) (Jordan, 2003). In the case of K-12 schools, bureaucratization appeared to reduce, rather than amplify, punctuations in the budget process among school districts in Texas (Robinson, 2004).

## **2.3 Focusing events and budget punctuations**

A few studies have highlighted the massive impact of a focusing event on political systems. These studies found that focusing events can destabilize the policy stasis and create budget punctuations. As briefly mentioned, economic or financial crises created budget punctuations more in related policy areas and fewer, but more extreme, in others (Fagan, 2023; Fernández-i-Marín et al., 2022). Aside from financial crises, the arrest of the notorious paedophile Marc Dutroux created both a new policy image (the unification of police forces) and a new policy venue (a parliamentary commission), leading to positive budget punctuations in Belgium's crime, justice, and police spending (Walgrave & Varone, 2008).

Following these empirical findings, this study assumes that budget dynamics follow PET, featuring a long period of stasis and occasionally a large-scale departure from the past. In addition, it assumes the existence of an association between a focusing event and budget punctuation in a related policy area. Figure 1 shows the

study's conceptual framework, graphically summarizes this association of interest, and briefly describes the related concepts.



**Figure 1:** Relationship of focusing event and budget punctuation within the context of punctuated budget dynamics

## 2.4 Hypotheses

There are three hypotheses in this study. Firstly, as a background, budget dynamics over a long period tend to follow the assumptions of PET and not those of incrementalism. Secondly, as a relationship of interest, a focusing event (COVID-19 pandemic) destabilizes such equilibrium, creating budget punctuations or a large-scale departure from the past. Thirdly, the advent of the COVID-19 pandemic in 2020 was likely to create more extreme positive punctuations than other years. The following hypotheses summarize the answers to the study's research questions: *Whether and how PET, through COVID-19, can explain budget punctuations.*

### *A: Punctuated equilibrium budget dynamics*

HA<sub>0</sub>: Budget dynamics are of incrementalism.

HA<sub>1</sub>: Budget dynamics follow PET's assumption of the co-existence of policy stasis and punctuation.

### *B: The COVID-19 pandemic triggered a surge in budget punctuations*

HB<sub>0</sub>: There are no associations between the occurrence of COVID-19 and budget punctuations in public health spending.

HB<sub>1</sub>: There are associations between the occurrence of COVID-19 and budget punctuations in public health spending.

### *C: The mean of positive punctuations of at least one year is different from that of other years*

HC<sub>0</sub>: There are no differences in intensity levels of PAO's positive punctuations from 2015 to 2023.

HC<sub>1</sub>: There are differences in intensity levels of PAO's positive punctuations from 2015 to 2023.

## 3. METHODOLOGY

This study applied the quantitative approach to investigate local Thai government budget changes over the last decade. Both descriptive and inferential statistics were used to describe the local governments' budget dynamics and to explain the association between the focusing event of interest the COVID-19 pandemic and any possible budget punctuations in the following year.

### 3.1 Population and sampling

Thailand's decentralized structure consists of lower and higher tiers. The lower-tier local governments are at the subdistrict level and remain mainly responsible for public services without spillovers such as garbage collection, nurseries, and local roads. Meanwhile, the higher-tier local governments, called Provincial Administrative Organizations (PAOs), are at the provincial level and are responsible for other tasks involving spillovers such as stadiums, high schools and vocational colleges, sewage systems and interprovincial roads. Importantly, shortly after the advent of the COVID-19 pandemic, the country experienced a vaccine shortage due to the inability of the central government to procure and distribute the vaccine effectively and equitably (Kategeaw et al., 2022). As a result, sixty-two out of seventy-six PAOs resolved to secure the vaccines themselves, ensuring every citizen in their jurisdictions received a vaccination (Bangkok Business Newspaper, 2021). They requested a fiscal law amendment to allow them to use their rainy-day fund for timely vaccine procurement. Hence, this study selected these PAOs to represent a disciplined configurative case study in that they serve as a historically important case to exemplify PET, particularly for a pedagogical purpose (George &

Bennett, 2005; Miles & Huberman, 1994). On this premise, the study's population is equal to seventy-six PAOs. Based on the following formula (Lind et al., 2019), at least sixty-eight PAOs are required to proceed with the subsequent hypothesis testing:

$$n = p(1 - p) \left( \frac{z}{E} \right)^2$$

where:  $n$  is the sample size;  $z$  is the standard normal  $z$  value corresponding to the desired level of confidence;  $p$  is the population proportion; and  $E$  is the maximum allowable error. This study set the estimate of the population proportion to be within 0.10, thus  $E$  is equal to 0.10. The desired level of confidence is 0.90, corresponding to a  $z$  value of 1.645 based on the  $t$  table with a finite degree of freedom. Also, it is assumed that half of the PAOs' budget dynamics are within PET, setting 0.50 for  $p$ . Accordingly, the required sample size is 67.65 or 68 PAOs.

### 3.2 Data collection

Between July and December 2023, this study mailed formal letters inviting the PAOs to participate in the research by requesting each of them to provide their aggregated and functional budget allocations over the last decade (2014–2023). Sixty-eight PAOs shared their budget data, ensuring a response rate of 89.47%. This met the required sample size calculated earlier. However, this dataset is not a balanced panel because some PAOs did not allocate their financial resources to public health in certain years.

### 3.3 Data analysis

Both descriptive and inferential statistics are necessary for testing both hypotheses established in the previous section. Overall, the study computed increments or relative changes—the percentage of annual budget change in public health spending, in conjunction with descriptive statistics (Workman et al., 2022). Note that this study also converted budget data into real-value ones, using the Thai Bureau of Trade and Economic Indices' consumer price index which currently dates from 1976 to 2023 (Ministry of Commerce, 2024). The following is a formula for calculating increments.

$$\text{Increment}_t = [(\text{Budget}_t - \text{Budget}_{t-1}) / \text{Budget}_{t-1}] * 100$$

For the first hypothesis regarding PET budget dynamics, this study examined the statistic distributions of increments with two tests: first, the Shapiro-Wilk Test for normality and, second, the kurtosis checking whether such distributions were leptokurtic. If the distribution of the PAOs' public health spending is not normal (the results from Shapiro-Wilk test are statistically significant) and leptokurtic (the kurtosis value is above 3.00 and the 4th L-moment is higher than 0.123) (Breunig & Koski, 2006; Lam & Chan, 2015; Meza, 2022; Xiao et al., 2020), this signifies that the PET budget dynamics feature both policy stasis and occasional drastic changes. To show robust results, this study statistically analyzed the budget dynamics at three different timeframes up until the first year of the COVID-19 pandemic, until the COVID-19 pandemic, and the last decade, or 2014–2019, 2014–2020, and 2014–2023, respectively.

For the second and third hypotheses with inferential statistics, this study conducted a Chi-Square test, calculated the Cramer's  $V$ , and then conducted an analysis of variance (ANOVA) to analyze differences among means of positive punctuations in public spending during the last decades. For the second hypothesis, this study used the Chi-Square test and Cramer's  $V$  to confirm whether there were associations between the advent of the COVID-19 pandemic in 2020, when the PAOs actively took part in vaccine procurement and distribution, and the numbers of the PAOs' public health budget punctuations (Stockemer, 2019; Warne, 2017). Specifically, the study counted the total positive punctuations each year. Subsequently, it tested the associations of the occurrence of a focusing event (the COVID-19 pandemic) and the numbers of punctuations via Chi-Square tests (Cohen, 1977) and then measured the strength of the associations by calculating their Cramér's  $V$  values (Cramér, 1945). Finally, for the third hypothesis, this study conducted a one-way ANOVA to determine whether statistically significant mean-differences exist among different years or multiple independent groups (Lind et al., 2019).

## 4. RESULTS

### 4.1 Descriptive statistics

Based on the increments of local public health spending among PAOs, Table 1 illustrates the descriptive statistics from 2014 to 2023 on three different timeframes up until the first year of the COVID-19 pandemic (2014–2019), until the COVID-19 pandemic (2014–2020), and the last decade (2014–2023). Meanwhile, Table 2 exhibits the kurtosis, the 4th L-moment, and results from the Shapiro-Wilk test on those increments of sixty-eight PAOs over the last decade.

**Table 1:** Descriptive statistics for increments of the paos' public health spending

Timeframe	Observation	Mean	Min	Max	SD
2014–2019	294	522.54	-99.35	33323.53	2443.78
2014–2020	355	619.71	-99.35	33323.53	3015.04
2014–2023	547	421.51	-99.35	33323.53	2446.87

Source: Author's calculations

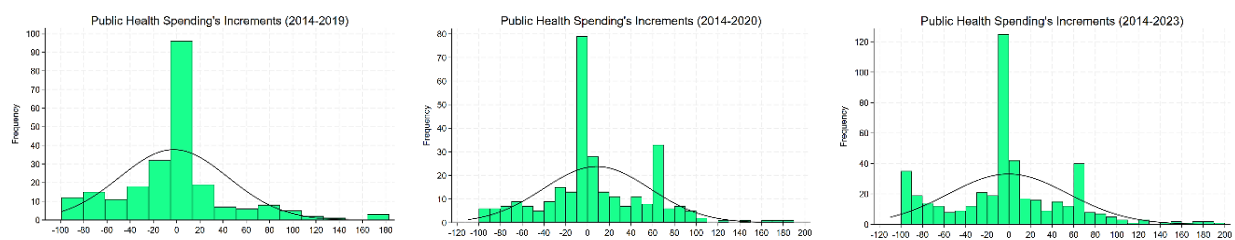
**Table 2:** Shapiro-Wilk test's results, Kurtosis, and 4th L-moments

Timeframe	Observation	Shapiro-Wilk test for normality				Leptokurtic distribution	
		W	V	Z	Prob>Z	Kurtosis	4th L-moment
2014–2019	294	0.22	162.56	11.94	0.000***	116.28	0.707
2014–2020	355	0.21	195.23	12.48	0.000***	79.76	0.753
2014–2023	547	0.17	302.14	13.78	0.000***	122.34	0.764

Note: \*\*\* Statistically significant at 0.001 level

Source: Author's calculations

Table 1 illustrates an enormous increase in the average annual change of public health spending between PAOs, ranging from 422% to 620%, with the last decade's expansion measured at 421.51%. Meanwhile, Table 2 demonstrates an inverse distribution across the three periods of interest, shown by the Shapiro-Wilks test results in disconfirming the normality hypothesis. Moreover, such distributions are leptokurtic, shown in their kurtosis (higher than 3) and 4th L-moment (higher than 0.123). Hence, this study accepts the HA<sub>1</sub>, confirming that PAO's public health budget dynamics follow PET's assumption of the co-existence of policy stasis and punctuation. In addition, this finding is proven to be robust since the budget dynamics of the three timeframes of interest exhibit the same characteristics non-normal and leptokurtic distribution. Graphically reflecting the non-normal and leptokurtic distribution, Figure 2 below shows the histograms of the increments of public health spending among PAOs according to the study's three timeframes of interest.

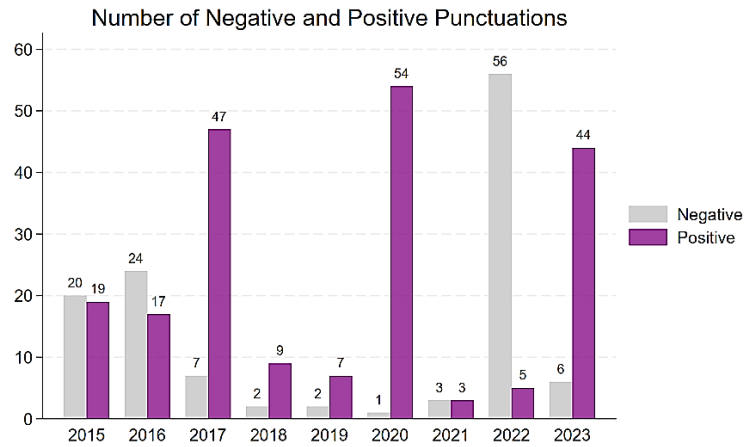


**Figure 2:** Histograms of the increments of public health spending

### 4.2 Inferential statistics

Before investigating the association between the occurrence of the COVID-19 pandemic and the number of punctuations, this section shows punctuation numbers from 2014 to 2023. During this period, there were 547 observations, with 326 observations classified as punctuations (121 and 205 are positive and negative punctuations, respectively). The year 2022 records the highest number of total punctuations (both positive and negative), sixty-one out of sixty-one observations (100%). Meanwhile, the year 2020 when the PAOs officially and actively played a crucial role in the COVID-19 response and recovery plan witnessed the highest number of positive punctuations, fifty-four from sixty-one observations (88.52%). Figure 3 portrays the numbers of the PAOs' negative and positive punctuations over the last decade.





**Figure 3:** Public health's budget punctuations among PAOs  
Source: Author's calculations

Examining possible associations between the occurrence of a focusing event—the COVID-19 pandemic—and the number of punctuations, Table 3 shows the Chi-Square test's results as well as the Cramér's V values from analyzing the advent of the COVID-19 pandemic and total punctuations. Meanwhile, Table 4 shows the tests' results from analyzing the numbers of observation and positive punctuations.

**Table 3:** Crosstabulation of the number of total punctuations and the advent of the COVID-19 pandemic

COVID-19 pandemic	All punctuation		$\chi^2$	V
	No	Yes		
No	215 (1.331)	271 (-1.096)	26.6395***	0.2207
Yes	6 (-3.756)	55 (3.092)		

Note: \*\*\* Statistically significant at 0.001 level. Pearson residuals appear in parentheses below the number of observations.  
Source: Author's calculations

**Table 4:** Crosstabulation of the number of positive punctuations and the advent of the COVID-19 pandemic

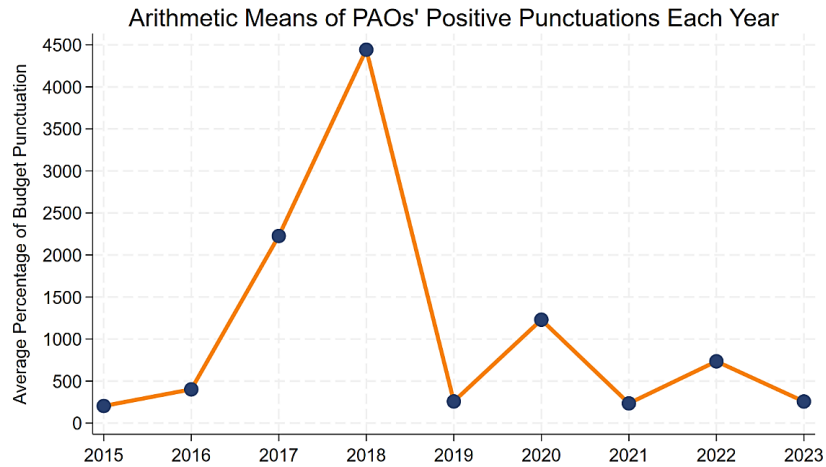
COVID-19 pandemic	Positive punctuation		$\chi^2$	V
	No	Yes		
No	335 (1.786)	151 (-2.307)	76.3526***	0.3637
Yes	7 (-5.042)	54 (6.513)		

Note: \*\*\* Statistically significant at 0.001 level. Pearson deviations appear in parentheses below the numbers of observations.  
Source: Author's calculations

Based on the results from Table 3, the advent of the COVID-19 pandemic and the number of total punctuations during 2014–2023 displayed a significant association,  $\chi^2 (2, N = 547) = 26.64, p < .001$ . Nevertheless, the effect size is considered small ( $df = 1, V = 0.2207$ ). Meanwhile, for Table 4, the association between the advent of the COVID-19 pandemic and the number of positive punctuations is statistically significant,  $\chi^2 (2, N = 547) = 26.64, p < .001$ , showing a moderate effect size ( $df = 1, V = 0.3637$ ). Thus, for the hypothesis stating that the COVID-19 pandemic triggered a surge of budget punctuations, the results, with robustness from testing both positive and total punctuations, confirm that there are associations between the occurrence of COVID-19 and budget punctuations in public health spending. Nonetheless, the strength of associations is only small to moderate partially due to surges in PAOs' public health budget punctuations in other years as well. The cases in point include 2017, 2022, and 2023, which saw 54, 61, and 50 punctuations, respectively.

Regarding the intensity of positive punctuations which mirrored how PAOs urgently responded to focusing events, this subsection first summarizes the descriptive statistics of PAOs' positive punctuations from 2015 to 2023 as shown in Table 5. The average of these punctuations across the years is equal to 1,109.82%. In other words, the substantial increase in public health spending among PAOs is approximately 11 times

higher than those of the previous years. Meanwhile, Figure 4 highlights the higher averages of positive punctuations in 2017 and 2018 in comparison to the 2020 average. In addition, Table 5 reports the results of testing whether the positive punctuations each year are normally distributed. Based on these results, it can be concluded that most of the positive punctuations each year are not normally distributed.



**Figure 4:** Average percentage of positive punctuations of PAOs' public health budget

**Table 5:** Descriptive statistics of positive punctuations of PAOs' public health spending

Year	Obs	Min	Mean	Max	SD	Shapiro-Wilk test for normality			
						W	V	Z	Prob>Z
2015	19	28.17	203.86	1601.90	371.08	0.486	11.954	4.984	0.000***
2016	17	25.71	401.64	2295.57	617.52	0.659	7.213	3.940	0.000***
2017	47	57.81	2226.16	13431.85	3110.53	0.681	14.313	5.655	0.000***
2018	9	46.35	4442.23	33323.53	10953.45	0.476	7.699	4.504	0.000***
2019	7	25.20	257.86	1521.64	557.79	0.488	6.720	4.228	0.000***
2020	54	39.06	1230.03	32262.67	5217.11	0.242	31.845	7.787	0.000***
2021	3	63.72	234.73	437.83	189.11	0.978	0.323	-0.578	0.718
2022	5	75.63	734.92	1879.68	699.89	0.891	1.2920	0.359	0.360
2023	44	27.40	256.96	1222.94	289.01	0.753	10.580	4.978	0.000***

Note: \*\*\* Statistically significant at 0.001 level. Pearson deviations appear in parentheses below the numbers of observations.  
Source: Author's calculations

Given that most of the positive punctuations each year are not normally distributed, this study conducted an analysis of variance (ANOVA) to compare variances across the means of different groups. Table 6 results signified that there are no statistically significant differences among the means of PAOs' positive punctuation each year from 2015 to 2023. This accepts the null hypothesis ( $H_{C0}$ ) of equal means, confirming the null hypothesis that there are no statistically significant differences between the means of positive punctuations each year.

**Table 6:** One-way analysis of variance of PAOs' positive punctuations in different years

Source	df	SS	MS	F	p
Between groups	8	222,833,510	27854188.7	1.91	0.0609
Within groups	196	2,863,500,000	14609853		
Total	204				

Source: Author's Calculation

## 5. DISCUSSION

Based on the results, there are three underlying findings from the COVID-19 pandemic's impact on substantial budget changes. Firstly, the local budgets designated for public health policies within the Thai context feature both policy stasis and policy punctuations. In other words, the budget dynamics or the pattern of changes follow the assumptions of PET. Secondly, considering positive punctuations in PAOs' public health



budget, the COVID-19 pandemic, referred to as a focusing event in this case study, destabilized the policy stasis, creating the greatest number of positive punctuations (54) in 2020. Fifty-four out of sixty-one PAOs dramatically increased their public health spending or allocated their financial resources specifically for the COVID-19 pandemic response and recovery programs. Thirdly, the intensity of positive punctuations was sustained over the years, demonstrated by the equal means. This implies that PAOs' positive punctuations in any particular year failed to diverge from those of other years, illustrated in the lack of extreme positive punctuations over the last decade. In sum, to answer the research question of *whether and how PET, through COVID-19, can explain budget punctuations*, the empirical evidence, drawn from Thai local governments, suggests that, overall, Thailand's local budget dynamics follow PET highlighting a long period of stasis and occasionally experiencing substantial changes or budget punctuations. The COVID-19 pandemic acted as an impactful focusing event, destabilizing the local public health policy stasis. Even though the pandemic failed to create extreme punctuations, almost every local government, at a provincial level, had dramatically increased their public health spending. These findings lead to five theoretical and practical discussion points.

Firstly, similar to those of developed countries, budget dynamics, at a local level for a particular policy area in a developing country remains within PET, which is characterized by a long policy stasis with occasional large-scale departures from the previous years (Jordan, 2003; Robinson, 2004). Mirroring other developing countries' experiences of such budget change patterns at a national level in China (van den Dool & Li, 2023) and Mexico (Meza, 2022), local public health spending at the provincial level in Thailand also underscores the prevalence or external validity of PET in describing budget changes over a prolonged period under contexts that differ from the developed world (Morse et al., 2009; Sena, 2024). This implies that budget changes under several contexts (in any policy area and at a local or national level of analysis) experience a long period of stasis and a sudden substantial change occasionally.

Secondly, in the same vein, MSF's focusing events show that the policy stream dominates, or at least precedes, the political and problem streams coupling or entering a policy window to eventually create dramatic policy changes for political systems (Herweg et al., 2023; Zahariadis, 2014). Under the context of Thailand's local public health spending, the COVID-19 pandemic has proved to be an unprecedented and impactful event, producing the greatest number of positive punctuations in a single year. In other words, almost every local government, at a provincial level, responded to it by dramatically increasing their public health allocations. Building upon the literature on MSF, this empirical evidence, similar to the German meat-processing case study (Möck et al., 2023), exemplifies the policy change as the result of a focusing event, particularly through examining the scale and the prevalence of dramatical budget increases throughout local governments in Thailand.

Thirdly, an integration of multiple theories or frameworks under theories of the policy process the research program examining change and development of policies and their actors, events, and contexts (Weible et al., 2012) can magnify the explanatory power of related theoretical insights into a single phenomenon (Cairney & Heikkilä, 2014). Similar to the studies examining the EU's financial crises (Fagan, 2023) and the arrest of Mac Dutroux (Walgrave & Varone, 2008), a combination of MSF and PET, to some extent, can also provide an exemplar of how a global pandemic or a focusing event creates budget punctuations in a public health policy. This underscores some degree of irrationality among policymakers who were overwhelmed by public attention, national mood, and urgency in their response to the extraordinary pandemic. Their action in terms of huge positive budget punctuations signify the trial-and-error policymaking approach or their erratic overreaction to the pandemic (Baumgartner et al., 2023; Cohen et al., 1972; Ecton & Dziesinski, 2022).

Fourthly, diverging from the results of previous studies (Fernández-i-Marín et al., 2022), the intensity levels of budget punctuations, created by a focusing event, are not always extreme. Although budget preparation after the COVID-19 pandemic led to several positive punctuations, their intensity, in general, is possibly determined by other conditions. Future studies may experiment by incorporating the related policy actors and contextual factors (Weible et al., 2012) or even a different combination of policy theories to further analyze this divergence from the extant literature. For instance, within the context of a strongly centralized administration such as that of Thailand (Sudhipongpracha & Wongpredee, 2015; White & Smoke, 2005), the national government still maintains extensive influence on local affairs, especially through such fiscal recentralization measures as intergovernmental fiscal transfers, regional strategic development plans, and shared taxes (Gilley & Laochankham, 2024). Consequently, the national government's fiscal influence on local governments may also contribute to the intensity of budget punctuations.

Finally, mirroring the positive punctuations and the focusing events, both fiscal capacity and awareness of creeping crises, respectively, are crucial for minimizing or eliminating the long-term impacts of such focusing events. Thailand's COVID-19 pandemic response and recovery has been recognized as an effective and accountable structure (Sachdev et al., 2022). Results in the previous section show that almost every local government promptly reacted to the pandemic with dramatic increases in their public health spending. Fiscal measures tax relief, direct cash assistance, special funds, short-term loans, and direct

expenditure are inevitably indispensable (Mascio et al., 2020; Rajatanavin et al., 2021). However, similar to other public administration practices, public health policymakers and bureaucrats must possess emergency management competencies or prowess to actively provide leadership, coordinate efforts, and set the stage for immediate problem-solving on identification of any forthcoming impactful events (Guy & Ely, 2022). Local governments must therefore periodically provide capacity-building training for their local public managers and policymakers. This training can help them develop, integrate, and sustain their organizations' fiscal capacities and emergency management competency in order to effectively (proportionally and promptly) react to the urgent and intense nature of a focusing event.

## 6. CONCLUSION

The COVID-19 pandemic had unforeseen social, economic, and political impacts on both developed and developing countries alike. This study aimed to explain how such a focusing event interrupted or impacted the budget dynamics of local Thai government. During the last decade, the PAOs' public health budgets represented a public health policy stasis at the local level, which was intermittently interrupted by drastic and substantial changes. In other words, these budget dynamics follow the policy pattern assumed by PET (Jones et al., 1998). For the policy punctuations, the COVID-19 pandemic was, ostensibly, a focusing event, according to MSF (Herweg et al., 2023; Jones et al., 2016; Zahariadis, 2014) since its occurrence was statistically associated with the number of substantial budget increases in public health spending among Thailand's provincial local governments. In 2020, as the empirical evidence in this study suggests, almost every PAO had to dramatically increase their public health spending to promptly respond to the COVID-19 pandemic, even though these increases were not extreme compared to those of other years.

Based on these results, this study contributes to the public administration and public policy literature in two ways. Firstly, it provides empirical examples showing the external validity of two key frameworks under theories of the policy process (Weible, 2014) MSF and PET outside the frequently examined context of the developed countries. Secondly, it promotes the integration of multiple theoretical frameworks in investigating a single case study. Via two theoretical perspectives, this case study can be understood through theory triangulation which offers valid results, while reducing or minimizing any errors from a methodological artifact (Johnson et al., 2007). Meanwhile, practically speaking, there are two key policy recommendations emanating from the research results. Firstly, policymakers should always be prepared for focusing events since natural disasters, pandemics, wars, and economic crises happen occasionally and haphazardly. Hence, competency building and development for local public managers and politicians should be in place for effective emergency management (Frederickson & O'Leary, 2014). Secondly, long-term budget data is, at least, highly recommended, or even indispensable for policy and budget analysis because it helps local policymakers and bureaucrats accurately comprehend and compare budget allocations. More importantly, this understanding of financial data is a prerequisite for decision-making at any stage of the budget process whose ultimate goal is to promote effectiveness, efficiency, and equity in both the short and long term (Grossi et al., 2016; Guy & Ely, 2022).

Notwithstanding the aforementioned scholarly and practical contributions, this study was subjected to certain theoretical and methodological limitations. It concentrated on proving a possible association between the advent of the COVID-19 pandemic and the number of positive budget punctuations. It did not, however, consider any confounders of budget punctuations, such as fiscal recentralization, the varying size of local governments, own-source revenues, and departmental performance and negative budget punctuations which aim to reconcile or offset the previous positive ones (Robinson, 2010), as witnessed, for instance, in 2002. For instance, multiple linear regression models, which appropriately control these confounders, can eliminate plausible rival explanations on the causal relationship between a focusing event and the number of budget punctuations, resulting in enhancing levels of internal validity (Gelman & Hill, 2007; Onwuegbuzie, 2003; Urdinez & Cruz, 2021). Furthermore, this study relied on longitudinal budget data from only one type of local government in Thailand within a ten-year period. To strengthen the external validity of the results (Onwuegbuzie, 2003), future research projects may wish to examine budget dynamics in municipalities and Subdistrict Administrative Organizations over the last two decades. Public health budget data across different types of local governments, or panel data, can offer valuable opportunities to rigorously examine pre- and post-treatment effects based on, for instance, a difference-in-difference estimation (Gelman & Hill, 2007).

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