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# Policy punctuations and agenda diversity in China: a national level analysis from 1980 to 2019

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## ABSTRACT

Based on data sources systematically tracking government activity such as budgets and bill hearings, the Punctuated Equilibrium Theory literature has demonstrated that policy processes in both democracies and nondemocracies feature long periods of stasis interrupted by dramatic changes. However, there is a lack of research that systematically examines China's policy process. In response, this article introduces a new dataset drawn from *China State Council Gazettes* from 1980 to 2019 to measure policy punctuations and agenda diversity in China. We find that punctuations in China's policy process are more intense than those in democracies. The findings further show that China's policy process features more positive punctuations than negative punctuations. We also find an overall increasing trend of agenda diversity and a pattern of alternation between agenda expansion and concentration across the forty years analyzed in this paper. These findings provide new long-term evidence regarding patterns of policy stability and change in the Chinese context and contribute to our understanding of China's politics of attention and its linkage with information inefficiency and survival politics.

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process

## 1. Introduction

There has been a significant body of research on the punctuated equilibrium theory (PET) showing that policy processes are characterized by long periods of stasis interrupted by dramatic changes (Baumgartner et al. 2017; Jones, Epp, and Baumgartner 2019). Baumgartner and Jones (2009) argue that policymakers are boundedly rational with limited attention resources and subject to cognitive bias in information processing. Moreover, the political institutions wherein policy action takes place generate more or less resistance to the flow of information. As a consequence, there are mismatches between societal problems that need to be addressed by the government and policy response, leading to stick-slip dynamics in the policy process.

Emerging studies have begun to explore the punctuations and agenda dynamics in China's policy process, which is important because it helps examine the potential universality of the pattern of punctuated equilibrium beyond democracies. For instance,

Lam and Chan (2015) analyzed government actions in Hong Kong from 1946 to 2007 and found that the colonial regimes featuring centralization and autocracy tend to have lower policy responsiveness and incur more intensive volatile shifts and punctuations after a long period of stasis. This partly extends the evidence regarding the general pattern of punctuated equilibrium to China's context. A further study on China's policy process by Chan and Zhao (2016) examined budgetary punctuation at the provincial level. They found that attention allocation of Chinese regional administrations is more punctuated than what is observed in their democratic counterparts and only becomes more responsive when there are increasing threats to regime survival. Very recently, another two studies have gone one step further and explored the general pattern of policy punctuation and attention allocation at China's national level. Meng and Fan (2022) focused on the input stage of the e-government issue on China's central government agenda and found a decreasingly punctuated yet increasingly diversified pattern of attention allocation. Yan, Yang, and Yuan (2022) explored the dynamics of policy attention on multiple issues by text-mining the data drawn from daily meetings of two core policy venues, the Chinese Communist Party and the State Council. They found a less punctuated agenda than those in democracies.

Although the above studies contribute significantly to our understanding of policy punctuation and attention dynamics in China's policy process and, more broadly, in non-Western contexts, their scope and conclusions vary. There is a general lack of long-term studies of China's policy process comparable to PET studies in other countries. This is, in part, due to the lack of a systematic data resource and a consistent coding scheme.

To fill this lacuna, in this contribution we introduce a new data source to trace the Chinese government's activities and policy changes over the last forty years. Our dataset relies on the State Council Gazette (*Guowuyuan Gongbao*), an official publication of China's State Council that includes myriad policy documents. Compared to studies fixating on the input (Meng and Fan 2022) and the output stage (Chan and Zhao 2016), this data source focuses on policy documents formulated at the middle stage of policy process (Baumgartner et al. 2009), thus helping to attain a panorama of China's policy process. The Gazette covers issues across almost all policy domains and has been published since 1954, which caters to PET's interest in tracing policy activities on various issues over a long period of time. We collected gazettes from 1980 to 2019 and coded them based on the Comparative Agenda Project's coding scheme. By employing a consistent coding scheme, the dataset enables us to systematically measure the general pattern of punctuation and diversity of China's national agenda in a comparative perspective.

By analyzing policy punctuations and agenda diversity, we found that policymaking at the national level in China follows the punctuated equilibrium pattern. We also found that punctuations are more intense compared to democratic settings. Moreover, the findings show that there are more positive than negative punctuations. In other words, China's national policy process features more cascading increases of attention on certain issues than cutdowns, which indicates a broadening of government activities. Finally, we found that agenda diversity increased with alternations between agenda expansion and concentration.

The rest of this article is structured as follows. We first review the PET literature and introduce our hypotheses about policy punctuations and agenda diversity dynamics in

China's policy process. This is followed by an overview of the data and data analysis. After reporting our findings, we reflect on our hypotheses, put forward possible explanations of our results, and discuss implications.

## 2. Theory and hypotheses

### 2.1. *Punctuated equilibrium and policy punctuations*

The central argument of the Punctuated Equilibrium Theory is that policy processes universally feature long periods of stability (i.e. incremental policy changes) interrupted by dramatic policy changes (i.e. policy punctuations) (Baumgartner and Jones 2009; Jones and Baumgartner 2012; Robinson et al. 2007). In comparative studies, this position also refers to the general punctuation hypothesis with the rationale that all political systems, whether democratic or authoritarian, are subject to a vast array of resistance to take action on policy problems (Baumgartner et al. 2009). Scholars have made considerable effort to explain the alternation of incremental changes and punctuations in policy processes.

The first identified theoretical reason for punctuated policy process is institutional friction in the policy process (Baumgartner et al. 2009; Fagan, Jones, and Wlezien 2017). Studies in democratic contexts stress the brake role of institutional friction in hindering government response to problems in its environment. Institutional arrangements, like separated powers and federalism in the U.S. and proportional parliamentary systems in some European countries, require broader mobilizations and consensus for radical policy change (Epp and Baumgartner 2017; Fagan, Jones, and Wlezien 2017). Like in physics, institutional frictions lead to stick-slip dynamics in policy process, in which long periods of incremental policy change are durable until the pressure triggers radical policy change (Baumgartner and Jones 2009; Chen and Flink 2022).

The second theoretical explanation for the punctuated equilibrium pattern is the nature of information processing of individuals and organizations. Baumgartner and Jones (2015) note that organizations hardly possess information regarding problems to resolve them in a proportionate way. As complexity and volumes of information quickly surpass the cognitive and organizational capacities, there is always a mismatch between problems and an appropriate policy response of government (Fagan, Jones, and Wlezien 2017). The mismatch error could accumulate as it is neglected by policy-makers, and the consequence of the error accumulation is radical and extensive policy adjustment.

Recent PET studies further point out other factors for intensive punctuations that may be relevant to nondemocracies, including centralization, transparency, and political incentives. The first is centralization or executive dominance. Stronger executives with fewer checks and balances from legislatures tend to be less responsive to public opinion, thus may lead to greater error accumulation in policy processes (Fagan, Jones, and Wlezien 2017; Wlezien and Soroka 2015). Greater policy transparency in democracies allows involved citizens to easily learn policy content and the way to modify policy, thus leading to fewer policy punctuations (Li and Feiock 2020). Yet, this transparency is usually absent, or – if present – can be dismissed as arbitrarily controlled by the rulers in authoritarian regimes (Baumgartner et al. 2017). As for political

incentives, democratic regimes may have electoral incentive structures to spur political leaders to address policy problems, thus mitigating punctuations. In authoritarian regimes, competing incentives policymakers and bureaucrats face (such as party ideologies and pressure from vested interests) also matter for their willingness to change existing policies (Jones, Epp, and Baumgartner 2019).

Overall, it can be argued that authoritarian regimes, with less efficient representative systems, more centralized government, and less open policy processes, should have more intensive punctuations (Jones, Epp, and Baumgartner 2019). Baumgartner et al. (2017) show in their comparisons of four countries during periods of democracy and authoritarianism that budget punctuations were more pronounced in nondemocracies. Chan and Zhao (2016) more specifically show that information disadvantage arising from the scarcity of diverse and independent information flows in China contributes to the more intense punctuated instability. Thus, we expect that the information inefficiencies of the regime would lead to highly intensive punctuations in policy process in China.

Another central thesis of the PET relevant to this study is the progressive friction hypothesis, which assumes that friction increases as policy issues move along from input to output processes in the policy cycle (Baumgartner et al. 2009). Scholars traced the level of institutional friction from agenda-setting to decision-making to policy outputs and found that punctuation is low in policy input (e.g. media attention), modest in policy process (e.g. congressional hearings, executive orders, and government reports), and highest in budgetary output (Baumgartner et al. 2009). In the case of this study, we focus on policies issued by the Chinese national level government in the policy process rather than the public opinion or budgetary data, which may have a relatively moderate intensity of punctuation. Taking all these together, we expect that:

H1: Changes in China's government policy are punctuated.

Baumgartner et al. (2009) emphasize the distinction between negative and positive policy punctuations as the institutional friction for issue discovery and abandonment is unbalanced in the policy process. There is confirmation bias ingrained in government organizations that disfavors any information and change inconsistent with existing policies (Baumgartner and Jones 2015; Allahverdyan and Galstyan 2014). Systematic tracking of policy problems already on the government agenda involves sunk costs; it may also lead to bureaucratic inertia and budgetary commitments (Lindblom 1979; Simon 1996). As a consequence, there may be more institutional friction for reducing attention to and squeezing out an issue that is already on the agenda than pushing a new issue in. This may lead to a pattern of the rise of issues on the agenda that are hard to fall out in the policy process.

Studies on authoritarian policy processes attribute changes in policy priorities to the survival need of autocrats and the strategies they take to assemble support from the public (Svolik 2009). In resilient authoritarian regimes, the political leaders survive and resist by effectively combining development-oriented policies with repressive politics (Gallagher and Hanson 2013). To solicit cooperation for development, the leaders take a co-optative approach. They share power with the ruling elite in return for support by carving up the political system into corresponding spheres of influence and delegating considerable discretion (Gandhi and Przeworski 2007). Moreover, they institutionalize the controllable representation of public interests and demands outside the ruling

coalition through nominal democratic bodies and participatory measures (Gandhi and Przeworski 2007). This leads to the rise of new factions and entrenched policy subsystems within the regime hovering around the issue they are interested in and waiting for opportunities by which they can put the issue into government agenda. Moreover, for autocrats that are powerful and seek to personalize control, constantly introducing new policy programmes is a strategy to undercut preference falsification and deter potential opponents (Chan, Lam, and Chen 2021).

Although authoritarian leaders thus have more incentives to broaden agenda space to include more new issues, authoritarian leaders, in particular those with less personalized control, have fewer capacities to undercut or overhaul existing issues and policy programmes. They have to ensure the continuation of existing policy programmes and prevent the contraction of attention allocated to them to signal their credible commitments to co-optation (Chan, Lam, and Chen 2021). Additionally, with the development of entrenched policy subsystems, bureaucrats in authoritarian regimes have strong incentives to develop loyalty to the elite in control of the subsystem they serve, leading to an alliance that contributes further to the continuity of the existing policy agenda (Lampton 1987). To sum up, the co-optative politics and elite bargains inside China's regime would lead to cascading increase of new issues into government agenda that the leaders have fewer incentives to squeeze out. This may further enlarge the imbalance of positive and negative changes in agenda-setting. Thus, we hypothesize that:

H2: Punctuations in China's government policy are mainly positive.

## **2.2. Agenda diversity and dynamics**

PET research stresses the important role of agenda diversity in understanding the policy process (Boydston, Bevan, and Thomas 2014). As the input information is overwhelming while the agenda space is finite, policymaker attention becomes the scarcest political resource for successful policy change. An essential lesson drawn from the PET literature is that agenda-setting is a trade-off. Important information is processed and critical decisions are made in a sequential manner. Pushing one issue into the agenda is at the expense of neglecting another. In other words, attention to one issue as the prerequisite of policy change affects all others. This spillover effect in policy changes encourages scholars to investigate the overall configuration of attention in the agenda space.

Scholars find increasing diversity and scope of policy agendas in democracies, which is associated with an expansion of government jurisdictional boundaries. To illustrate, Jones, Theriault, and Whyman (2019) note the "great broadening" of the U.S. government peaking in the late 1970s, with which government got larger not by doing more of what it already was doing but by intervening in areas where it had only limited presence before. Alexandrova, Carammia, and Timmermans (2012) further show increasing issue diversity associated with expanding jurisdictional boundaries in the European Council. Studies on authoritarian policy processes attribute the policy priorities changes in an authoritarian regime to the co-optation of external interests (Svolik 2009). In resilient authoritarian regimes like China, a co-optative power-sharing approach to include the interests of allies and even potential challengers into the policy process helps the regime survive and achieve resilience (Gallagher and Hanson

2013). In return for cooperation and support, the political leaders need to signal their commitments and give relative autonomy to various coalition factions representing disparate policy domains (Magaloni 2008). In this, keeping government policy priorities diverse becomes a survival strategy for the leaders to gain viability. The result would be a broadening and wider agenda space for more diverse issues in a resilient authoritarian regime. Given that, we expect that:

H3: Agenda diversity of China's government policy is increasing over time.

Although China's public policy may show increasing diversity over time, there continues to be cognitive and organizational limits on its capacities for parallel processing. Alexandrova, Carammia, and Timmermans (2012) show that the institutional complexity of the European Council limits its parallel processing capacity and leads to an alternation of agenda expansion and concentration. This organizational cognitive limitation would also work in China's context: as urgent policy issues – especially those threatening regime stability – spurt out and pour into government agenda, China's policymakers need to concentrate their expansive attention in order to prioritize and deal with them as quickly as possible, leading the agenda space to alter between contraction and expansion over time.

Beyond issue competition, extant literature emphasizes the role of internal activities and strategies political leaders use to bargain with elites in shaping the policy process in authoritarian regimes. As to authoritarian leaders who obtain elite cohesion mainly through a co-optative approach, they gain viability and wider support by giving considerable autonomy to factions entrenched in different turfs and discretion to bureaucrats serving in disparate policy domains. To further consolidate the support, they need to signal their commitment by avoiding abruptly undercutting attention to certain policy issues. In this, these leaders are often associated with a more diverse policy agenda (Chan, Lam, and Chen 2021). In contrast, strongman-style leaders tend to entrench personal control by purging rival factions in the party and building a more exclusive support coalition (Minzner 2018). With powers largely unavailable to their counterparts, they have fewer challenges and more abilities to pursue the priorities they care about most, and demand more cohesion and loyalty from policymakers and bureaucrats in the broader political system. In response, to avoid being seen as unresponsive or pursuing issues independently, policymakers and bureaucrats have to put their attention into a smaller set of issues set by the strongman leaders, which in turn leads to a decline of diversity in government agenda. Following this logic, Chan, Lam, and Chen (2021) show how the transfer of Hu and Xi has led to fluctuations in agenda diversity of the Chinese government. In this, considering the transfers of China's leadership and their variations in the extent of personalized control (Chan, Lam, and Chen 2021; Wang and Vangeli 2016), we expect that:

H4: Agenda diversity of China's government policy alternates between increase and decrease.

### 3. Data and methods

#### 3.1. Bringing CAP to China through a new dataset

The heavy reliance of the PET literature on content analysis of policy documents has led to the birth of the Comparative Agenda Project (CAP; <https://www.comparativeagendas.com>).



net), which consists of datasets from around the world that all use the same consistent coding system. CAP has collected substantial and comprehensive databases documenting the longitudinal policy changes in many countries (Baumgartner, Green-Pedersen, and Jones 2006). It introduces a suitable approach to trace changes in public policy that has seen increasing use by researchers from several countries.

However, research pertaining to Chinese politics, public administration, and policy process has long suffered from a lack of data. The lack of a systematic trace of Chinese government policy process led scholars to employ approaches like text topic modelling to circumvent burdensome data collection and data analysis. Moreover, extant coding scheme vary largely and depart from the general coding system used in PET literature. This may led to different even contradictory conclusions in the studies.

The lack of data and inconsistency in coding scheme have inspired us to introduce the CAP to China<sup>1</sup> and we apply this codebook to a four-decade long, novel data set consisting of official government policy documents collected from the *China State Council Gazette* (1980–2019) to systematically trace the policy process and government activities in China. The *China State Council Gazette* is promulgated by the State Council of China, the highest administrative office at the national government level. The *China State Council Gazette* contains three main types of policy: (1) administrative regulations, decisions, and orders by the State Council; (2) decisions on institutional adjustments, administrative division changes, and personnel appointments; and (3) important executive rules and documents from various administrative departments of the State Council. These policy documents record over-time policy activities located in the mid of the policy process or policy cycle, providing systematical data appropriate for policy change studies.

We coded these policies into 21 major topics according to the coding scheme of CAP, with differences only at subtopic levels.<sup>2</sup> The CAP coding scheme discerns 21 major topics, ranging from “Macroeconomics” to “Government Operations” (See Appendix A for all major topics and more details), each of which further contains a set of subtopics (e.g. air pollution, land conservation, forest protection, etc. in the major topic “Environment”). This set of standardized codes has been applied to a large number of policy outputs (e.g. media coverage, legislation, executive orders, and budgets) across a wide range of countries. In this way, attention to different issues and its changes over time can be quantitatively assessed. During the coding process, we made sure that each policy document is manually coded by two coders and, if the two have a disagreement, discussions were held weekly to attain a consensus for better intercoder reliability.

### 3.2. Measuring punctuations and agenda diversity

Tracking attention and government action devoted to particular policies over long periods of time is challenged by a lack of suitable approaches to measure the changes. The CAP provides an appropriate method for the study of policy dynamics (Breunig and Jones 2011; Jones et al. 2009; Baumgartner et al. 2009; Rey, Epp, and Baumgartner 2015). The strategy is to measure policy changes, such as budget allocations based on policy categories, by the percentage-count change value or percentage-percentage change score (Jones, Sulkin, and Larsen 2003). A single frequency distribution can then be prepared of all of the percentage changes. If incremental changes characterize the system, then the frequency distributions will resemble a normal bell-shaped curve.



If punctuated equilibrium is the rule, however, the frequency distributions will show a slender central peak but fat and long tails (Baumgartner, Jones, and Wilkerson 2011).

In this study, the percentage-percentage method of measuring change is used. First, we calculate the percentage ratio of a particular policy topic to the total administrative policies using the following formula:

$$p_{it} = 100 \cdot \left( \frac{x_{it}}{y_t} \right)$$

where  $x_{it}$  is the number of policies relating to topic  $i$  at time  $t$ , and  $y_t$  is the total number of policies across all topics at time  $t$ . Then, the percentage-percentage differences were calculated, which capture yearly changes in the percentage ratio of each policy topic to the total administrative policies. Then, we compute the difference in the proportion using the following formula:

$$d_{it} = 100 \cdot \left( \frac{p_{it} - p_{it-1}}{p_{it-1}} \right)$$

where  $p_{it}$  is the percentage of policies relating to topic  $i$  at time  $t$ , and  $p_{it-1}$  is the percentage of policies relating to topic  $i$  at time  $t-1$ .

We then pooled the percentage change values to form a density distribution. L-moment kurtosis was calculated to measure the intensiveness of policy punctuations. Compared to the kurtosis index, L-moment kurtosis is more robust against the influence of outliers. The PET literature suggests an L-kurtosis value larger than 0.123, the value marking a Normal distribution, indicates a leptokurtic distribution and the presence of both incremental policy changes and more extreme punctuations (Jones, Sulkin, and Larsen 2003).

As to agenda diversity, we use Shannon's H information entropy formula as the measure of agenda diversity across the 21 CAP policy topics. Shannon's H index as a measure of information entropy has been used in political science to measure the degree to which resources are distributed across items and have better performance in terms of sensitivity than other indexes (e.g. Herfindahl-Hirschman Index) (Boydston, Bevan, and Thomas 2014). To exclude the influence of the number of policy topics, the normalized version of Shannon's H index was calculated with the following formula:

$$H_t = - \sum_{i=1}^{21} p_{it} \cdot \ln(p_{it}) / \ln(21)$$

where  $p_{it}$  is the percentage of policies relating to topic  $i$  at time  $t$ ,  $\ln(p_{it})$  is the natural log of the percentage of policies of topic  $i$  at time  $t$ , and 21 is exactly the total number of topics. The value of normalized Shannon's H index ranges from 0 to 1. It increases as the percentages of policy issue across 21 topics becomes more equal, and vice versa.

## 4. Findings

### 4.1. Policy areas

Table 1 shows major topics and their percentage value on China's policy agenda (changes of all 21 topics are available in Appendix B). From 1980 to 2019, the *China State Council Gazette* included a total of 19,056 items. Among the 21 policy topics, government operations policy has the largest percentage value. Governance affairs, such as intergovernmental relations, bureaucracy, and appointments, cover almost one-fifth of China's policy agenda. The domestic commerce policy on affairs such as banking, small business, and tourism has the second-largest count, taking up approximately 16.5% of the attention of the Chinese government. Macroeconomics comes third with about 7%, and then international affairs fourth with a similar percentage. Together, these four topics cover almost half of the whole agenda space of the Chinese government.

### 4.2. Policy punctuations

By pooling the percentage change values across 21 topics, we obtained 819 observations. Table 2 provides the summary statistics of China's policy changes. It shows that the mean value is 0.33, indicating that attention on each topic increased annually by 33 percentage on average. The L-kurtosis of the distribution is 0.42, which is a relatively high value compared to democracies. As mentioned before, the Gazette, as a government publication of policy documents, regards the middle stage rather than the input or output stage of the policy cycle. The L-kurtosis value is higher than their counterparts in democracies (See Appendix C for more discussions on the comparison of values), including Danish government reports (L-kurtosis = 0.26), executive orders of the U.S. government (L-kurtosis = 0.25), and Belgian government (L-kurtosis = 0.32) (Baumgartner et al. 2009). The finding supports H1, namely that changes in China's government policy are punctuated. In fact, our findings indicate that China's policy process is highly punctuated. This is consistent with the conclusion drawn by Lam and Chan (2015) and Chan and Zhao (2016).

The distribution of the percentage changes is leptokurtic and has a higher peak and heavier tails than the normal distribution. Figure 1 displays the pooled density distribution of these percentage changes, with a normal distribution (represented by the dashed line) added for comparison. Percentage changes with a value larger than 500% were aggregated for a better visual result. Figure 1 clearly shows that the distribution

**Table 1.** Attention allocation across policy topics in China, 1980–2019.

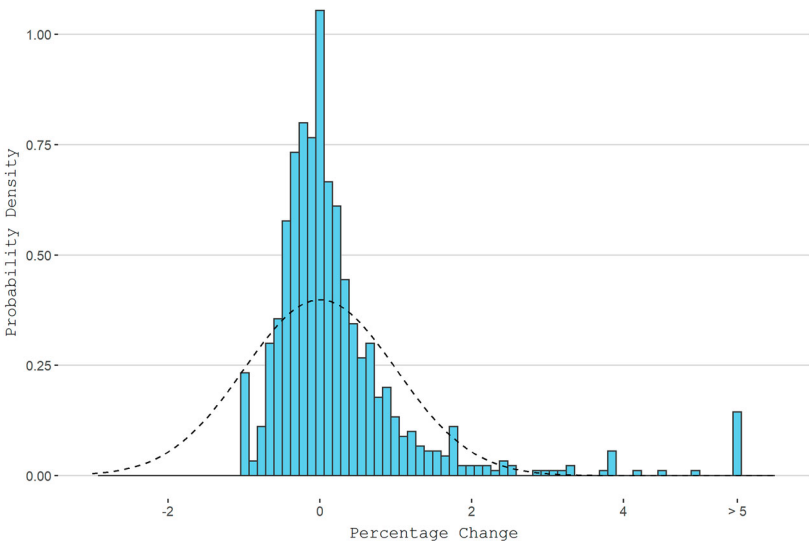
Topic	Items	Percentage
Government Operations	3641	19.11%
Banking, Finance, and Domestic Commerce	3136	16.46%
Macroeconomics	1434	7.53%
International Affairs	1371	7.19%
Transportation	1094	5.74%
Foreign Trade	900	4.72%
Public Lands and Water Management	836	4.39%
Space, Science, Technology, and Communications	833	4.37%
Other topics (each less than 4%)	5811	30.49%
Total	19,056	100%

**Table 2.** Statistics on national level policy change in China, 1980–2019.

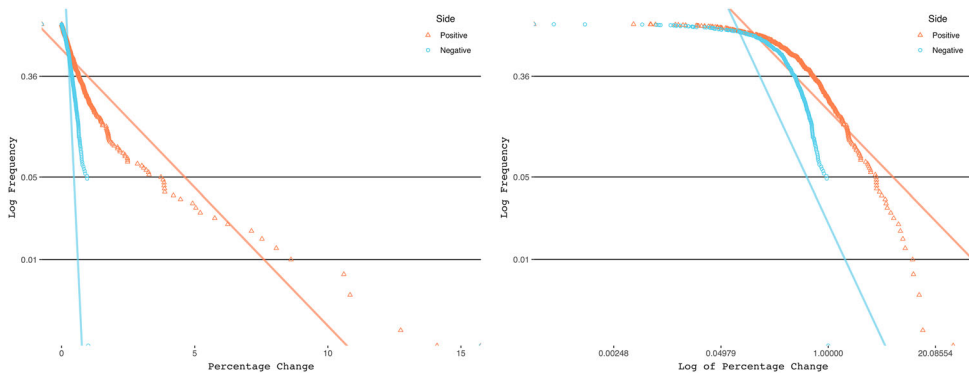
Num	819
Minimum	−1
1st Quarter	−0.29
Median	0
Mean	0.33
3rd Quarter	0.44
Maximum	32.93
SD	1.74
Skewness	10.31
L_skewness	0.45
Kurtosis	161.76
L_kurtosis	0.42

is right-skewed with a heavy long tail on the right side. Although it is due partly to the fact that the left side of the distribution (the negative changes) is truncated at  $-100\%$ , a more important source of the right skewness is a considerable amount of extremely large change values on the right side. The negative side of the distribution is below the normal distribution curve, while the positive side has heavily fatter tails than the normal distribution. This suggests the punctuation in China’s policy process is mainly positive rather than negative.

We provided a more accurate check on the punctuations separately for the positive and negative sides. A method of cumulative frequency distribution with regression estimation was utilized (Jones and Baumgartner 2005; Baumgartner et al. 2009). The results are shown in Figure 2. There are two things to look for in the semi-log and log-log plot: the fitness of points to the straight line, and the slope of the straight line. The former indicates whether the distribution approximates the exponential distribution (represented by the straight line in the semi-log plot) or the Paretian distribution (represented by the straight line in the log-log plot), which have thicker tails than the normal distribution and the thickest of the three. As in linear regression analysis, the goodness of fit can



**Figure 1.** Distribution of government policy change in China, 1980–2019.



**Figure 2.** Semi-log and log-log plots of policy change in China.

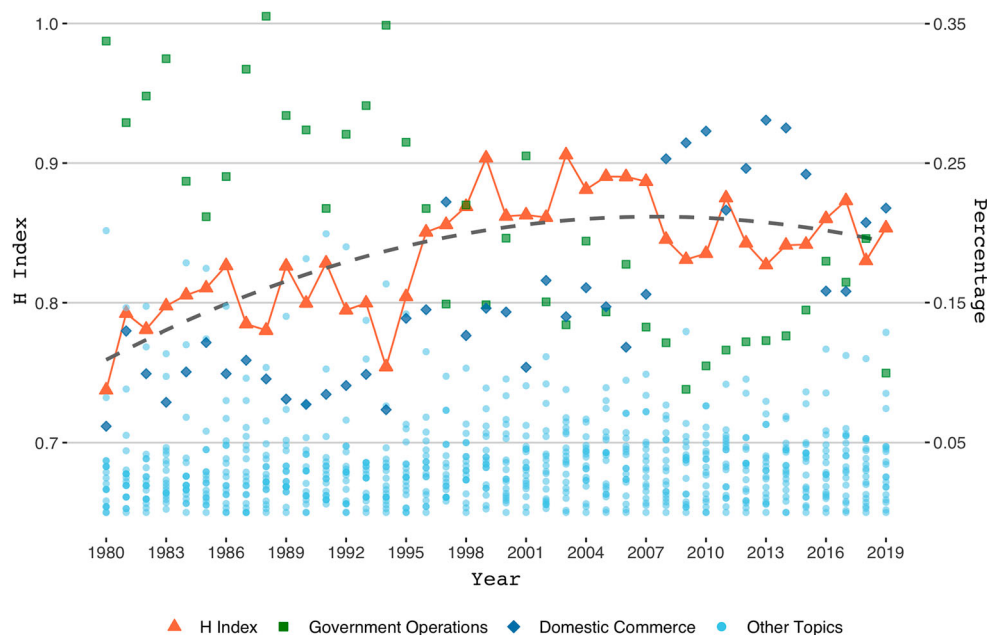
be tested using R-squared statistics. Further, the slope of the line indicates the thickness of the tails, namely, how many cases are far out in the tails instead of in the central peak of the distribution. A flatter slope suggests a thicker tail, and vice versa.

We can see the large difference between the positive policy changes (the right tail) and the negative policy changes (the left tail) in Figure 2. Positive change points fit better (R-squared = 0.90) the straight line in the semi-log plot than in the log-log plot (R-squared = 57), suggesting the right side of the distribution approximates the exponential distribution and has a wilder tail than the normal distribution. In contrast, negative change points fit neither the lines well (R-squared = 0.52; 0.18), indicating the left tail of the distribution is not wilder dramatically than the normal distribution. The slope estimates for the two tails are also distinctly different, indicating that the positive change is more punctuated than the negative one. It seems China's policy changes in the positive direction have more extreme values and are more punctuated than in the negative direction, which is consistent with H2, which states that punctuations in China's government policymaking are mainly positive.

#### 4.3. Diversity dynamics

In the last decades (from about 2009 to 2019), the Chinese government's agenda became concentrated on a limited number of issues rather than expanding the scope to more diverse problems. Figure 3 displays the changes in Shannon's H index and percentages of policy topics across 40 years. The mean of the H index is 0.83, a relatively high value of information entropy, indicating the high degree of diversity of China's government agenda. To test H3, which states that the policy agenda of the Chinese government is increasingly diverse, a smooth method based on the loess algorithm was utilized to depict the overall patterns of the agenda diversity changes. The trend line (the grey dashed line) shows a rising level of H index on average but with a slightly convex curvature. This provides only partial support for H3.

While the diversity of China's government agenda increased, sharp rises and falls in attention to single topics also occurred. We now dive into the details of the alternation between agenda diversity and concentration to evaluate our fourth hypothesis pertaining to the dynamics of agenda diversity, namely that agenda diversity of China's government



**Figure 3.** Diversity dynamics of China government agenda, 1980–2019.

policy alternates between increase and decrease. After the third plenary session of the eleventh central committee of the CCP in 1978, the Chinese government launched extensive reforms in broad policy areas, and agenda diversity increased gradually during the 1980s. But in 1987 and 1988, the diversity temporally shrunk. Since then, diversity has switched between rising and falling. In 1994, a dramatic but temporary decrease in diversity occurred. The next decades saw the highest level of agenda diversity on average in China's policy process, but with a slight concentration from 2000 to 2002. In 2008, the year when the global financial crisis hit China, another concentration emerged. It took two years for the diversity to increase again, peaking in 2011. In 2013 another relatively intensive agenda concentration occurred. Since then, the agenda has expanded again but never reached the level it had in the 2000s. The year 2018 witnessed another agenda concentration followed by expansion in 2019. Taking all these together, one conclusion we could draw from the change in agenda diversity is that the increase in China's government agenda diversity is within cycles of more and less concentration. This provides empirical support to H4.

One important cause of agenda diversity dynamics is competition (Alexandrova, Carammia, and Timmermans 2012). When juxtaposing the percentage change of the two core issues, governmental operation and domestic commerce, to the alternation of the H-index in Figure 2, we can clearly see that when the percentage of core issues increased, the agenda diversity shrunk, and vice versa. When core issues dominate the government agenda space, there is limited room for other issues. For instance, in 1980 and 1994, when agendas were most concentrated, the government operation and domestic commerce issues covered nearly half of the whole agenda space. The decreased diversity during the last decades also came with the increasing proportion of domestic commerce as

well as the governmental operations policy. As an example, in 2008 and 2009, when the financial crisis arrived, domestic commerce, finance, and banking issues became the most salient ones and drew the most attention from the government, leaving a limited agenda space for other policy issues. On the other hand, when the attention captured by these core issues goes down, the agenda space is released and open for non-core issues. This was the case during the period from 1997 to 2007 when the salience of government operations issues went down, and none of the policy topics covered more than one-fifth of the agenda space.

## 5. Discussion

PET has shown its explanatory power in various institutional contexts. It has evolved to “the general punctuations thesis and in turn to a theory of government information processing” (Jones and Baumgartner 2012) which put more emphasis on information and its processing in understanding public policy changes. The role of information processing is still one of the most plausible explanations for the highly intensive policy punctuations in China. Consistent with other studies, our findings suggest an information disadvantage inherent to government information supply in authoritarian settings (Baumgartner et al. 2017). Chan and Zhao (2016) argue in their study of Chinese regional governments that the underlying mechanism of policy punctuation in authoritarian regimes is distinct from their democratic counterparts. Top leaders in authoritarian regimes, notwithstanding their ability to search for information on specific policy issues that have come to their attention, are less exposed to the information returned through bottom-up representations that may mitigate biases of current policy activities (Baumgartner and Jones 2015). They are more likely to adhere to the current course until new issues and problems become serious enough to threaten the survival of the regime (Mertha 2009). In this sense, information disadvantage stemming from marginalizing the opponents in politics is one of the major institutional foundations of punctuated equilibrium in authoritarian policy processes.

To deepen the understanding of underlying mechanisms, it is helpful to distinguish between positive and negative punctuations. We found more positive punctuations than negative ones in China’s policy process over the last four decades. Existing literature shows that institutional friction involved in issue discovery and abandonment is unequal (Baumgartner et al. 2009). For an issue already on the policy agenda, there are sunk costs regarding searching and processing relevant information and bureaucratic inertia that pose more frictions to reducing attention.

A factor that may help explain the presence of more positive than negative punctuations in China is the country’s “response-oriented agenda-setting process” (Zhao and Xue 2017). Scholars note that when facing issues emergent and challenging to regime stability, such as disasters and social contests, the Chinese government steps over to agenda-setting and policymaking by omitting or truncating the process of policy legalization (Xue and Zhao 2020). As the information disadvantage inevitably leads to serious error accumulation in policy response, this mode of agenda-setting may be an in-time way for top leaders to tackle serious policy problems. The result of this mode is that these serious issues, without the process of open and deliberative legalization, often squeeze into the agenda and be translated into policies in an abrupt way.

Finally, the prevalence of dramatic positive changes in policy attention also lies in the ability of the leaders to control the policy agenda. As the influence and obstacle of dissenting views are minimized, top leaders at the State Council and CCP central committee have exclusive power to set new agendas and increase attention toward particular issues. This fact makes the attention increases toward issues top leaders are interested in much easier. To some extent, this mode of agenda setting helps authoritarian regimes attain resilience and can be regarded as a strategy to countervail the information inefficiency caused by the shortage of information supply. Yan, Yang, and Yuan (2022) note the CCP recently has established a series of central leading groups to reinforce top leaders' control over policymaking and accelerate implementation by centralizing authority and resources to make quick responses to complex policy problems like environmental protection and technology innovation.

In terms of attention diversity, we found that China's parabolic-similar changes of agenda diversity saw attention diversification over the last three decades as well as a concentration in the recent decade. The changes may be associated with the issue of competence in limited agenda space in China's policy process. The "big four" core issues regarding government operations, domestic commerce, macroeconomics, and international affairs, take on average half of the whole agenda space, leaving relatively limited room for other peripheral policy problems to compete for. As a consequence, the level of agenda diversity at a given time is largely affected by the salience of the core issues at that time. Another explanation with less scholarly attention arises once we consider together the agenda diversity dynamics and Chinese top leadership transitions. Beyond the traditional focus of agenda-setting research on the shortage of information supply (information disadvantage), internal activities of elite bargains in autocracies also shape the agenda-setting and policy process (Chan, Lam, and Chen 2021). For authoritarian leaders who obtain elite compliance and survival mainly through a co-optative approach, they have to include a wide enough set of interests of elites to cultivate wider support; in return, the leaders offer to the members of the winning coalition considerable autonomy, allowing them to exercise more discretion in policy issues they concern (Magaloni 2008). This co-optative approach generally broadens the scope of public policy agenda, as the coalition now involves relatively autonomous and entrenched factions representing disparate policy domains (Chan, Lam, and Chen 2021). Since the 1980s, it has taken several decades for China's reformists to co-opt and gain support from local officials, foreign investors, and social actors (Cai 2018). It followed a gradually broadening agenda space to accommodate the increasingly diverse demands. In contrast, leaders with a strongman style personalize political control and achieve elite cohesion through coercion. Through sidelining potential opponents and utilizing mechanisms like building leading groups (Yan, Yang, and Yuan 2022), they have more capacities and fewer challenges to reshape the policy agenda, arbitrarily select information from elite factions, and prioritize the issues they are most interested in. In response, bureaucrats in the broader policy system need to signal their loyalty and avoid blame by focusing on a smaller set of priorities the leaders set for them at the cost of neglecting other issues (Chan, Lam, and Chen 2021; Baranovitch 2021). Consequently, strongman leaders often come into power with less issue diversity and more contracted agenda space. In this, it is not surprising that our finding on the recent decline of agenda diversity in China is consistent with the findings of Chan, Lam, and Chen (2021).



They note that Xi, in contrast to his predecessors, corroborates the strongman mode of elite bargains and has led to a contracted agenda space with less diverse policy priorities.

## 6. Conclusions

We have examined agenda dynamics and policy punctuations in China's national level policy process using a new dataset covering forty years of government activity. We, first of all, find that government operations, domestic commerce, macroeconomics, and international affairs are the "big four" issues on the Chinese government agenda over the last four decades. Second, our findings provide strong evidence that China's policy process is punctuated, and the intensity of punctuation is relatively high compared to democracies. This conclusion is consistent with the conclusions of previous studies (Baumgartner et al. 2017; Chan and Zhao 2016; Lam and Chan 2015). Third, by examining the punctuations of positive and negative policy changes separately, we find that positive changes are more punctuated than negative ones. It indicates that over the last decades, a considerable number of policy issues have attracted more attention from the Chinese government while fewer issues have fallen out. This finding extends the evidence regarding the variable frictions between issue discovery and abandonment and provides insight into exploring the broadening process of the Chinese government.

In terms of agenda diversity and its dynamics in China's government policy process, we find that the average level of agenda diversity increased, but there was a downward trend in the last decade, leading to an overall dynamics path featuring convex curvature. Underlying the pattern of alternation in Chinese government agenda dynamics is the intensive competition among policy issues and elite bargains that may undermine the information efficiencies of the regime. As the agenda capacity of government is limited, whether core issues like government operations and domestic commerce are salient such that they are taking up most agenda space is tightly associated with the alternation between diversification and concentration. Beyond this is the internal process of elite bargains within authoritarian regimes that may also contribute to the variation in agenda diversity over time. China's leaders stepped back and forth in their bargains with elite coalitions in terms of the coercion and power they have in hand, which in turn provides more or fewer incentives for co-optation in politics and results in more diverse or contracted agenda space for issues out of the leaders' interest. This insight may clarify the further agenda of agenda research in autocracies where the information efficiencies of policy system rely not only on information supply but also on the survival politics and internal activities of the regime.

While this study covers the policy venue of the State Council and thus focuses on national level policymaking, future PET research on China should embrace a more delicate research design either by shifting focus to the local level or by diving into specific policy areas (Meng and Fan 2022). More studies are welcome empirically exploring how punctuations and agenda dynamics in Chinese government differ from others and work in specific policy areas.

## Notes

1. In November 2017, we established a coding team to initiate construction of the database.

2. Admittedly, there are prominent differences between China and the West. To make sure comparability, during the coding process, we kept in a close touch with the American policy agenda team led by Jones. We discussed through revisions of the codebook, and unanimously agreed to revising the CAP coding scheme only on subtopic level. For example, special subtopics, such as “Hong Kong, Macao, and Taiwan issues” and “spiritual civilization and ideological education”, were added to ensure validity. It has taken more than three years to finish the manual coding work.

## Disclosure statement

No potential conflict of interest was reported by the author(s).

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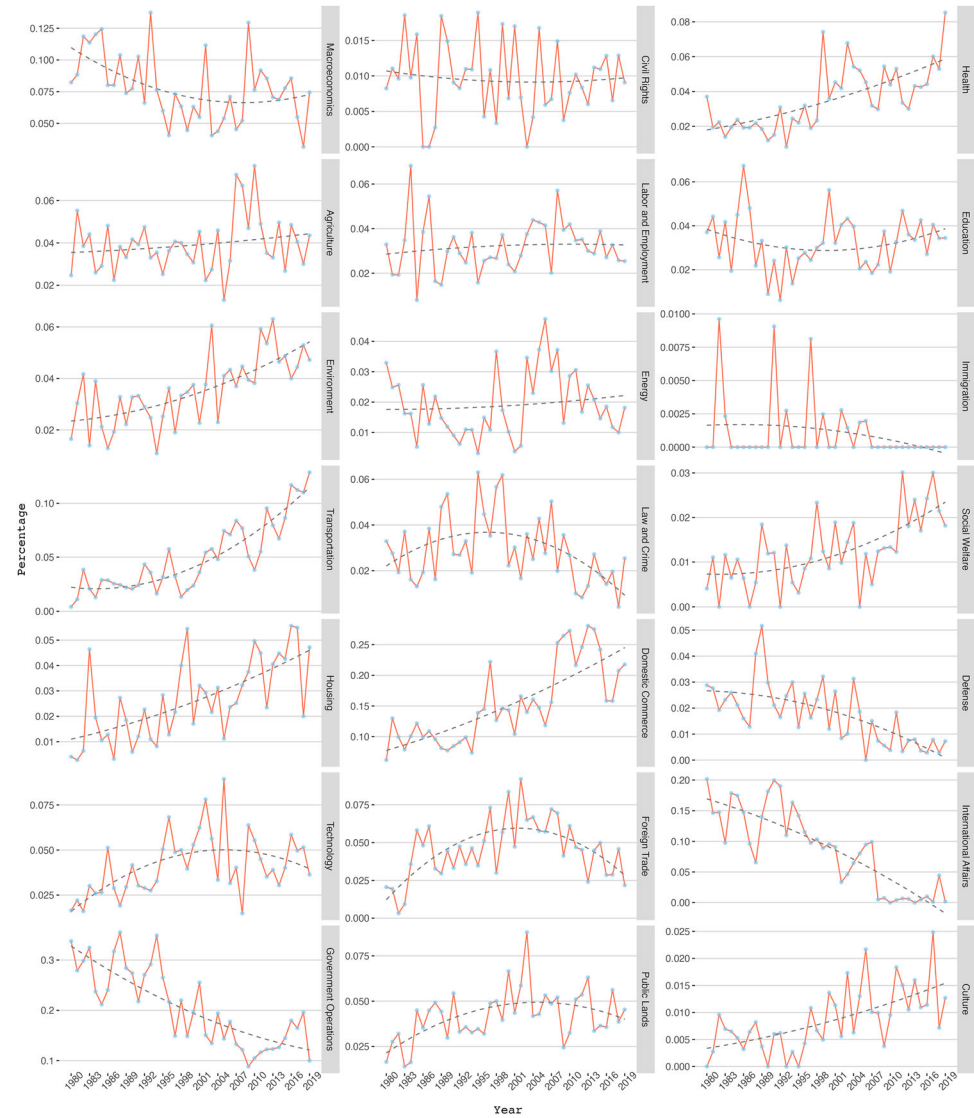
## Appendices

### Appendix A

**Table A1.** 21 major topics and coding guidelines as applied to China.

Code	Major topics	Major coding guidelines
1	Macroeconomics	- Observations are coded according to the single predominant, substantive policy area rather than the targets of particular policies or the policy instrument utilized.
2	Civil Rights	
3	Health	- Observations that discuss appropriations for particular agencies are coded according to their substantive policy area. Those that discuss appropriations for multiple agencies that span multiple major topic codes are coded as government operations.
4	Agriculture	
5	Labor and Employment	
6	Education	
7	Environment	
8	Energy	
9	Immigration	
10	Transportation	
12	Law and Crime	
13	Social Welfare	
14	Housing	
15	Domestic Commerce	
16	Defense	
17	Technology	
18	Foreign Trade	
19	International Affairs	
20	Government Operations	
21	Public Lands	
23	Culture	

Appendix B



**Figure B1.** Percentage changes of 21 policy topics on China's national agenda.

## Appendix C

**Table C1.** Comparisons between L-Kurtosis values in existing PET studies.

	L-Ks	Stage	Data Source	Sources
China	0.42	Mid	State Council Gazettes (1980–2019)	
	0.20	Input/Mid	CCP Daily Meetings (2003–2019)	(Yan, Yang, and Yuan 2022)
	0.24	Input/Mid	SC Daily Meetings (2003–2019)	
	0.87	Output	Regional government budget (1995–2012)	(Chan and Zhao 2016)
	0.56	Input/Mid	CCP Politburo SC Appearances and Meetings (2002–2018)	(Chan, Lam, and Chen 2021)
	0.57	Mid/ Output	Government reports, orders, budgets (2002–2018)	
	0.60	Input	NPC and PCC work reports (2002–2018)	
	0.49	Output	Hong Kong's Budget (1985–2007)	(Lam and Chan 2015)
United States	0.25	Mid	Executive orders (1947–2002)	(Baumgartner et al. 2009)
Denmark	0.26	Mid	Government reports (1953–2003)	
Belgium	0.32	Mid	Executive orders (1991–2000)	

Table A2 lists major relevant contributions on policy punctuations in China and Western countries. We assign the policy stage for each data source. Notable differences are between our L-K value and those of the West, which is consistent with and can be partly explained by the information inefficiency assumption on authoritarian regime's policy process. More surprisingly, there also are evident differences between L-K values in China's studies. Besides the difference in stages of policy process, another main reason for this variation is the largely varied coding scheme and approaches they employed. Specifically, our L-K value is in the mid of the values ranging from 0.20 to 0.87, which supports the PET's argument on increasing friction along the policy process.