Judging, Sooner or Later:

A Study of Decision Timing in Taiwan's

Constitutional Court

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Abstract

This paper presents the first empirical study of the judicial decision-making behind the marked deviation as to the number of days it takes for Taiwan's Constitutional Court to render a merit decision (Judicial Yuan Interpretation). Analyzing the IIAS Taiwan Constitutional Court Database, which contains a myriad of data for all the merit decisions the Court made between 1994 and 2013, this paper finds, inter alia, that cases bearing a certain cues of importance can be expected to have the Court's judgments sooner rather than later, and that decision timing in Taiwan's Constitutional Court has more to do with strategic decision-making than with non-strategic considerations. This finding suggests that, in addition to setting its own agenda by exercising its de facto discretion on case selection, Taiwan's Constitutional Court can, to some extent, manage its agenda via strategic decision-timing.

Keywords: decision timing, agenda setting, Taiwan's Constitutional Court

1. Introduction

Conventional wisdom holds that one of the differences between centralized and decentralized judicial review is the time it usually takes to get a final judicial decision over a constitutional issue. All else being equal, the argument goes, a Constitutional Court is expected to respond to the demand for judicial review faster than a Supreme Court, because a constitutional issue can be referred directly to the former, before or even without exhausting judicial remedies provided by the (ordinary) lower courts. But all else are not equal. While it may be the case that, in general, some (but not all) of the constitutional issues may reach a Constitutional Court in a faster pace than what it would take for them to reach a Supreme Court, it is not necessarily the case that a Constitutional Court and a Supreme Court would reach their respective merit decisions in a similar amount of time. Depending on the institutional design of constitutional adjudication writ small, a Constitutional Court's agenda is not merely a function of whether the Court decides to decide a given case upon receiving it, but may also be a function of whether the merit decision is made sooner, or later.

For Taiwan's Constitutional Court (TCC) (a.k.a. the Justices of the Constitutional Court, and formerly known as the Council of the Grand Justices), decision timing—i.e., the pace of the Court's (substantive) decision-making as measured by the amount of time it takes for a duly-filed petition to turn into a merit decision of the Court (in the name of Judicial Yuan Interpretation No. ###)—appears to be a unique agenda-setting mechanism that is distinct from case selection. According to the Taiwan's Constitutional Court Database (the TCC Database) developed by the research team at the Institutum Iurisprudentiae, Academia Sinica (IIAS) (forthcoming 2015), the average docket period for all Judicial Yuan Interpretations issued over 1994-2013 is 656 days. The standard deviation, however, is 427 days. As reported in Table 1 and Figure 1, the difference between a speedy TCC decision and a slow-moving TCC decision can be a matter of years.

Table 1: Time Used for TCC Merit Decisions: 1994-2013

	N	Min	Q1	Median	Mean	Q3	Max	Std. Dev.
All	605	3	336	594	656.2	911	2569	427

Figure 1: Time Used for TCC Merit Decisions: 1994-2013
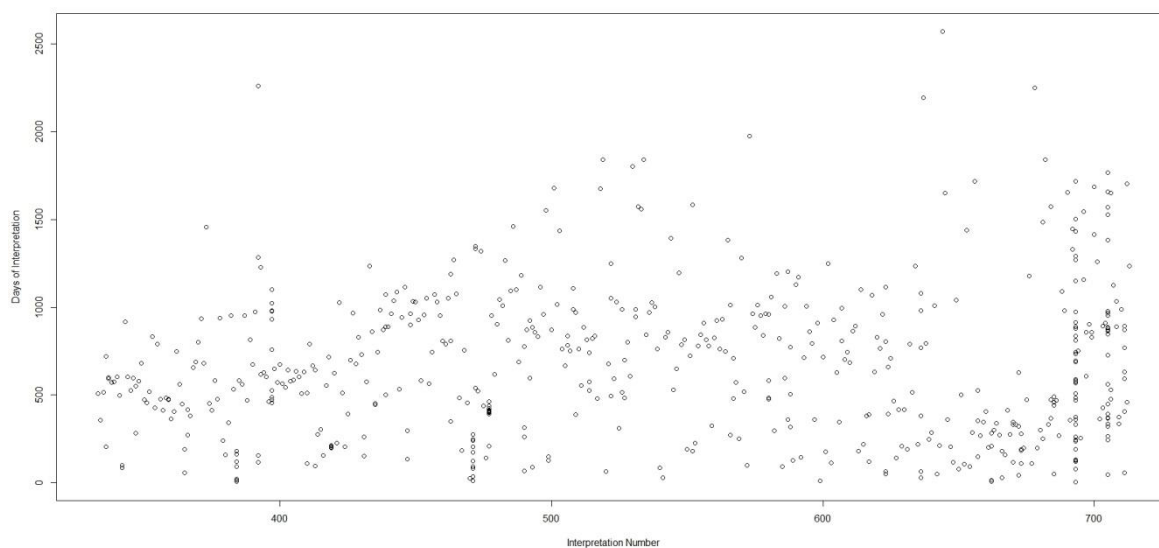
Why is there such a wide variation in the time cost of TCC decision-making? How does TCC approach the issue of its decision timing? While much has been studied about agenda setting in the United States Supreme Court (e.g., Teger & Kosinski 1980; Caldeira & Wright 1988; Perry 1994; Caldeira, Wright, & Zorn 1999; Cordray & Cordray 2008; Black & Owens 2009), students of comparative judicial politics have just begun to explore how other Supreme Courts or Constitutional Courts set their own agenda (e.g., Flemming & Krutz 2002; Fontana 2011). A few commentators in Taiwan (including, among others, former Justice and President of the Judicial Yuan Dr. Weng Yueh-sheng (翁岳生)) have taken note of the marked differences in TCC decision timing, and have offered some explanations as to why a few "outlier" TCC decisions took so long (Weng 2009). Still, how TCC sets its agenda by means of decision timing (or the lack thereof) awaits systemic and empirical studies (Su forthcoming 2014).

This paper presents the first empirical legal study of decision timing in Taiwan's Constitutional Court. By analyzing the data we have collected for the unreleased TCC Database at IIAS, we attempt to uncover TCC's timing decisions that are responsible for the significant disparities in the pace of its decision making. We first develop the strategic and the non-strategic approaches as two competing theories for TCC decision timing. We then identify two respective sets of independent variables and

assess their explanatory force with linear regression and other statistical tests. Our major finding is that, to a certain extent and as a matter in general, TCC engages more in strategic than in non-strategic decision timing. As a result, a case (petition) bearing a certain cues of importance can be expected to be decided by TCC sooner rather than later. In view of the profound impacts of agenda setting on the roles and performance of judicial review, it is quite understandable—for students of judicial politics at least—that TCC should engage in strategic decision timing as a supplement to its arguably strategic case selection. Contrary to the assumption behind the legal theory and the regulations of the TCC procedure, our finding further establishes that in TCC, strategic decision timing is a rule, not an exception.

In addition, our regression analyses reveal that TCC's decision pace, by and large, has been slowing down as the Court's composition changes over time. Further inquiries are needed to adequately account for this trend. With the help of statistical analyses, we can also identify the specific decisions that are likely to have experienced gridlock inside TCC. A further examination of these cases may uncover the factors that make a case prone to paralysis.

2. Background: Agenda Setting in Taiwan's Constitutional Court

This section introduces the basic institutional design of Taiwan's Constitutional Court, with focus being centered on the mechanisms by which the Court sets its own agenda. We attempt to establish that, from a descriptive point of view, decision timing can be seen as a case-specific agenda-setting mechanism that is distinct from, and added to, the Court's de facto case selection.

2.1. Taiwan's Constitutional Court in a Nutshell

Taiwan's Constitutional Court is the only judicial tribunal in Taiwan having the full and final authority to declare and void a law as unconstitutional. It also has the original jurisdictions over certain separation-of-powers controversies and certain conflicts in legal interpretation. Immigrated to Taiwan along with the Republic of China regime in 1950, TCC managed to survive the four-decade long authoritarian rule and has gradually transformed itself into a powerful and active Constitutional Court (e.g., Ginsburg 2003). Since as late as the Constitutional Interpretation Procedure Act (CIPA) (司法院大法官審理案件法) replaced the previous Act of the

Council of Grand Justices (司法院大法官會議法) in 1993, the Justices has embraced its identity as a Constitutional Court by downplaying the significance of its being organized as a Council (rather than a Court) and its substantive decisions being issued in the format of Interpretation (as opposed to court judgment). In addition to its core functions in constitutional adjudication and its limited role in unifying legal interpretation, the Court has been tasked to adjudicate the dissolution of unconstitutional political parties (since 1992) and the impeachment of the President or the Vice President of Taiwan (since 2004). Neither of these ancillary powers of TCC has ever been exercised, however.

The number, tenure and appointment of the Justices were reengineered in 1997 by the later renumbered Additional Article 5 to the ROC Constitution. During the Sixth Term of the Justices (1994-2003), TCC was supposed to have 17 Justices, with each Justice serving a renewable 9-year term. Since 2003, TCC has been composed of no more than 15 Justices (including two Justices who serves as the President and Vice President of the Judicial Yuan), who are nominated by the President and confirmed by the Legislative Yuan. After 2007, each Justice is expected to serve a non-renewable 8-year term, and the term of Justiceship is staggered and counted individually. The Justices of TCC have been recruited mainly from (i) senior career judges at the Supreme Court and the Supreme Administrative Court, and from (ii) senior law professors. While a Court watcher may gather a sense about the political/ideological leanings of some Justices based on their individual opinions and/or other writings, the party identification of the nominating President and that of the confirming Legislative Yuan are of limited use in gauging whether a single Justice is, and votes as, a liberal or a conservative (Garoupa, Grembi & Lin 2011; Pellegrina, Garoupa & Lin 2012) .

TCC's plenary docket consists of two types of cases: (i) petitions for constitutional adjudication, and (ii) petitions for unifying legal interpretation. Most of the existing Judicial Yuan Interpretations, however, are cases concerning constitutional adjudication, which can be further divided into three sub-types: (a) constitutional review (including abstract review, concrete review, and qualified constitutional complaint), (b) adjudication of separation-of-powers controversy, and (c) advisory opinion (on matters concerning constitutional interpretation). Table 2 details the multiple accesses to TCC as provided and regulated by the respective procedural-jurisdictional rules found in CIPA, TCC's jurisprudence, and two other laws. CIPA stipulates two decisional rules for these cases: (i) Except for the constitutional review of a regulation, ordinance, or a judicial norm (such as *pan-li* (判例) and Supreme Court's Joint Resolution), it takes 2/3 majority of Justices to form a

quorum, and 2/3 majority of attending Justices to vote on cases of constitutional adjudication. (ii) For constitutional cases concerning review of regulations and alike, and for cases regarding unifying legal interpretation, simple majority rule applies; cases of unifying legal interpretation are subject to a majority quorum rule as well.

Table 2: Access Rules of the TCC

Access Rules	Types of Petition	Types of Petitioner
Art. 5.1.1 of CIPA	CA (a), (b), (c)	government agencies
Art. 5.1.2 of CIPA	CA (a)	individuals, legal entities, political parties
Art. 5.1.3 of CIPA	CA (a), (b), (c)	one-third of the Legislators or more
Art. 5.2 of CIPA	CA (a)	Supreme Court, Supreme Administrative Court
J.Y. Interpretation No. 371, J.Y. Interpretation No. 572	CA (a)	judges
Art. 7.1.1 of CIPA	ULI	government agencies
Art. 7.1.2 of CIPA	ULI	individuals, legal entities, political parties
Art. 30.5 of Local Government Systems Act	CA (a), (b), (c)	central government/Executive Yuan, local self-governing bodies
Art. 75.8 of Local Government Systems Act	CA (a), (b)	local self-governing bodies
Art. 178 of Administrative Litigation Act	ULI	Administrative Courts
Art. 178-1 of Administrative Litigation Act	CA (a)	Administrative Courts
Art. 12-2 Administrative Litigation Act	ULI	Courts other than the Administrative Courts
Art. 182-1. of Code of Civil Procedure	ULI	Ordinary Courts

(CA: Constitutional Adjudication: (a) constitutional review, (b) adjudication of separation-of-powers controversy, (c) advisory opinion; ULI: Unifying Legal Interpretation)

Invariably, a Judicial Yuan Interpretation—i.e., a merit decision of

TCC—consists of two parts: (i) Holding, which summarizes the gist of the Court's opinion, and (ii) Reasoning, which offers a more detailed explanation of the Court's opinion. Both (i) and (ii) are written *per curiam*, and it is a known secret that during the review sessions, the Justices usually deliberate on the texts of both (i) and (ii) word by word. Individual Justice of TCC can write concurring and/or dissenting opinion should he/she so choose, and the signed individual opinions would be published along with the authoritative Judicial Yuan Interpretation.

One noteworthy feature of TCC's agenda arises from the absolute size of its plenary docket. In the interval of 2002-2011, TCC had to deal with an average of 572 petitions annually in its rolling docket. TCC, however, dismissed about 350 (about 61%) cases as frivolous or improperly filed, and merely produced an average of 16 (about 2.78%) Interpretations each year. TCC's annual (merit) output had even dropped to 9 Interpretations in 2013. Only a tiny fraction of petitions would have their days in TCC, and some commentators in Taiwan blamed the Justices for not working hard enough.

Su (forthcoming 2014) proposes a three-level analytical framework to study the law and politics of agenda setting in TCC. Whereas the access/jurisdiction rules, the decision rules, the opinion-writing approach and several other institutional arrangements have significant influences over TCC's agenda at the aggregate level, TCC, as Su (forthcoming 2014) suggests, is capable of deliberately setting its case-specific agenda through two separate mechanisms: (i) case selection, and (ii) decision timing.

2.2. Agenda Setting via Case Selection

Although the ROC Constitution and CIPA does not grant TCC with discretionary jurisdictions, it is arguable that TCC has and does exercise a significant amount of discretion in deciding whether to hear a case. Such kind of *de facto* case selection is arguably one of the major driving forces behind the phenomenon that the plenary docket TCC maintains is a highly selective one: During 2002-2011, only 3.02% of non-governmental petitions and 23.03% of governmental petitions acquired merit decisions from TCC. Some constitutional jurists in Taiwan criticize TCC for its arbitrary interpretation and/or application of its access/jurisdiction rules. The flip side of this criticism, though, is that the legal/doctrinal theory of TCC procedure has limited force in predicting whether or not TCC would decide on a given case.

One way for TCC to dismiss a petition it doesn't want to hear is through narrow and strict interpretation of the pertinent access rule. Conversely, TCC can read the access rule expansively so as to catch a petition it hates to miss. There are some anecdotal evidences that TCC is experienced with both of these lawyering methods, though it appears that TCC uses the former more often than the latter.

TCC is required by CIPA to state the reason why it dismissed a petition as inadmissible, and TCC often applies a standardized statement that the petition is inadmissible because "the petitioner failed to present a cogent case for the alleged unconstitutionality of the law at issue." Developed by TCC without explicit authorization from CIPA, this dismissal formula enables TCC to winnow out not only the numerous frivolous petitions on its docket, but also the various petitions raising such hot-button issues as malapportionment, gay marriage and death penalty that TCC wants to avoid—at least for the time being. TCC's resolution to dismiss a petition, after all, is unreviewable.

2.3. Agenda Setting via Decision Timing?

Making a decision takes time, and regardless of whether a Judicial Yuan Interpretation was intended to come out at a certain point of time, the time spent in processing a case through (i) filing, (ii) screening, (iii) admission and (iv) deliberation (including voting and opinion writing) invariably adds to the time lag between when an issue surfaces and when TCC rules on it. In view of the significant variation in the time cost of TCC decision-making, Su (forthcoming 2014) argues that for TCC, decision timing serves as a distinct, case-by-case mechanism that works alongside case selection in setting the Court's agenda.

According to the CIPA Enforcement Rules (司法院大法官審理案件法施行細則), once a petition is submitted to TCC, it will first be assigned to a three-Justice panel for screening (preliminary review). Then the panel (actually, the designated Justice) will report back to TCC its recommendations as to how the Court should dispose of the case. Unless the Court requests otherwise, the screening panel can write its report at deliberate speed. With the screening report on file, a case is pending before the Court, which will deliberate and vote on the case in its regularly-held *en banc* review sessions. And unless the Justices rule otherwise, the pending cases will be decided on by the order of when the petitions and the screening reports are filed. In the review sessions, the Court may concentrate on one case at a time, and deliberate as long as it takes to reach a decision. Except for a list of pending cases before the

review sessions published on TCC's website, however, outsiders know very little about the progress of a case before it is closed. It is also arguable that TCC's reluctance to hold oral arguments may have something to do with the time pressure imposed by the CIPA requirement that, within one month after the oral argument, TCC should announce the scheduled date of its decision on the case being argued.

While anticipating the occasional need for speedy decision-making, the respective contents of CIPA and its enforcement rules seem to suggest that the default rule for TCC's decision timing is first come, first serve. This inference is not straightforward, however, because CIPA and its enforcement rules say nothing about the order of a screening panel's agenda. In any event, the fact that petitions have very different lifespan cast into deep doubt the extent to which TCC actually times its decisions on a first-come, first-serve basis.

3. Data and Methodology

We analyze the TCC database at IIAS to explore how TCC approaches its decision timing. The dependent variable of our empirical analyses is the number of days it took for the making of a Judicial Yuan Interpretation found in our database. We hypothesize that TCC would engage in strategic decision timing, and a non-strategic approach is thereby developed as our null hypothesis. Two corresponding sets of independent variables are identified.

In a sense, the time until a petition is interpreted is comparable to the time until a cancer patient dies. In both instances, our outcome of interest is the time to the occurrence of an event regardless of the nature of the event. We thus apply Survival Analysis, a class of statistical techniques dealing with analysis of time, or lifetime data. To compare the "survival" experiences between two or more groups of an explanatory variable, we first report descriptive statistics on survival time separately for each group and display the corresponding graphs of the widely-used Kaplan-Meier Survival Probability Estimates, which are the nonparametric estimates of survivor probability as a function of time, say $S(t)$. We then perform the log-rank tests, which are the formal tests to examine the equality of survivor functions across groups. We further examine the relationship between the docket period and the two corresponding sets of independent variables (as identified respectively by the strategic and the non-strategic theories of TCC decision timing) by fitting lognormal regression in the

accelerated failure time metric.

3.1. The TCC Database: 1994-2013

    The database we use is developed by the research team at the IIAS and is expected to be released online in January 2015. The TCC database currently covers all of the merit decisions TCC made during 1994 and 2013—i.e. Judicial Yuan Interpretations from No. 333 to No. 713. These 381 cases came from 605 petitions, some of which were consolidated by the Court as they raised the same issues. For the purpose of this research, we disaggregate the 381 cases on the basis of their respective petitions and count as our dependent variable the number of days it took for each admitted petition to receive its merit decision from the Court. The TCC had undergone several composition changes during this period, and with the exceptions of the Interpretations made by the 5th and the 6th Terms of the TCC, we treat two Interpretations as made by two separate courts if the composition of the Court differed. Table 3 reports the coverage of the TCC Database in terms of the different terms/versions of the Court involved and the specific Judicial Yuan Interpretations they separately made.

Table 3: The Coverage of the TCC Database: 1994-2013

| Courts | Periods | Composition Change | | Number of Justices | J.Y. Interp. Nos. |
		Justices Left	Justices Appointed		
5th Term	1994/1-1994/8		15	15	333-363
6th Term	1994/9-2003/9		*	14~16	364-566
7.court	2003/10-2007/9		15	15	567-633
8.court	2007/10-2008/09	8	4	11	634-646
9.court	2008/10	1	0	10	647-650
10.court	2008/11-2010/10	0	5	15	651-681
11.court	2010/10-2011/09	2	2	15	682-690
12.court	2011/10-2013/12	4	4	15	691-713

    For each and every Judicial Yuan Interpretation made during 1994-2013, the

TCC Database provides 47 pieces of coded information in 5 major categories: (i) meta information about the case and the petitioner(s), (ii) meta information about the participating Justices and their written opinions, (iii) information about the procedural matters, (iv) textual analyses of the petition(s), and (v) textual analyses of the Holding and Reasoning. The original TCC Database provides us with the basic information about all the variables that may affect the TCC decision timing under our hypothesis and null hypothesis except for the political salience of a given case. We amend the TCC Database with a Political Salience Index (PSI), the design of which is explained in the following section 3.2. (iii).

3.2. Hypothesis: Strategic Decision Timing

By strategic decision timing, we mean that TCC would prioritize the cases in its plenary docket—i.e., the cases the Court intends to decide on the merit—so that "important" cases will be processed as priorities and are more likely to be decided by TCC sooner rather than later. Under the strategic approach to decision timing, we suspect that the sequence of when the petitions were filed does not serve as a strong predictor of how soon the Court will decide on them and render its substantive judgments. In other words, we reject the notion that first-come, first-serve is the default rule for TCC's merit decision timing. Instead, we hypothesize that, as a strategic agenda-setter, TCC would follow a "priority rule" in arranging its plenary docket. By definition, all cases would not be treated indiscriminately under a priority rule, but cases with similar priorities would still be treated similarly. We thus expect to find some patterns of strategic decision timing in the TCC Database. Specifically, we expect that cases qualified as priority cases under certain criteria would have shorter docket periods than non-priority cases in TCC's plenary docket.

Using data available to us, we develop a strategic model of TCC decision timing with four independent variables: (i) types of petitioners, (ii) difference in decision rules, (iii) political salience, and (iv) word counts. The model proposes that TCC would use the first three variables as criteria for deciding whether to prioritize a given case; the presence of either of these three indicators of case importance in a given case would make it more likely that TCC would decide on the merit of the case sooner than later.

We suspect that TCC would engage in forward-looking, outcome-oriented considerations during the case selection phase, and such considerations may have contributed to its relatively high percentage of decisions finding unconstitutionality.

After all, the Justices might want to justify as cost-effective the time and energy they have to spend on a given decision, and whether its likely outcome would change the status quo is surely a factor to be considered. However, we cannot rationalize why and how the anticipated outcome of a given case would affect its decision timing. We therefore do not include the case outcome variable in our strategic model.

(i) *Types of petitioners*: As a matter in general, it is arguable that TCC would consider cases brought by governmental petitioners (including judges, legislators, and governments/agencies) more important than cases brought by such non-governmental petitioners as individuals or corporations in the private sector. Under the existing access/jurisdiction rules, the constitutional and/or statutory issues raised by these two types of petitioners often have qualitative differences. And the former can be said to be more important than the latter either in terms of urgency, of intensity of controversy, or of the likely consequences and implications of TCC decisions. Generally speaking, governmental petitions can also be initiated much quicker than non-governmental petitions, which usually have to go through the litigation process first. A Constitutional Court may be interested in making a timely response to the nation's political agenda, as doing so may enhance its reputation and political authority, and further cement its leading and unique role in the judiciary.

(ii) *Difference in decision rules*: CIPA divides the various types of qualified petitions into two categories, with one being subject to 2/3 majority rule and the other simple majority rule. This difference in decision rules arguably reflects CIPA's assessment of the relative importance of these two groups of cases and its basic judgment that the more important the cases are, the more scrupulous the TCC decision making should be. The decisions requiring 2/3 judicial votes can be said to be more important than those requiring simple majority in the sense that the former may have stronger ramifications on the Court's legitimacy than the latter. The strategic approach suggests that TCC may use the applicable decision rule as a cue for case importance, and prioritize the decision making of those requiring 2/3 judicial votes—even though the decision making of which tends to be more time-consuming and more prone to gridlock.

(iii) *Political Salience Index (PSI)*: The cases in TCC's plenary docket differ in their political salience: Some are high-profile cases that attracted much public attention before and/or after the Court spoke, while others are low-profile cases flying under the radar of public opinion. To evaluate this difference, we asked three research fellows at the IIAS to grade independently the political salience of each Judicial Yuan

Interpretation included in the TCC Database. Each grader would give one score to a given Interpretation provided that, to the grader's knowledge, the underlying case had ever received major newspaper coverage when the petition was filed or after the Interpretation was announced. We then aggregated the three graders' independent judgments into a Political Salience Index (PSI); each coded Interpretation thereby would acquire a PSI score ranging from 0 to 3. An Interpretation with a score of PSI=3 is thus considered one of the most salient TCC decisions, whereas a PSI=0 Interpretation is viewed as one of the least salient TCC cases. We contend that a strategic-minded TCC would prioritize cases based on their political salience, so that the higher PSI score an Interpretation has, the shorter its docket period would be.

3.3. Null Hypothesis: Non-Strategic Decision Timing

For TCC to time its decisions in a non-strategic manner is to take the first-come, first-serve rule as the organizing principle of the Court's agenda in general. The non-strategic approach does not entail an equalized docket period for each of TCC's merit decisions. The only factor that may lead to differences in decision timing under the non-strategic approach, however, would be decision easiness/difficulty: All else being equal, a hard case is expected to take more time for the Court to decide on than an easy case. When the judicial deliberation of a hard case is stalled due to gridlock, the non-strategic approach does not prevent TCC from moving up some easy cases down the line and having them be judged sooner as a way to avoid or relieve docket congestion. We therefore predict that easy cases tend to be judged sooner and hard cases tend to be judged later if TCC adopts the non-strategic approach to its decision timing.

(i) *Difference in decision rules*: The non-strategic approach would also factor in the difference in applicable decision rules, but to the contrary of the strategic approach, it would predict that cases requiring 2/3 judicial votes have longer docket periods and be judged later than cases subject to simple majority rule. It is more difficult and thereby more time-consuming, after all, for Justices to form and maintain a super-majority agreement/coalition than a simple-majority one.

(ii) *Word counts*: We assume that, as a general matter, the final judicial opinions on a hard case would be more voluminous than those on an easy case. Accordingly, we count the words in a Judicial Yuan Interpretation—including all of its *per curiam* and individual (concurring and/or dissenting) opinions—and use the total word counts as a proxy for decision difficulty. Our non-strategic model predicts that, the greater

word counts an Interpretation has, the longer docket period it would have experienced.

3.4. The Use of Kaplan-Meier Survival Probability Estimates

Because the time to every Judicial Yuan Interpretation is completely observed, standard univariate summary statistics and methods such as mean, standard deviation, and linear regression procedures could be used. However, they might be inadequate since time to event data are restricted to be positive numbers and has a right-skewed distribution. In addition, survival analysis is a field of its own. One prominent example is the mean residual life—i.e., the expected remaining lifetime at a certain time point. We still report standard summary statistics such mean, median, the first and the third quartiles and standard deviations. In addition, trimmed 5% mean and trimmed 5% standard deviation are provided because they are less sensitive to outliers.

(i) *Kaplan-Meier (KM) Survival Probability Estimates and Curves*: The Kaplan-Meier estimates and its curves are widely-used statistics describing how the survival probabilities changes over time. The "survival" here means a petition that is not yet interpreted. The KM estimator, also known as the product-limit estimator, is used to measure the probability of survival past a certain time point, say, $t_{(j)}$. Let T be a random variable denoting the time of Interpretation, the estimated pending probability $\widehat{S}(t_{(j)})$, following the notation and formula of Kleinbaum and Klein (2005) , is defined as

$$\widehat{S}(t_{(j)}) = \prod_{i=1}^{j} \widehat{P}\left(T > t_{(i)} \mid T \geq t_{(i)}\right) = \widehat{S}(t_{(j-1)}) \times \prod_{i=1}^{j-1} \widehat{P}\left(T > t_{(i)} \mid T \geq t_{(i)}\right)$$

with $\widehat{S}(t_{(0)}) = 1$ always, because the pending probability is 1 upon submitting a petition. Graphing $\widehat{S}(t_{(j)})$ against ordered t produces Kaplan–Meier curves. The KM curves, which are able to compare the groups at different times, make up the insufficiency that standard descriptive statistics merely provide comparisons over time and give more insight to the behaviors.

Because our data are completely observed, the Kaplan–Meier estimates reduce to one minus the empirical distribution function. If we were able to obtain all of the petitions filed with TCC, we could use the KM approach to obtain a better estimate.

(ii) *Log-Rank Tests*: It is popular to evaluate whether KM curves for two or more

groups are statistically equivalent via log-rank tests. The log-rank test is also nonparametric and the test works by comparing the expected versus the observed number of Interpretations made/pending cases at time t in a g by 2 contingency table, where g is the number of groups. The log-rank test then combines all the g by 2 contingency tables to obtain an overall summary across all time points of the Interpretations (an Interpretation is made on $t_{(j)}$, the jth day). Under the null hypothesis, the log-rank test statistic is approximately chi-square distributed with g-1 degrees of freedom. If the null hypothesis is true, the difference between expected and observed number of days should be small and vice versa

3.5. Regression Analyses

Regression methods allow us to further examine the relationship between the survival time and the explanatory variables. There are two frameworks of modelling process, one is known as the proportional hazards (PH) and the other is the accelerated failure time (AFT). After trying these two types of models, we use the AFT model here mainly because the PH model works best when the predictors satisfy the proportional hazard assumption, which can be reflected by the shapes of KM curves if the curves are basically the same and the spaces between the curves remain a fixed length across. However, it seems that this assumption is not held as shown in Section 4.1.

The AFT model is a parametric survival model in which the distribution of the time to event is specified in terms of unknown parameters. The word "accelerated" is used because there is an acceleration parameter τ_j in describing the model and we need to specify the distribution for this parameter instead of assuming a distribution directly for time. We tried several common distributions such as exponential, Weibull, gamma, and log-normal. The model diagnostics suggest log-normal distribution is relatively appropriate for our data. Here, to lessen the effects of extreme values of time, we make a 95% winsorization of the dependent variables. 95% winsorization means data below the 2.5^{th} percentile are set to be the 2.5^{th} percentile, and data above the 97.5^{th} percentile are set to be the 97.5^{th} percentile.

Following the notation of Cleves, Gould, and Gutierrez (2002), in log-normal regression, we mean τ_j belongs to log-normal distribution with parameters (β_0, σ^2) and the cumulative distribution function $F(\tau)$ is $\Phi((\ln\tau_j - \beta_0)/\sigma)$, where Φ is the cumulative distribution function of the standard normal distribution. Thus,

$$\ln(t_j) = \beta_0 + \beta_1 x_{j1} + \beta_2 x_{j2} + \cdots \beta_k x_{jk} + u_j$$

where $u_j \sim N(0, \sigma^2)$. In other words, for the log-normal ATF model, log transforming the time converts the problem into familiar multiple linear regression.

4. Results

4.1. Exploring Time-to-Event Data

We first report and analyze the basic descriptive statistics with respect to the various variables of TCC decision timing. Median survival time is a commonly-used number reported in survival analysis. It is the time when half the cases in TCC's plenary docket are expected to be closed with merit decisions. It means that the chance of being interpreted within or beyond that time is 50%. Mean time to failure (MTTF) means the average lifespan of a petition.

4.1.1. Types of petitioners and TCC decision timing

Table 4: Descriptive Statistics by Types of Petitioners

	N	Q1	Median	Mean	Q3	Std. Dev.	Trimmed 5% Mean	Trimmed 5% Std. Dev.
People	485	407.5	631.5	695.7	932.2	417.07	671.97	340.73
Judges	47	162	338	471.6	776	420.64	436.98	310.78
Legis.	42	148	289.5	462.5	778.8	400.47	430.45	314.45
Gov.	31	190.2	420.5	584.7	850.8	485.09	562.83	403.81

The log-rank test statistic is 19.17 with a near zero *p*-value, which indicates there are strongly significant differences among the four types of petitioners. A plot of the KM survival probabilities corresponding to each ordered days of Interpretation is shown for four types of petitioners. We found that the KM curve for PEOPLE is consistently higher than the KM curve for other groups when the number of days of Interpretation is less than 1000. This figure indicates that people's petitions has longer pending prognosis than other groups. Moreover, as the number of days increases, the

four curves appear to get closer, suggesting that there is no difference among the four types of petitioners if one petition stays in Judicial Yuan over 1400 days.

Figure 2: Kaplan–Meier Curves by Types of Petitioners
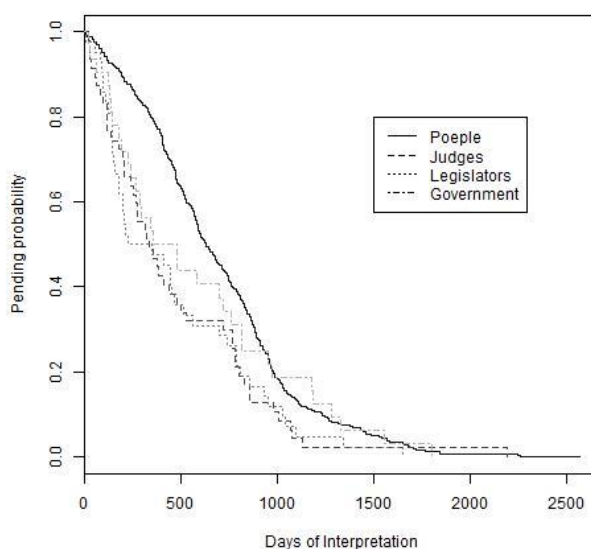
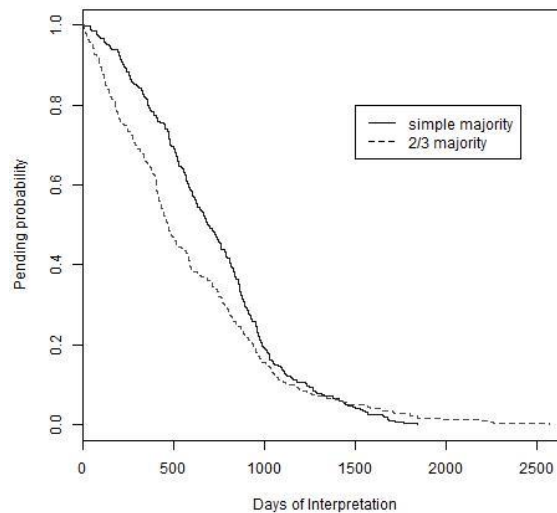4.1.2. Decision rules and TCC decision timing

Table 5: Descriptive Statistics by Types of Decision Rules

	N	Q1	Median	Mean	Q3	Std. Dev.	Trimmed 5% Mean	Trimmed 5% Std. Dev.
2/3 majority	294	226	470.5	591.42	856	461.59	552.33	349.1
simple majority	311	452	694	717.51	954	382.24	702.62	308.24

The log-rank test statistic is 5.64 with *p*-value=0.0176, which means there is a significant difference between the two decision rules regarding the pending rate.

There is a crossing point around 1400 days.

Figure 3: Kaplan–Meier Curves by Types of Decision Rules

4.1.3. Political salience index and TCC decision timing

Table 6: Descriptive Statistics by Political Salience Index

PSI	N	Q1	Median	Mean	Q3	Std. Dev.	Trimmed 5% Mean	Trimmed 5% Std. Dev.
0	301	416	717	716	953	383.25	697.34	337.61
1	117	326	526	593.6	814	385.89	569.18	303.39
2	54	383	693.5	797.3	1154	487.74	785.78	434.38
3	133	164	409	518.7	776	456.75	474	327.94

The log-rank test statistic is 6.54 and *p*-value is about 0.011, which means days of Interpretations significantly differ among PSI. From the KM curves below, it's unsurprising to see the pending rate is the smallest if the case is "important". However, the order of the KM curves is not consistent with the order of political salience.

Figure 4: Kaplan–Meier Curves by Political Salience Index
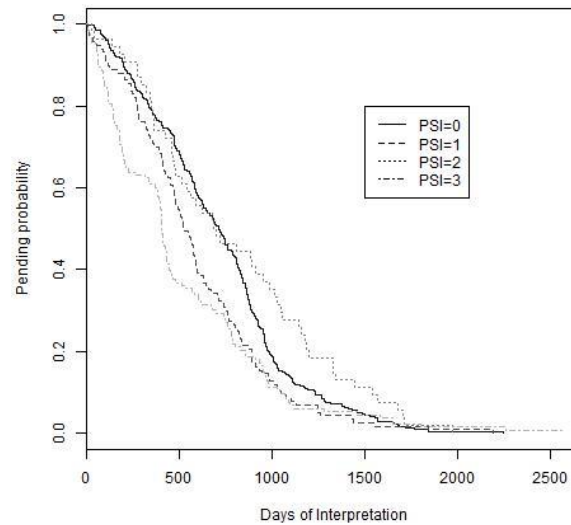
4.1.4. Word counts and TCC decision timing

Table 7: Descriptive Statistics by Word Counts

	N	Min	Q1	Median	Mean	Q3	Max	Std. Dev.	Trimmed 5% Mean	Trimmed 5% Std. Dev.
	605	320	1833	6130	19380	32360	143500	25002.45	16533.31	23375.73
log	605	5.77	7.51	8.72	8.90	10.38	11.87	1.51	8.90	1.47

Because number of words is a continuous covariate, the KM estimates are not available. To explore the effect of word counts, we test the hypothesis H_0: $\beta=0$, where β denotes the coefficient using Cox regression model. The score test arising from Cox model is equivalent to a log-rank test (the difference between word counts for a petition j and the average of word counts for all petitions still pending when an Interpretation for petition j is made). The test statistics for word counts and word counts in log are 0.62 and 0.43 with p-values 0.43 and 0.51, respectively, which means the number of words is insignificant when there is a single explanatory variable, that is, word counts, in the model.

4.1.5. Case outcomes and TCC decision timing

Table 8: Descriptive Statistics by Case Outcomes

	N	Q1	Median	Mean	Q3	Std. Dev.	Trimmed 5% Mean	Trimmed 5% Std. Dev.
Unconstitutional	266	277.8	594	634.9	893.8	444.07	606.24	349.98
Constitutional	293	409	643	702.3	938	411.29	677.8	318.59
Non-constitutional	46	200.8	430	485.8	808.5	376.92	465.86	323.71

The log-rank test statistic is 0.33 with *p*-value= 0.568, which finds no significant difference among case outcomes and the KM curves confirm this similarity between constitutional and unconstitutional outcomes.

Figure 5: Kaplan–Meier Curves by Case Outcomes
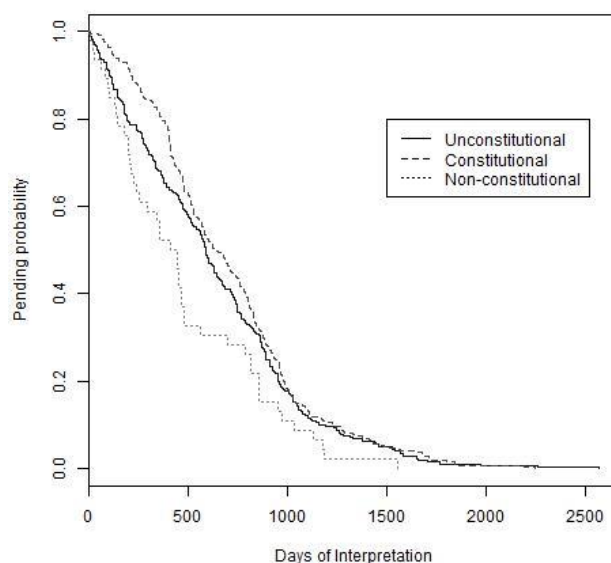
4.2. Regression Models

The fitted regression equations for both non-strategic approach and strategic approach, after controlling the loading every year, the composition of TCC (using 5th Term of Justices as the baseline), and the petition years (using 1989 as the baseline), are shown below. The cluster-robust standard errors are used to take into consideration the intra-Interpretation correlations among multiple petitions. For each

approach, we first fit the model using full-length data (fits (1) & (2)) to obtain an overall view on how the two sets of independent variables affect the time of Interpretation. Then, we split the data into 2 non-overlapping sets by the first quartile (used in fit (3) to fit (6)) and by the median (used in fit (7) to fit (10)), respectively, and construct the regression equations based on each split subset. The comparisons of how the two approaches behave in different lengths of time are thus made.

Table 8: Regression Models of TCC Decision Timing

fits	(1) ns_full	(2) s_full	(3) ns≤Q1	(4) s≤Q1	(5) ns>Q1	(6) s>Q1	(7) ns≤median	(8) s≤median	(9) ns>median	(10) s>median
=1 if JUDGE		-0.233*		0.084		-0.022		-0.068		-0.041
		(0.117)		(0.108)		(0.098)		(0.106)		(0.049)
=1 if LEGIS.		-0.302		-0.023		0.067		-0.376*		-0.040
		(0.183)		(0.158)		(0.092)		(0.160)		(0.071)
=1 if GOV.		-0.105		-0.118		0.105		-0.349*		0.064
		(0.168)		(0.168)		(0.087)		(0.158)		(0.059)
PSI		-0.069+		-0.112+		-0.046+		-0.049		0.001
		(0.038)		(0.060)		(0.028)		(0.050)		(0.012)
=1 if 2/3 majority	-0.165+	-0.055	-0.251*	-0.172+	-0.063	-0.028	-0.094	-0.003	0.037	0.039
	(0.087)	(0.082)	(0.099)	(0.103)	(0.052)	(0.044)	(0.106)	(0.098)	(0.029)	(0.030)
word counts in log	-0.138**	-0.094*	0.022	0.086+	0.023	0.029	-0.110*	-0.058	0.002	0.002
	(0.050)	(0.046)	(0.040)	(0.049)	(0.020)	(0.021)	(0.048)	(0.050)	(0.015)	(0.015)
pending (log)	-0.623	-0.497	0.179	-0.053	-0.330	-0.284	0.217	0.210	-0.177	-0.175
	(0.471)	(0.488)	(0.480)	(0.499)	(0.249)	(0.240)	(0.614)	(0.590)	(0.168)	(0.172)
Constant	11.161***	10.250***	4.231+	5.022*	8.297***	8.117***	6.056*	5.728*	7.694***	7.686***
	(2.441)	(2.561)	(2.305)	(2.398)	(1.267)	(1.246)	(2.967)	(2.879)	(0.841)	(0.866)
Observations	605	605	152	152	453	453	306	306	299	299
R-squared	0.451	0.475	0.270	0.299	0.491	0.504	0.352	0.392	0.492	0.496
# of clusters	381	381	91	91	314	314	180	180	233	233
r2_a	0.419	0.440	0.0962	0.103	0.452	0.461	0.279	0.314	0.433	0.429

Robust standard errors in parentheses

***$p<0.001$, **$p<0.01$, *$p<0.05$, +$p<0.1$

The ten fits are shown in Table 8. The coefficient with the log-transformed dependent variable as reported in our regression analyses can be understood as the respective mean percent change of the dependent variable resulting from one unit change in a given independent variable while all the other predictors are held constant. We also report changes in composition and petition years by graphing respectively their corresponding coefficients of fit (2) in Figure 6 (other fits show similar patterns).

From the previous log-rank tests, we see the overall differences in time among types of petitioners are significant. Now, we are able to figure out where the differences come from in the regression results. Since PEOPLE are used as the baseline, the coefficient estimate for PEOPLE is omitted, and the coefficient for JUDGE is the mean percent change for JUDGE minus the mean percent change for the omitted group, i.e., PEOPLE. Most of the time, the coefficients of JUDGE, LEGISLATOR and GOVERNMENT are negative (although some are statistically insignificant), no matter what time span is, implying petitions from people usually take longer time. Take fit (2) for example, the time of Interpretation is shortened by 23.3% on average for petitions from judges, compared with people's petitions, with all the other variables held constant in the model. Similarly, fit (8) shows that the petitions by Legislators and governments would be 37.6% and 34.9% faster than petitions by people respectively, when the days of Interpretation are less than or equal to 594 days.

The effect of political salience is significant when the fit is to all data (fit (2)) and when the days of Interpretation are less than or equal to the first quartile, that is, 336 days (fit (4)). The coefficient in fit (6) is also significant. For those Interpretations made in no more than 336 days, an increase in PSI score would results in an 11.2% decrease in the average days of Interpretation.

For the decision rule variable, the SIMPLE MAJORITY RULE is used as the baseline. The coefficient means the percentage change in a petition under 2/3 MAJORITY RULE minus the percentage change of a petition under simple majority rule on average, with all the other variables being fixed. The coefficients are negative and significant in our non-strategic approach setting when all data are used (fit (1)) and when the days of Interpretation are less than 336 days (fit (3)), indicating 2/3 MAJORITY cases are faster than SIMPLE MAJORITY cases by 16.5% and 25.1%, respectively. In our strategic approach, the coefficient is significant only when the days of Interpretation are less than or equal to 336 days (fit (4)). In short, a case under 2/3 majority rule on average takes less time than a case under simple majority rule in both non-strategic and strategic approaches.

The predictor word counts are put on a log scale, so the coefficient measures the expected percent change in the mean days of Interpretation when the word counts increase by a fixed percentage. As we see in Table 8, the coefficients are negative when all data are used (fits (1) & (2), both coefficients are significant) and when the days of Interpretation are no more than the first quartile or median, in both non-strategic and strategic models except fit (3) (with significant coefficients in fits (4) & (7)), which means the days of Interpretation tend to decrease as the decision difficulty increases.

Though the composition of TCC and the petition years are used as control variables, we found very strong linear trends between days of Interpretation and both variables. The relationship between the composition of TCC and days of Interpretation is positive, which means the days of Interpretation become longer with the composition changes of TCC. The coefficients of petition years, on the contrary, are negative and are decreasing with time.

Figure 6: Regression Coefficients of Petition Years and Compositions
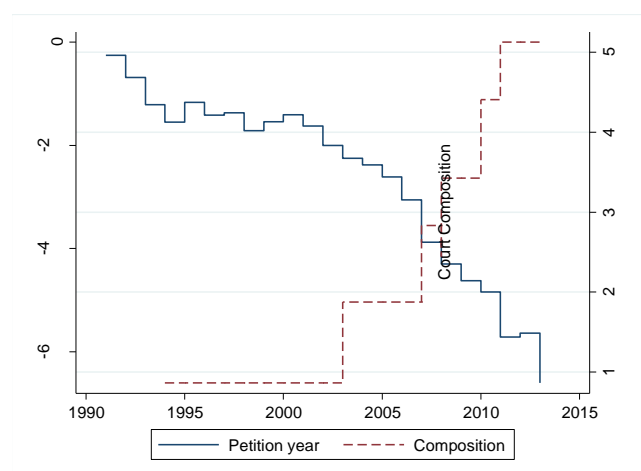
In summary, though we are not able to figure out a specific length of time, say less than or equal to the first quartile or the median, to distinguish which strategy TCC would adopt in which period, we still found some influential factors on days of Interpretations, including types of petitioners, the political salience of a case, different decision rules and number of words. In sum, the TCC tend to judge cases petitioned by people later than cases brought by governmental petitioners. The higher the PSI score a case has, the sooner it is decided by the TCC. Interpretations made under the 2/3 majority rule usually come out sooner than those made under the simple majority

rule.

5. Discussion

Our empirical analyses find that, consistent with our hypothesis, TCC does engage in strategic decision timing, and it does so more often than not. In managing its plenary docket, TCC generally prioritizes governmental petitions over non-governmental petitions, and high-profile cases over low-profile cases. The statutory assumption that TCC usually organizes its plenary docket on a first-come, first-serve basis is further refuted by the regression result suggesting that, all else being equal, the later a petition is filed, the sooner it would be judged by TCC. The primacy of the priority rule over the first-come, first-serve rule may well explain why in TCC, hard cases tend to be judged sooner rather than later—even if it does take more time for the Court to deliberate and decide on the former. We suspect that strategic decision timing is not unique to TCC; every Constitutional Court that has a rolling docket may just have to accept the fact that all cases are not created equal, and prioritize its plenary docket on the basis of case importance—if it wants to do the right thing at the right time (Fontana 2011).

The adjusted R^2s of our strategic models are fairly modest, indeed. We can think of a few possibilities that may complicate TCC's strategic decision timing. (i) Our strategic models only account for TCC's prioritizing strategy. But instead of prioritizing, sometimes the Court may deliberately prolong the docket period of an important case out of none other than strategic considerations. For instance, the Court might prefer that an important issue be resolved in the political process, and the longer the issue is left undecided, the more likely that it will be mooted by changes in law. (ii) Sometimes the judicial deliberation of a priority case may simply result in gridlock, which in turn would take the case off the Court's decision making agenda if the Justices could not reach a compromise in time. (iii) A significant proportion of the docket period is determined by the pace of the screening process, and it is possible that some Justices pay less attention to timing concerns than others in doing his/her assignments.

Our regression analyses reveal that TCC's substantive decision making is getting longer, or slower, in a statistically significant manner, as the Court's composition changes over time. It remains to be studied whether and to what extent this trend is

attributable to the changes in the Court's composition, or has more to do with the changes in the nature of the petitions filed over time.

Studying TCC's decision timing may also foster the study of the likely causes to gridlock in TCC's decision making, as we may identify the decisions suspected of having incurred gridlock by examining those unusually procrastinated decisions. Further empirical analyses of the TCC Database may help us better understand why the application of the 2/3 majority rule encountered gridlock in some cases but not in others.

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