# Internal Lobbying Model of Supreme Court Justices: <br> Term Limits and Trade of Political Favors between Justices 

Armando Perez-Gea*<br>Yale University<br>armando.perez-gea@yale.edu

March 13, 2018


#### Abstract

Life tenure and term limits (particularly with reelections) produce different incentives which are often classified as falling into one of two mechanisms: the (external) accountability of the public officials to the voters or appointing officials and the selection of the types of nominees made by the voters or appointing officials. This paper presents a third mechanism: lobbying, where one public official offers help to another public official in exchange for a future favor. The focus of the paper is (internal) lobbying between public officials who are members of the same institution; namely, justices of the supreme court. The accountability and selection mechanisms emphasize the effects that the executive or legislative branches can have over the judiciary, an influence which threatens judicial independence. The lobbying mechanism shows that there can also be undue influence of retired justices over sitting justices and of newly appointed justices over justices nearing retirement. This paper analyzes the incentives to lobby that justices face in a system with life tenure and a system with term limits. The results are that justices with life tenure are free to choose to lobby or not, while justices with term limits partake in lobbying, where justices nearing the end of their term are subservient to both newly appointed justices and retired justices. The term limit result changes when all the justices join the court late in life, hence having no post-retirement career concerns. In this case, the justices will not partake in lobbying.


[^0]
## I Introduction

Commitment to an independent judiciary is a central concern for democracies and international organizations that desire to be democratic. Yet there is little concern about the independence of a member of the judiciary from internal forces within the judiciary, like retired justices influencing the decisions made by sitting justices. The mechanism that would bring about this internal lobbying is worth analyzing. ${ }^{2}$ While theoretically there could be many ways in which a retired justice could exert influence over sitting justices (for example, respect for the legacy or experience of a retired justice, gratitude if they were somehow nominated by the now retired justice, etc.), this project looks at a simple "tit-fortat" mechanism where one justice offers help to another justice in exchange for a future favor. The asking for the favor to be paid back would be the most apparent part of the lobbying.

This "tit-for-tat" mechanism creates a patronage relation built upon internal lobbying. Since this lobbying-based patronage relation is problematic, this paper presents an analysis that shows which systems are more likely to create and maintain this relation, and which systems are less likely to do so. The main conclusions of this paper are the following: 1) the system that is least likely to exhibit internal lobbying is a court with term limits where all the justices appointed are late in their career and with short to non-existent post-retirement career desires. In the unique symmetric equilibrium of this scenario there is no lobbying between justices. 2) The system with life tenure can lead to a case where there is no lobbying between the justices. Unfortunately, this is not the only equilibrium, since any feasible allocation is also an equilibrium. 3) In the case of term limits where the justices are predominantly young or middle-aged (and hence have post-retirement career desires), lobbying amongst the justices is the unique symmetric equilibrium. In particular, we should see Justices who are

[^1]nearing retirement more likely to agree with positions of less senior members of the court. Indeed, the junior members of the Court should exercise their preferences more often than the senior members.

The mechanism that leads to justices lobbying each other, particularly the lobbying of sitting justice by retired justices, is easiest to observe when comparing life tenure to term limits. This does not mean that the only difference or even the main difference between life tenure and term limits is this lobbying mechanism. A court with term limits would probably incentivize the appointing officers (in the US case the President and the Senate) to select different types of people to serve as justices than in a court with life tenure. There can also be different external (to the Supreme Court) accountability mechanisms that form the incentives faced by the justices in the two different systems. As such, this project analyzes the internal lobbying mechanism and uses life tenure and term limits as two different systems to shed light on this internal lobbying mechanism.

## II Related Literatures

There are two broad literatures that this project will interact with. The first literature is a substantial (both in size and in depth) constellation of studies in American Politics that analyze elections. While one of the branches of the literature analyzes the state judiciary system, such as Hanssen (2004) and Gordon (2007); the bulk is centered on Congress, the Presidency, and local legislatures and executives. The lobbying model adds to the debate a new mechanism where office holders create networks of debtors and creditors where the currency is political favors and the creditors ask for the favors to be paid back when they leave office. In contradistinction with the majority of the literature that is concerned with the external actors' influence over the courts (or other agencies), this lobbying model is an internal mechanism that is active regardless of the relation between the court and other government officials or agencies.

The second literature focuses on the American Supreme Court and the proposal of implementing term limits to the justices' tenure. The literature has a heavily normative character. It starts by presenting different positive mechanisms, then gives a normative evaluation of the positive mechanisms, and finally presents a policy proposal. The lobbying model presents a mechanism that the literature hasn't yet normatively valued; a mechanism that is very evident in the change from life tenure to term limits.

## II.i Legislative and Executive Term Limits

While this lobbying model is formulated in light of the judiciary, in particular a Supreme Court, it is primarily in conversation with the literature on elections and term limits on legislative and executive officers. This literature is more interested in the positive theoretical foundations and the empirical testing of those foundations rather than on the normative evaluation of those theories, which is the focus of the Supreme Court term limits literature. Two watershed works are Maskin and Tirole (2004), which gave a theoretical comparison of reelection versus appointment (and which is, structurally, the inspiration of this lobbying model), and Fearon (1999) which compares two motivations that voters have during an election, rewarding past performance (accountability) or selecting good politicians (selection/competence).

The literature on elections, with its dual focus on accountability and selection/competence, is formidable in size and depth. A good overarching summary can be found in Alt, Bueno de Mesquita and Rose (2011):

Elections play two potential roles in representative democracy. First, elections may mitigate moral hazard by creating accountability; that is, politicians may take costly actions on behalf of voters because they know that they will only be reelected if their performance exceeds some standard (e.g., Barro 1973; Ferejohn 1986). Second, elections may mitigate adverse selection by allowing voters to select competent types
who perform better, in expectation, than an unknown challenger. Moreover, in the absence of term limits, elections allow voters to retain incumbents whose competence has increased through experience (Padro i Miquel and Snyder 2006). Thus, over time elections may help voters weed out bad types and retain good types (e.g., Ashworth 2005; Ashworth and Bueno de Mesquita 2008; Fearon 1999; Gordon, Huber, and Landa 2007; Gowrisankaran, Mitchell, and Moro 2008; Zaller 1998).

The internal lobbying model brings a new voice to the debate by arguing for the existence of a yet to be analyzed positive mechanism: when an office holder helps another fellow office holder so that the fellow office holder can "pay back" the favor in the future. This mechanism can be present in any institution where there are stacking terms, so that in a given time, some office holders will remain in office while others leave office. Just like in the analyzed case of the Supreme Court where there are several justices in the court who leave at different times, each chamber of Congress can be analyzed in a similar fashion. Since some local legislatures have term limits (Cummins 2013), these institutions might be more easily analyzed using this lobbying model. The Senate's staggered terms could make an interesting case study to analyze if there is any lobbying between members of different classes, since even if a Senator were to lose her seat, the Senators of the other 2 classes are secure in their seats for 2 or 4 years.

## II.ii Supreme Court Term Limits Literature

The internal lobbying model adds a new element to the debate that has been trying to adjudicate the advantages and disadvantages of the United States' Supreme Court Justices' life tenure vis-à-vis several proposed term limit mechanisms. The addition to the conversation does not come from the normative valuation of different mechanisms against each other, but rather by bringing to light a descriptive mechanism that is likely present in a court with term limits while likely being absent in a court with life
tenure. Since the literature is mostly focused on the normative analysis of different positive descriptive claims of two different mechanisms, this internal lobbying model introduces a new positive mechanism that can be analyzed normatively by this literature.

After 11 years of having a Supreme Court with the same nine Justices, in 2005 Chief Justice William Rehnquist passed away. This created a literature by legal scholars that is concerned with term limits and life tenure in the United States Supreme Court. At the heart of this debate is Calabresi and Lindgren's "Term limits for the Supreme Court: Life tenure reconsidered" (2005). As the title implies, the authors propose a very specific 18-year term that would allow presidents to have the opportunity to appoint two Justices each term the President serves in office (hence 4 if reelected).

The literature consciously focuses on the appointment of the justices, rather than on the incentives of the justices while in office (like what this lobbying model presents). "The Court should be independent enough to stand up to majority pressure to ignore the Constitution, but not be so far beyond control that nine life-tenured and unelected individuals can impose their will on the nation. In assessing this latter point, whether the nation can control or at least influence the Court, most scholars focus on the Supreme Court appointment process as the best, and perhaps only, opportunity for democratically elected leaders to substantially influence the Court (Baum, 1992; Dahl, 1957; Krehbiel, 2007; Moraski and Shipan, 1999; Rohde and Shepsle, 2007; Snyder and Weingast, 2000)." (Bailey and Yoon 2011). While the choice of justices is extremely important, the incentives that justices have depending on the institution (i.e. election, appointment, term limit, life tenure) also matter tremendously.

It is interesting to point out that the literature realizes that at the end of a term when a reelection is imminent, a sitting Justice will have an incentive to please those who have power over his career. "First, toward the end of their careers, active judges may cater to the wishes of the majority party in Congress to smooth their path toward reconfirmation, which could damage judicial independence. Second, the
prospect of a difficult reappointment might encourage aging judges to remain in active status rather than endure another confirmation battle, which could lead to a greater number of mentally and physically infirm judges carrying a full case." (Stras and Scott 2006). This is the same insight motivating the internal lobbying model of justices' interactions, since justices think about the post-retirement future after their term in office. This concern for the future occurs, even if no reelection will occur in the future.

The internal lobbying model adds an additional positive claim to better adjudicate the normative debate that is the literature's main concern. The positive claim is that in a court with term limits, justices will partake in intergenerational exchanges in the court so that longer serving justices will be subservient to new justices (assuming the justices are not old when appointed). The longer serving justice will do this so that the new justice will help him when he retires and the new justice remains in the court; such that a justice with a term limit is more powerful in her early years in court than in her later years. This added positive claim should be welcomed in the debate, as Burbank (2006) argues: "Indeed, the work of many engaged in the debate is quite relentlessly normative and replete with unsupported causal assertions. For that reason I thought it useful to explore the question whether proponents' assertions and predictions about political phenomena are supported by the theories or empirical evidence produced by those whose business it is to study political phenomena." The political phenomenon being presented here is lobbying amongst justices.

## III: Lobbying Model of Justices' Interactions

There are some basic assumptions that undergird this lobbying model. The first assumption is that the role of power \& prestige in a justice's utility function can be examined without needing to analyze the effect of income in the utility function (in other words, income is separable from power and prestige). This paper is not unique in making this distinction. There is a literature that points out this position.

Stras and Scott (2005), while criticizing this position, summarize it as follows: "Perhaps you view the Supreme Court as a unique body whose members would be unresponsive to financial incentives. The job involves tremendous prestige and power, and no individual would give it up lightly. Indeed, many who accept the nomination are demonstrably less responsive to economic pressures because they have foregone, and continue to forego, lucrative work in private practice."

The second is that Justices are trying to maintain a level of power and prestige in their post retirement career comparable to the level they had while in office. Judges seem to like the prestige and power involved with their office, and hence often prefer to keep it for as long as it is possible. "As Professors Steven Calabresi and James Lindgren have recently explained, the 'social status associated with being a [Supreme Court] Justice' has improved over time, encouraging many Justices to stay on the bench for longer periods of time. Professor Albert Yoon recently conducted a survey of senior judges, in which many explained that being a judge was prestigious, intellectually stimulating, and an important factor in their continued happiness." (Stras 2005).

The utility function of a Justice distinguishes between holding office as a Sitting Justice and post retirement career as a Retired Justice. The Retired Justice wants to maintain a level of prestige and power comparable to what she had as a Sitting Justice. This is a kind of consumption smoothing in which there are two periods over which the consumption is smoothed: time as a Sitting Justice and time as a Retired Justice. While the two time-periods are long, there is nothing to exclude them as proper objects of consumption smoothing.

Consumption smoothing occurs between some levels of time periods, not every level of time period. For example, a person who wants to smooth food consumption between different days does not need to care if the consumption is smooth between hours or minutes. The person might consume a lot of food during certain hours (breakfast, lunch, and dinner) and little food during others (middle of the night
while sleeping). This would mean that while the food consumption is smooth between days, it spikes between hours.

Again, when there is consumption smoothing between weeks, then the smaller time periods (the days or weekdays/weekend) can have spikes in consumption. It should not be surprising to find individuals who consume little entertainment during the weekdays (Monday through Thursday) and then consume a lot during the weekend (Friday to Sunday). This division of the week into two time-periods (weekdays and weekend) seems conventional, but it is less common that in reality each time period lasts a different amount even if they are modeled as equal time periods. The weekend has at most three days, while the weekdays are at least four days long (depending on how you treat the Friday). A way for a model to incorporate this reality is to put weights on the utility function's benefit from each time period. This is a clean alternative to breaking down the week into seven time-periods (days) rather than the proposed two (weekdays/weekend).

The smoothing between the time periods does not need to be one in which an individual person desires to consume the same amount between the time periods. It is possible for the consumption smoothing to be proportional such that an individual time period consumption is weighted as a proportion of another time period. So, it could be possible that an individual would want to smooth entertainment consumption in such a way that distinguishes vacation from work weeks, and the optimal entertainment consumption in a work week is half of a vacation week's entertainment consumption. There is still smoothing, and a change in income or resources would change all the weeks' consumptions, but the proportion will not be 1 to 1 .

These same ways of thinking apply to this analysis of justices. Justices want to smooth their consumption of power and prestige between two time-periods: being a Sitting Justice and being a Retired Justice. Yet, while being a Sitting Justice, a justice can distinguish between the early years of the
term and the later years of the term. Potentially a justice could sacrifice part of her consumption of power and prestige in the early years of the term (or the later years of the term) to assure her a given consumption as a Retired Justice.

The two time-periods that justices smooth between (being a Sitting Justice and being a Retired Justice) are probably not equally long. An empirically rigorous application of this model could measure the expected lengths of the two time-periods. Yet, this paper's objective is not to give a precise measurement of magnitudes, but rather to show the direction or pattern that should be observable. Discovering the magnitude of the direction in a specific case is an interesting project which is beyond the scope of this paper.

Another empirical reality is that a justice probably does not want to have the exact same power and prestige as a Retired Justice that she had as a Sitting Justice. A given justice might want to maintain two thirds of the power and prestige she had as a Sitting Justice, while another would prefer closer to a half, and a third would want to keep just slightly less power as a Retired Justice that she had as a Sitting Justice. This proportional consumption smoothing would alter the magnitude of the patterns that should be observed, but not the actual pattern. Hence for the sake of simplicity, but without losing generality, we can assume that the Justice wants to maintain the same benefits from power and prestige as a Retired Justice as she had on average while a Sitting Justice. As such the utility of a Justice would be the minimum of two things: the average power and prestige used for her benefit as Sitting Justice and the power and prestige used for her benefit as a Retired Justice.

## III.i First Model: Life Tenure

The game has three turns. In the first two turns a player is a Sitting Justice. In this first model, the Life Tenure case, a player is also a Sitting Justice in the third turn. This is in contradistinction to a Term Limit case (the second model), where in the third turn a player would be a Retired Justice. Each turn a new

Justice is added to the court, which means that a new player enters the game when a player exits the game. In any given turn, we should see three players: one player in the first turn, one in the second turn, and one in the third turn.

Each turn a player receives the power and prestige from the office being held that turn. A player can either be a Sitting Justice or a Retired Justice. A player who is a Sitting Justice receives power and prestige from holding the office, while a player who is a Retired Justice does not receive power and prestige. The power and prestige from holding the office of a Sitting Justice can be normalized to 1 for computational simplicity. If it seems naïve to believe that a Retired Justice receives no power or prestige while a Sitting Justice receives power and prestige, then this model can be understood as analyzing the difference between the power and prestige that a Justice receives as a Sitting Justice versus as a Retired Justice instead of the absolute power and prestige received. Either way does not change the analysis, which is simply claiming that Sitting Justices receive more power and prestige than Retired Justices, a hopefully uncontroversial position.

A player can choose to use the power and prestige for her own benefit or the benefit of a different justice (sitting or retired). A justice can offer a political favor to entice another justice to use her power and prestige for the benefit of the offering Justice rather than herself. A political favor will then be repaid by the justice who owes the political favor using his power and prestige for the benefit of the justice who acquired the political favor. Functionally this is a "I help you today and you help me tomorrow" system.

This project assumes that justices commit to pay back the political favors they promise. Since the project is not directly concerned with how political favors are created, but rather what would be the result of their creation in an intergenerational court model, this assumption is not that strong. Indeed, it can be akin to a model where money or externally enforceable contracts exist. This assumption avoids time
inconsistency problems in the last turn where a player cannot punish another justice who doesn't pay back a debt. Each turn a player receives political favors that she owes or she was owed from actions taken on the previous turn. On the last turn a player cannot acquire any new political favors. Further, a player cannot end her last turn with any owed political favors; hence the player has a lifetime budget constraint, where she cannot borrow more than she can pay back.

I want to stay agnostic about what exactly counts as benefit for a justice. It can include what the justice considers to be right and just, the politically correct decision, ideologically consistent decisions, decisions that will bring the esteem of the general population or the justice's peers in society (for example the upper class, academics, jurists, or the rest of the judicial system) or decisions that will cement the good legacy of the justice. It also includes things that might be considered rents. For example, a decision that a wealthy donor or corporation prefers, the decision that will directly give financial benefits to the justice, or a decision that an individual or group are willing to pay the justice if the decision is reached. Regardless of the benefits being internal or external to the justice, of their being ideologically or rent driven, justices negotiate with each other to achieve these benefits.

## Specifics of the First Model

The utility function of a Justice with Life Tenure would be the minimum of two things: the average power and prestige used for her benefit as a Sitting Justice and the power and prestige used for her benefit as a Retired Justice. Since in the Life Tenure case a Justice serves as a Sitting Justice all three turns, the function would look as follows:
$U_{L}=\min \left[\left(C_{L 1}+C_{L 2}+C_{L 3}\right) / 3, \infty\right]$ for those with Life Tenure.

This is equivalent to just saying:
$U_{L}=\left(C_{L 1}+C_{L 2}+C_{L 3}\right) / 3$ since the summation will be lower than infinity.

Optimizing this equation is the same as optimizing the summation without averaging, which is computationally simpler. Hence the following simpler equation will result in the same outcomes: $U_{L}=C_{L 1}+C_{L 2}+C_{L 3}$ for those with Life Tenure.

Where:
$C^{L 1}$ is the power and prestige used for the Life Tenured Justice's benefit in his first turn.
$C^{L 2}$ is the power and prestige used for the Life Tenured Justice's benefit in his second turn.
$C_{L 3}$ is the power and prestige used for the Life Tenured Justice's benefit in his third turn.

The justices of a given turn cannot consume more than they produce in that turn. In other words, total consumption in a given turn cannot exceed the total endowment in that turn: $\mathrm{C}_{\mathrm{L} 1, i+1}+\mathrm{C}_{\mathrm{L} 2, \mathrm{i}}+\mathrm{C}_{\mathrm{L} 3, i-1}=\mathrm{E}_{\mathrm{L} 1, i+1}$ $+\mathrm{E}_{\mathrm{L}, \mathrm{i}}+\mathrm{E}_{\mathrm{L}, 3,-1}$. This is a feasibility condition. Also, a particular justice cannot consume more than her total endowment: $\mathrm{C}_{\mathrm{L} 1, \mathrm{i}}+\mathrm{C}_{\mathrm{L} 2, i}+\mathrm{C}_{\mathrm{L} 3, \mathrm{i}}=\mathrm{E}_{\mathrm{L} 1, i}+\mathrm{E}_{\mathrm{L} 2, \mathrm{i}}+\mathrm{E}_{\mathrm{L} 3, \mathrm{i}}$. This is a life time budget constraint.

A simple equilibrium in this case would be the equilibrium where there is no trade. In this case the distribution of consumption would be ( $\left.C_{L 1}=1, C_{L 2}=1, C_{L 3}=1\right)$ for each player. This would provide a utility $U_{L}=C_{L 1}+C_{L 2}+C_{L 3}=3$ for each player. This is an equilibrium since no player has an incentive to deviate. Any trade would provide the same amount of utility to the parties because of the lifetime budget constraint (or cannot provide a higher utility to one party without another party receiving a lower utility because of the feasibility condition), and hence there is no incentive to deviate.

A simple equilibrium with trade would be one where during the middle turn a player does not consume. In this case the distribution of consumption would be ( $C_{L 1}=3 / 2, C_{L 2}=0, C_{L 3}=3 / 2$ ) for each player. This would mean that a justice $i$ in the second turn uses half of her power to benefit the justice $i+1$ in his first turn, so that in the next turn, when justice $i$ reaches her third turn and justice $i+1$ reaches his second
turn, justice i+1 uses half of his power to benefit justice i on her third turn. This would provide a utility $\mathrm{U}_{\mathrm{L}}=\mathrm{C}_{\mathrm{L} 1}+\mathrm{C}_{\mathrm{L} 2}+\mathrm{C}_{\mathrm{L} 3}=3$ for each player. Any trade would provide the same amount of utility to the parties because of the lifetime budget constraint (or cannot provide a higher utility to one party without another party receiving a lower utility because of the feasibility condition), and hence there is no incentive to deviate.

A general way of characterizing distributions is the following: ( $\left.C_{L 1}=1+\alpha_{i}, C_{L 2}=1-\alpha_{i}+\beta_{i}, C_{L 3}=1-\beta_{i}\right)$. Where $\alpha_{i}$ is a transfer from the justice $i$ in his second turn to his first turn, and $\beta_{i}$ is a transfer from the justice i in his third turn to his second turn.

An individual justice cannot consume negative power and prestige, so there are three binding conditions: $1+\alpha_{i} \geq 0,1-\alpha_{i}+\beta_{i} \geq 0$, and $1-\beta_{i} \geq 0$. The first equation can be rearranged to $\alpha_{i} \geq-1$ and the third to $1 \geq \beta_{\mathrm{i}}$. Then the second to $1+\beta_{\mathrm{i}} \geq \alpha$, which with the first rearranged equation to $1+\beta_{\mathrm{i}} \geq \alpha_{\mathrm{i}} \geq$ -1, and then $\beta_{i} \geq-2$. The second can also be rearranged to $\beta_{i} \geq \alpha_{i}-1$, which with the third rearranged equation becomes $1 \geq \beta_{i} \geq \alpha_{i}-1$, and then $2 \geq \alpha_{i}$. Hence we get $1 \geq \beta_{i} \geq-2,2 \geq \alpha_{i} \geq-1$, and keep $1-\alpha_{i}+$ $\beta_{\mathrm{i}} \geq 0$ (which can be binding).
$\alpha_{i}$ is a transfer from the justice $i$ in his second turn to his first turn. This is done by accepting on his first turn a benefit being given by justice $\mathrm{i}-1$ (who is on her second turn) to be paid back in the next turn. As such, $\alpha_{i}$ is positive if justice i owes political favors to justice $\mathrm{i}-1$.
$B_{i}$ is a transfer from the justice $i$ in his third turn to his second turn. This is done by accepting on his second turn a benefit being given by justice $i+1$ (who is on her first turn) to be paid back in the next turn. As such, $\beta_{\mathrm{i}}$ is positive if justice i owes political favors to justice $\mathrm{i}+1$.

The lifetime budget constraint $\left(C_{L 1, i}+C_{L 2, i}+C_{L 3, i}=E_{L 1, i}+E_{L 2, i}+E_{L 3, i}\right)$ is integrated into the identity of the transfers $\alpha_{i}$ and $\beta_{\mathrm{i}}:\left(1+\alpha_{\mathrm{i}}\right)+\left(1-\alpha_{\mathrm{i}}+\beta_{\mathrm{i}}\right)+\left(1-\beta_{\mathrm{i}}\right)=3$.

The feasibility condition $\left(C_{L 1, i+1}+C_{L 2, i}+C_{L 3, i,-1}=E_{L 1, i+1}+E_{L 2, i}+E_{L 3, i-1}\right)$ can be binding, since it will be: $\left(1+\alpha_{i+1}\right)$ $+\left(1-\alpha_{i}+\beta_{i}\right)+\left(1-\beta_{i-1}\right)=3$. The terms can be collected: $\alpha_{i+1}-\alpha_{i}+\beta_{i}-\beta_{i-1}=0$.

These then give the general structure of possible allocations: $\left(C_{L 1}=1+\alpha_{i,}, C_{L 2}=1-\alpha_{i}+\beta_{i}, C_{L 3}=1-\beta_{i}\right)$, where $\alpha_{i} \in[-1,2], \beta_{i} \in[-2,1], 1-\alpha_{i}+\beta_{i} \geq 0$, and $\alpha_{i+1}-\alpha_{i}+\beta_{i}-\beta_{i-1}=0$. Since all of these distributions by construction give $U_{L}=C_{L 1}+C_{L 2}+C_{L 3}=3$ to all players, then they are also equilibria. No individual player has an incentive to deviate, since any unilateral deviation will leave the player with the same utility, since it can only change how much is transferred between the three turns.

These conditions allow for an infinite number of diverse equilibria, a diversity that is magnified because the justices are indifferent between symmetric and asymmetric distributions as long as $\mathrm{U}_{\mathrm{L}}=\mathrm{C}_{\mathrm{L} 1}+\mathrm{C}_{\mathrm{L} 2}+$ $C_{L 3}=3$. By symmetric distributions I mean having one single distribution that can be attained by all players in the game. Examples of these would be the no trade case (1,1,1), the weak middle term (3/2, $0,3 / 2)$, etc. Asymmetric distribution would be where players end up taking different actions that provide different distributions to the players. Simple examples would be where generations of justices alternate their strategies to have alternating distributions, like $(1,0,2)$ and $(2,0,1)$, where players $1,3,5$, etc. get ( $1,0,2$ ) and players $2,4,6$, etc. get $(2,0,1)$. But there could be more unique asymmetric distributions where there is little if any alternation.

## III.ii Second Model: Term Limit

The game has three turns. In the first two turns a player is a Sitting Justice. In the Term Limit case, in the third turn a player is a Retired Justice. Each turn a new Justice is added to the court, which means that a new player enters the game when a player exits the game. In any given turn we should see three players: one player in the first turn, one in the second turn, and one on the third turn.

Like in the first model, each turn a player receives the power and prestige from the office being held that turn. A player can either be a Sitting Justice or a Retired Justice. A player who is a Sitting Justice receives power and prestige from holding the office, while a player who is a Retired Justice does not receive power and prestige. The power and prestige from holding the office of Sitting Justice can be taken as a unit for computational simplicity.

Also, a player can choose to use the power and prestige for her own benefit or the benefit of a different justice (sitting or retired). A justice can offer a political favor to entice another justice to use her power and prestige for the benefit of the offering Justice rather than herself. A political favor will then be repaid by the justice who owes the political favor using his power and prestige for the benefit of the justice who acquired the political favor. Again, functionally this is a "I help you today and you help me tomorrow" system.

Following the first model, the justices commit to pay back the political favors they promise. Each turn a player receives political favors that she owes or she was owed from actions taken on the previous turn. On the last turn a player cannot acquire any new political favors. To put this more strongly, a player cannot end her last turn with any owed political favors; hence the player has a lifetime budget constraint, where she cannot borrow more than she can pay back.

The utility function of a Justice would be the minimum of two things: the average power and prestige used for her benefit as Sitting Justice and the power and prestige used for her benefit as a Retired Justice. Since in the Term Limit case a Justice serves as a Sitting Justice for two turns and then as Retired Justice for one turn, the function would look as follows:
$U_{T}=\min \left[\left(C_{T 1}+C_{T 2}\right) / 2, C_{T 3}\right]$ for those with Term Limits.

The Justice with Term Limit will want to spend a third of her total endowment in the third turn, since $\left(C_{T 1}+C_{T 2}\right) / 2=C_{T 3}=>C_{T 3}=\left(C_{T 1}+C_{T 2}\right) / 2$ is what optimizes his utility.

Where:
$\mathrm{C}_{\mathrm{T} 1}$ is the power and prestige used for the Term Limit Justice's benefit in her first turn.
$\mathrm{C}_{\mathrm{T}_{2}}$ is the power and prestige used for the Term Limit Justice's benefit in her second turn.
$\mathrm{C}_{\mathrm{T} 3}$ is the power and prestige used for the Term Limit Justice's benefit in her third turn.

The justices of a given turn cannot consume more than they produce in that turn. In other words, total consumption in a given turn cannot exceed the total endowment in that turn: $\mathrm{C}_{\mathrm{T} 1, \mathrm{i}+1}+\mathrm{C}_{\mathrm{T} 2, \mathrm{i}}+\mathrm{C}_{\mathrm{T} 3,-1}=\mathrm{E}_{\mathrm{T} 1, i+1}$ $+\mathrm{E}_{\mathrm{T}, \mathrm{i}}+\mathrm{E}_{\mathrm{T}, i,-1}$. This is a feasibility condition. Also, a particular justice cannot consume more than her total endowment: $\mathrm{C}_{\mathrm{T} 1, \mathrm{i}}+\mathrm{C}_{\mathrm{T} 2, \mathrm{i}}+\mathrm{C}_{\mathrm{T} 3, i}=\mathrm{E}_{\mathrm{T} 1, \mathrm{i}}+\mathrm{E}_{\mathrm{T} 2, i}+\mathrm{E}_{\mathrm{T} 3, \mathrm{i}}$. This is a life time budget constraint.

In the case of Term Limit, the first and second turn (when a player is a Sitting Justice) have an endowment of 1, while the third turn (when a player is a Retired Justice) has an endowment of $0 . \mathrm{E}_{\mathrm{T}, i+1}=$ $1, \mathrm{E}_{\mathrm{T}, i-1}=1, \mathrm{E}_{\mathrm{T} 3,-1}=0, \mathrm{E}_{\mathrm{T}, \mathrm{i}}=1, \mathrm{E}_{\mathrm{T} 3, \mathrm{i}}=1$, and $\mathrm{E}_{\mathrm{T} 3, \mathrm{i}}=0$. This would make the feasibility condition and the time budget constraint:
$\mathrm{C}_{\mathrm{T} 1, i+1}+\mathrm{C}_{\mathrm{T}, \mathrm{i}}+\mathrm{C}_{\mathrm{T} 3,-1}=2$. This is the feasibility condition.
$\mathrm{C}_{\mathrm{T} 1, \mathrm{i}}+\mathrm{C}_{\mathrm{T} 2, \mathrm{i}}+\mathrm{C}_{\mathrm{T} 3, \mathrm{i}}=2$. This is the life time budget constraint

The more general optimal normalized bundle would be ( $\left.C_{T 1}=2 / 3+\mu, C_{T 2}=2 / 3-\mu, C_{T 3}=2 / 3\right)$, where $\mu$ $\epsilon[-2 / 3,2 / 3]$.

A general way of characterizing distributions is the following: $\left(C_{T 1}=1+\alpha_{i}, C_{T 2}=1-\alpha_{i}+\beta_{i}, C_{T 3}=0-\beta_{i}\right)$. Where $\alpha_{i}$ is a transfer from the justice $i$ in his second turn to his first turn, and $\beta_{i}$ is a transfer from the
justice $i$ in his third turn to his second turn. If all the players are following the same strategy, then no further specification is required. If they are following different strategies, then it would be necessary to group and separate players into categories. These categories could potentially be every single player independently.

An individual justice cannot consume negative power and prestige, so there are three binding conditions:

1) $1+\alpha_{i} \geq 0$,
2) $1-\alpha_{i}+\beta_{i} \geq 0$,
3) $0-\beta_{i} \geq 0$.

The first equation can be rearranged to $\alpha_{i} \geq-1$ and the third to $0 \geq \beta_{\text {. }}$. Then the second to $1+\beta_{i} \geq \alpha$, which with the first rearranged equation to $1+\beta_{i} \geq \alpha_{i} \geq-1$, and then $\beta_{i} \geq-2$. The second can also be rearranged to $\beta_{i} \geq \alpha_{i}-1$, which with the third rearranged equation becomes $0 \geq \beta_{i} \geq \alpha_{i}-1$, and then $1 \geq$ $\alpha_{i}$. Hence we get:
a) $0 \geq \beta_{i} \geq-2$
b) $1 \geq \alpha_{i} \geq-1$
c) $1-\alpha_{i}+\beta_{i} \geq 0$

Like in the previous model, $\alpha_{i}$ is a transfer from the justice i in his second turn to his first turn. This is done by accepting on his first turn a benefit being given by justice $\mathrm{i}-1$ (who is on her second turn) to be paid back in the next turn. As such, $\alpha_{i}$ is positive if justice $i$ owes political favors to justice $i-1$. $B_{i}$ is a transfer from the justice i in his third turn to his second turn. This is done by accepting on his second turn a benefit being given by justice i+1 (who is on her first turn) to be paid back in the next turn. As such, $\beta_{i}$ is positive if justice $i$ owes political favors to justice $i+1$.

The lifetime budget constraint $\left(\mathrm{C}_{\mathrm{T} 1, \mathrm{i}}+\mathrm{C}_{\mathrm{T} 2, \mathrm{i}}+\mathrm{C}_{\mathrm{T} 3, \mathrm{i}}=\mathrm{E}_{\mathrm{T} 1, \mathrm{i}}+\mathrm{E}_{\mathrm{T} 2, \mathrm{i}}+\mathrm{E}_{\mathrm{T} 3, i}\right)$ is integrated into the identity of the transfers $\alpha_{i}$ and $\beta_{i}:\left(1+\alpha_{i}\right)+\left(1-\alpha_{i}+\beta_{i}\right)+\left(0-\beta_{i}\right)=2$.

The feasibility condition $\left(C_{T 1, i+1}+C_{T 2, i}+C_{T 3, i-1}=E_{T 1, i+1}+E_{T 2, i}+E_{T 3, i-1}\right)$ can be binding, since it will be: $\left(1+\alpha_{i+1}\right)$ $+\left(1-\alpha_{i}+\beta_{i}\right)+\left(0-\beta_{i-1}\right)=2$. The terms can be collected: $\alpha_{i+1}-\alpha_{i}+\beta_{i}-\beta_{i-1}=0$.

A difficulty arises because of the lack of resources in the last turn (as Retired Justice) and the lifetime budget constraint. In the last turn, a Justice cannot borrow anything new (since there won't be a next turn to repay it) and hence is tied to the agreement made in his second turn. This is represented by $\beta$. In the second to last turn, a justice cannot borrow either. This is twofold: first, as mentioned above, the justice on her third turn doesn't have resources. Hence $0 \geq \beta_{\mathrm{i}}$.

Second, the justice on his second turn cannot promise to repay anything he borrows from the justice in her first turn. Hence the only trade that we should see is a justice on his second turn giving to a justice on her first turn, so that the justice on her second turn gives back to the original justice once he is in his third turn. Hence $\alpha_{i} \geq 0$. Decreasing $\alpha_{i} \in[-1,1]$ to $\alpha_{i} \in[0,1]$.

These then give the general structure of possible allocations: $\left(C_{T 1}=1+\alpha_{i}, C_{T 2}=1-\alpha_{i}+\beta_{i}, C_{T 3}=0-\beta_{i}\right)$, where $\alpha_{i} \in[0,1], \beta_{i} \in[-2,0], 1-\alpha_{i}+\beta_{i} \geq 0$, and $\alpha_{i+1}-\alpha_{i}+\beta_{i}-\beta_{i-1}=0$.

The range of $\beta_{i}$ is actually smaller since $1-\alpha_{i}+\beta_{i} \geq 0$ and $\alpha_{i} \in[0,1]$ decrease it. $\beta_{i} \geq \alpha_{i}-1$, and since $\alpha_{i} \in$ $[0,1]$, then $\beta_{i} \geq 0-1$. Hence $\beta_{i} \in[-1,0]$.

Having $\alpha_{i} \in[0,1]$ and $\beta_{i} \in[-1,0]$ means that a justice in the second turn will use no more (and probably less) power and prestige for her own benefit than a justice in the first turn. Hence when a supreme court has term limits rather than life tenure, we should see that justices who are more senior have less (or the same) power and prestige than justices who are newer to the court.

## Equilibria of the Second Model

While the previous equations show the possible feasible allocations, there has to be some analysis of the equilibria. The first allocation to test would be where there is no trade: $\alpha_{i}=0$ and $\beta_{\mathrm{i}}=0$. This allocation is not an equilibrium, since any trade that transfers resources to the third turn of any justice will increase that justice's utility without decreasing the utility of any other justice. This can be seen more clearly in the utility function:

If $\beta_{i}=0$ then $U_{T}=0$

If $\beta_{i} \in[-2 / 3,0)$ then $U_{T}=C_{T 3}$ and since $C_{T 3}=0-\beta_{i}$ then $U_{T}=-\beta_{i}$, hence $U_{T} \in(0,2 / 3]$

If $\beta_{i} \in[-1,-2 / 3)$ then $U_{T}=\left(C_{T 1}+C_{T 2}\right) / 2$ and since $C_{T 1}+C_{T 2}+C_{T 3}=E_{T 1, i}+E_{T 2, i}+E_{T 3,1}=2$ then $C_{T 1}+C_{T 2}=2-$ $C_{T 3}=2+\beta_{i}$ which leads to $U_{T}=\left(2+\beta_{i}\right) / 2$, hence $U_{T} \in[1 / 2,2 / 3)$

Therefore any trade that leads to the third turn having some resources, $\beta_{\mathrm{i}} \in[-1,0)$, would lead to a utility, $U_{T} \in(0,2 / 3]$, that is greater than the utility from no trade, $U_{T}=0$ when $\beta_{i}=0$.

By construction the other players who transfer resources between their first two turns keep $\mathrm{U}_{\mathrm{T}}=0$.

There are then two types of equilibria that could be analyzed, the symmetric ones (where all players have the same strategy and the action is the same for both turns), and the asymmetric ones (where players can have different strategies). Because of the nature of the political favors that require one justice to use power and justice for the benefit of another justice so that the first justice might receive the same benefits a turn later. There are then two interactions that matter, the interaction between a justice in her second turn and a justice in his first turn, and then the interaction of the same justices, but now in her third turn and his second turn.

In the symmetric case, a justice gives in her second turn what she receives in her third turn: $\alpha_{i}=-\beta_{i}$ or differently arranged $\beta_{i}=-\alpha_{i}$. This would create the following symmetric allocations: ( $C_{T 1}=1-\beta_{i}, C_{T 2}=1$ $\left.+2 \beta_{\mathrm{i}}, \mathrm{C}_{\mathrm{T} 3}=-\beta_{\mathrm{i}}\right)$, where $\beta_{\mathrm{i}} \in[-1 / 2,0]$ since $\mathrm{C}_{\mathrm{T} 2}=1+2 \beta_{\mathrm{i}} \geq 0$. This produces as a single equilibrium the
allocation where there is a maximization on this range, namely $\beta_{i}=-1 / 2$ that gives $U_{T}=-\beta_{i}=1 / 2 .{ }^{3}$ This can be seen since if $\beta_{i}{ }^{*} \in(-1 / 2,0]$, then any player can propose a slightly lower $\beta_{i}{ }^{*}$ (that is $\left.\beta_{i}{ }^{*}-\sigma\right)$ which would make that player better off. At $\beta_{i}=-1 / 2$ there is no further trade that could make a given player better off without decreasing the utility of another player. This gives the allocation ( $\mathrm{C}_{\mathrm{T} 1}=3 / 2, \mathrm{C}_{\mathrm{T} 2}=0$, $C_{T 3}=1 / 2$ ).

The empirical implications of this consumption bundle are that in Courts with life tenure we shouldn't see any specific inter-generational patterns. But in Courts with term limits we should see Justices who are nearing retirement more likely to agree with positions of less senior members of the court. Indeed, the junior members of the Court should exercise their preferences more often than the senior members. Hence a justice with a term limit is more powerful when starting her term than when finishing her term.

## III.iii Third Model: Type Selection of Old, Middle, and Young

Since this paper is trying to explore the effects of post retirement regimes on justices, an important factor to consider is how long the post retirement career of an individual justice is expected to last. The length of the post retirement career seems to be reasonably tied to the age of the justice. Since the age of the justice at the end of the term is perfectly predicted by the age of the justice at the start of the term, the age of the justice at the start of the term would be an important variable to take into account.

This can be modeled by assuming that there are three types of potential Justices: Old, Middle, and Young. The Middle was the normative assumed in the previous section. The other two types multiply the

[^2]utility of the third turn to represent how much time they spend in the last turn (in post-retirement). For Old Justices $\xi<1$, for Young Justices $\xi>1$, and for Middle Justices $\xi=1$. For simplicity, we can assume that $\lim \xi \rightarrow 0$ for Old Justices, so that functionally they only have to maximize the consumption in the first two turns. Also, for simplicity we can assume that for Young Justices $\xi=2$, and so would want to consume in total as much in post-retirement as they consumed in total while in office. The intuition between these two choices are the following: in the case of the Old Justice, we can imagine a Justice who started so old, that she has no plan to have a post-retirement career. She just wants to have pure retirement, hence no desire for power and prestige (this is a less gruesome alternative than just assuming they die after holding office). In the case of the Young Justice, the justice could have started so young that they expect to have a long post retirement career, which could be as long as the career as a Sitting Justice.

The type based term limited utility functions are as follows:
$U_{T}=\min \left[\left(\mathrm{C}_{\mathrm{T}_{1}}+\mathrm{C}_{\mathrm{T} 2}\right) / 2, \mathrm{C}_{\mathrm{T} 3} / \xi\right]$ Generic utility of Term Limit Justice with Types.
$U_{0}=\min \left[\left(C_{01}+C_{02}\right) / 2, \infty\right]$ Specific utility of Justice of type Old.
$U_{M}=\min \left[\left(C_{M 1}+C_{M_{2}}\right) / 2, C_{M 3}\right]$ Specific utility of Justice of type Middle.
$U_{Y}=\min \left[\left(C_{Y 1}+C_{Y 2}\right) / 2, C_{Y 3} / 2\right]$ Specific utility of Justice of type Young.

## Feasible Allocations

The feasible allocations of the Third Model are identical to those of the Second Model. This is the case because the Third Model builds upon the Second Model by making just one change in the utility functions, and keeping everything else the same. Here is the recap of the more relevant parts of the same discussion as presented in the Second Model.

The justices of a given turn cannot consume more than they produce in that turn. In other words, total consumption in a given turn cannot exceed the total endowment in that turn: $\mathrm{C}_{\mathrm{T} 1, i+1}+\mathrm{C}_{\mathrm{T} 2, \mathrm{i}}+\mathrm{C}_{\mathrm{T}, i,-1}=\mathrm{E}_{\mathrm{T} 1, i+1}$ $+\mathrm{E}_{\mathrm{T}, \mathrm{i}}+\mathrm{E}_{\mathrm{T}, i,-1}$. This is a feasibility condition. Also, a particular justice cannot consume more than her total endowment: $\mathrm{C}_{\mathrm{T} 1, \mathrm{i}}+\mathrm{C}_{\mathrm{T} 2, \mathrm{i}}+\mathrm{C}_{\mathrm{T} 3, \mathrm{i}}=\mathrm{E}_{\mathrm{T} 1, \mathrm{i}}+\mathrm{E}_{\mathrm{T} 2, \mathrm{i}}+\mathrm{E}_{\mathrm{T} 3, \mathrm{i}}$. This is a life time budget constraint.

A general way of characterizing distributions is the following: ( $\left.C_{T 1}=1+\alpha_{i}, C_{T 2}=1-\alpha_{i}+\beta_{i}, C_{T 3}=0-\beta_{i}\right)$. Where $\alpha_{i}$ is a transfer from the justice $i$ in his second turn to his first turn, and $\beta_{i}$ is a transfer from the justice $i$ in his third turn to his second turn. If all the players are following the same strategy, then no further specification is required. If they are following different strategies, then it would be necessary to group and separate players into categories. These categories could potentially be every single player independently.

An individual justice cannot consume negative power and prestige, so there are three binding conditions:
a) $0 \geq \beta_{i} \geq-2$
b) $1 \geq \alpha_{i} \geq-1$
c) $1-\alpha_{i}+\beta_{i} \geq 0$

The lifetime budget constraint $\left(\mathrm{C}_{\mathrm{T} 1, \mathrm{i}}+\mathrm{C}_{\mathrm{T} 2, \mathrm{i}}+\mathrm{C}_{\mathrm{T} 3, \mathrm{i}}=\mathrm{E}_{\mathrm{T} 1, \mathrm{i}}+\mathrm{E}_{\mathrm{T} 2, \mathrm{i}}+\mathrm{E}_{\mathrm{T}, \mathrm{i}}\right)$ is integrated into the identity of the transfers $\alpha_{i}$ and $\beta_{i}:\left(1+\alpha_{i}\right)+\left(1-\alpha_{i}+\beta_{i}\right)+\left(0-\beta_{i}\right)=2$.

The feasibility condition $\left(\mathrm{C}_{\mathrm{T} 1, i+1}+\mathrm{C}_{\mathrm{T} 2, i}+\mathrm{C}_{\mathrm{T}, i,-1}=\mathrm{E}_{\mathrm{T}, i,+1}+\mathrm{E}_{\mathrm{T} 2, i}+\mathrm{E}_{\mathrm{T}, i-1}\right)$ can be binding, since it will be: $\left(1+\alpha_{i+1}\right)$ $+\left(1-\alpha_{i}+\beta_{i}\right)+\left(0-\beta_{i-1}\right)=2$. The terms can be collected: $\alpha_{i+1}-\alpha_{i}+\beta_{i}-\beta_{i-1}=0$.

These then give the general structure of possible allocations: $\left(C_{T 1}=1+\alpha_{i}, C_{T 2}=1-\alpha_{i}+\beta_{i}, C_{T 3}=0-\beta_{i}\right)$, where $\alpha_{i} \in[0,1], \beta_{i} \in[-2,0], 1-\alpha_{i}+\beta_{i} \geq 0$, and $\alpha_{i+1}-\alpha_{i}+\beta_{i}-\beta_{i-1}=0$.

The range of $\beta_{i}$ is actually smaller since $1-\alpha_{i}+\beta_{i} \geq 0$ and $\alpha_{i} \in[0,1]$ decrease it. $\beta_{i} \geq \alpha_{i}-1$, and since $\alpha_{i} \in$ $[0,1]$, then $\beta_{\mathrm{i}} \geq 0-1$. Hence $\beta_{\mathrm{i}} \in[-1,0]$.

Having $\alpha_{i} \in[0,1]$ and $\beta_{i} \in[-1,0]$ means that a justice in the second turn will using no more (and probably less) power and prestige for her own benefit than a justice in the first turn. Hence when a supreme court has term limits rather than life tenure, we should see that justices who are more senior have less (or the same) power and prestige than justices who are newer to the court.

## All Old Justices

The case with all Old Justices will have the same feasibility conditions as the previous case, but the different utility function will provide a different analysis which will bring up different results. The utility of the Old Justice is as follows:
$\mathrm{U}_{\mathrm{O}}=\min \left[\left(\mathrm{C}_{01}+\mathrm{C}_{02}\right) / 2, \infty\right]$ for those Old Justices with Term Limits.

The Old Justice with Term Limit will want to spend none of her total endowment in the third turn, since $\mathrm{C}_{03}$ does not appear in her utility function, while $\left(\mathrm{C}_{01}+\mathrm{C}_{02}\right) / 2=\infty$ is what optimizes her utility.

While the feasible allocations are the same as the second model, the equilibria depend not only on the feasible allocations, but also on the utility functions of the justices. Like in the previous case, the first allocation to test would be where there is no trade: $\alpha_{i}=0$ and $\beta_{i}=0$. This allocation is an equilibrium, since it provides the highest utility achievable (if $\beta_{i}=0$ then $U_{0}=2$ ), and hence there is no incentive to deviate.

A second allocation to test would be the symmetric case, where a justice gives in her second turn what she receives in her third turn: $\alpha_{i}=-\beta_{i}$ or differently arranged $\beta_{i}=-\alpha_{i}$. This would create the following symmetric allocations: $\left(C_{01}=1-\beta_{i}, C_{02}=1+2 \beta_{i}, C_{03}=-\beta_{i}\right)$, where $\beta_{i} \in[-1 / 2,0]$ since $C_{T 2}=1+2 \beta_{i} \geq 0$.

Since $U_{0}=C_{01}+C_{02}=1-\beta_{i}+1+2 \beta=2+\beta$, and $\beta_{i} \in[-1 / 2,0]$, then the utility of the Old Justices decrease as the consumption in the third turn $\left(C_{03}=-\beta_{i}\right)$ increases. Hence $\beta_{i}=0$ is the stable symmetric case, which is the case where there is no trade; since any deviations from this symmetric case would lead to a decrease in utility by the player deviating. This gives the allocation ( $C_{01}=1, C_{02}=1, C_{03}=0$ ). The empirical implications of a court with term limits which is populated with Old Justices is that there should be no trading of political favors. This is in contrast to the normal case of term limits where there will be trading between senior Justices and less senior Justices. It is also more restrictive than the case of life tenure, since in the life tenure case having no trade is an equilibrium (like in this case of Old Justices) but so are all other symmetric feasible allocations (which is not the case in a court with Old Justices with a term limit).

## All Middle Justices

The case with all Middle Justices is the same as the case studied in the Second Model, since the Middleaged utility function is the same as the basic term limit model. Just to repeat what has been said before:
$U_{T}=\min \left[\left(C_{M 1}+C_{M 2}\right) / 2, C_{M 3}\right]$ for those Middle Justices with Term Limits.

The Middle Justice with Term Limit will want to spend a third of his total endowment in the third turn, since $\left(C_{M 1}+C_{M 2}\right) / 2=C_{M 3} \Rightarrow C_{M 3}=\left(C_{M 1}+C_{M 2}\right) / 2$ is what optimizes his utility.

While the feasible allocations are the same as the second model, the equilibria depend not only on the feasible allocations, but also on the utility functions of the justices. Like in the previous case, the first allocation to test would be where there is no trade: $\alpha_{i}=0$ and $\beta_{i}=0$. This allocation is not an equilibrium, since any trade that transfers resources to the third turn of any Justice will increase that justice's utility without decreasing the utility of any other justice. This can be seen more clearly in the utility function:

If $\beta_{i}=0$ then $U_{T}=0$

If $\beta_{i} \in[-2 / 3,0)$ then $U_{T}=C_{T 3}$ and since $C_{T 3}=0-\beta_{i}$ then $U_{T}=-\beta_{i}$, hence $U_{T} \in(0,2 / 3]$

If $\beta_{i} \in[-1,-2 / 3)$ then $U_{T}=\left(C_{T 1}+C_{T 2}\right) / 2$ and since $C_{T 1}+C_{T 2}+C_{T 3}=E_{T 1, i}+E_{T 2, i}+E_{T 3,1}=2$ then $C_{T 1}+C_{T 2}=2-$ $C_{T 3}=2+\beta_{i}$ which leads to $U_{T}=\left(2+\beta_{i}\right) / 2$, hence $U_{T} \in[1 / 2,2 / 3)$

Therefore any trade that leads to the third turn having some resources, $\beta_{i} \in[-1,0)$, would lead to a utility, $U_{T} \in(0,2 / 3]$, that is greater than the utility from no trade, $U_{T}=0$ when $\beta_{i}=0$.

By construction the other players who transfer resources between their first two turns keep $U_{T}=0$.

A second allocation to test would be the symmetric case, where a justice gives in her second turn what she receives in her third turn: $\alpha_{i}=-\beta_{i}$ or differently arranged $\beta_{i}=-\alpha_{i}$. This would create the following symmetric allocations: $\left(C_{T 1}=1-\beta_{i}, C_{T 2}=1+2 \beta_{\mathrm{i}}, C_{T 3}=-\beta_{\mathrm{i}}\right)$, where $\beta_{\mathrm{i}} \in[-1 / 2,0]$ since $C_{T 2}=1+2 \beta_{\mathrm{i}} \geq 0$. This produces as a single equilibrium the allocation where there is a maximization on this range, namely $\beta_{i}=-1 / 2$ that gives $U_{T}=-\beta_{i}=1 / 2$. This can be seen since if $\beta_{i}{ }^{*} \in(-1 / 2,0]$, then any player can propose a slightly lower $\beta_{i}{ }^{*}$ (that is $\beta_{i}{ }^{*}-\sigma$ ) which would make that player better off. At $\beta_{i}=-1 / 2$ there is no further trade that could make a given player better off without decreasing the utility of another player. This gives the allocation ( $\mathrm{C}_{\mathrm{M} 1}=3 / 2, \mathrm{C}_{\mathrm{M} 2}=0, \mathrm{C}_{\mathrm{M} 3}=1 / 2$ ).

The empirical implications of this consumption bundle are that in Courts with term limits which are populated with Middle Justices we should see Justices who are nearing retirement are more likely to agree with positions of less senior members of the court. Indeed, the junior members of the Court should exercise their preferences more often than the senior members. Hence a Middle Justice with term limit is more powerful when starting her term than when finishing her term.

## All Young Justices

The case with all Young Justices will have the same feasibility conditions as the previous cases, but the different utility function will provide a different analysis which could bring up different results. The utility of the Young Justice is as follows:
$U_{Y}=\min \left[\left(C_{Y 1}+C_{Y 2}\right) / 2, C_{Y 3} / 2\right]$ for those Young Justices with Term Limits.

The Young Justice with Term Limit will want to spend half of his total endowment in the third turn, since $\left(C_{Y 1}+C_{Y_{2}}\right) / 2=C_{Y 3} / 2 \Rightarrow C_{Y 3}=\left(C_{Y_{1}}+C_{Y_{2}}\right)$ is what optimizes his utility.

While the feasible allocations are the same as the second model, the equilibria depend not only on the feasible allocations, but also on the utility functions of the justices. Like in the previous case, the first allocation to test would be where there is no trade: $\alpha_{i}=0$ and $\beta_{i}=0$. This allocation is not an equilibrium, since any trade that transfers resources to the third turn of any Justice will increase that justice's utility without decreasing the utility of any other justice. This can be seen more clearly in the utility function:

If $\beta_{i}=0$ then $U_{Y}=0$

If $\beta_{i} \in[-1,0)$ then $U_{Y}=C_{Y 3} / 2$ and since $C_{Y 3}=0-\beta_{i}$ then $U_{Y}=-\beta_{i} / 2$, hence $U_{Y} \in(0,1 / 2]$

Therefore any trade that leads to the third turn having some resources, $\beta_{i} \in[-1,0)$, would lead to a utility, $U_{T} \in(0,1 / 2]$, that is greater than the utility from no trade, $U_{Y}=0$ when $\beta_{i}=0$.

By construction the other players who transfer resources between their first two turns keep $U_{Y}=0$.

A second allocation to test would be the symmetric case, where a justice gives in her second turn what she receives in her third turn: $\alpha_{i}=-\beta_{i}$ or differently arranged $\beta_{i}=-\alpha_{i}$. This would create the following symmetric allocations: $\left(C_{T 1}=1-\beta_{\mathrm{i}}, C_{T 2}=1+2 \beta_{\mathrm{i}}, C_{\mathrm{T} 3}=-\beta_{\mathrm{i}}\right)$, where $\beta_{\mathrm{i}} \in[-1 / 2,0]$ since $C_{T 2}=1+2 \beta_{\mathrm{i}} \geq 0$. This produces as a single equilibrium the allocation where there is a maximization on this range, namely
$\beta_{i}=-1 / 2$ that gives $U_{Y}=-\beta_{i}=1 / 2$. This can be seen since if $\beta_{i}{ }^{*} \in(-1 / 2,0]$, then any player can propose a slightly lower $\beta_{i}{ }^{*}$ (that is $\beta_{i}{ }^{*}-\sigma$ ) which would make that player better off. At $\beta_{i}=-1 / 2$ there is no further trade that could make a given player better off without decreasing the utility of another player. This gives the allocation ( $\left.C_{Y 1}=3 / 2, C_{Y 2}=0, C_{Y 3}=1 / 2\right)$.

The empirical implications of this consumption bundle are that in Supreme Courts with term limits which are populated with Young Justices we should see Justices who are nearing retirement more likely to agree with positions of less senior members of the court. Indeed, the junior members of the Court should exercise their preferences more often than the senior members. Hence a Young Justice with term limit is more powerful when starting her term than when finishing her term.

## IV: Conclusion

There are two alternatives so that lobbying among justices does not occur. One possibility is to have a court with life tenure, which allows for the no-lobbying equilibrium. The other possibility is to have term limits where all the justices appointed are old. This can be achieved by having a minimum age required to be nominated as a justice (like the US President and Senator) or by requiring a certain amount of experience in lower judicial positions that would guarantee old experienced jurists as the only nominees for the court.

If term limits are implemented but the nominees are not old, then the equilibrium will lead to rampant lobbying among the justices. Specifically, we would see newly appointed justices basking in power. This power decreases to the point that when a justice is nearing retirement, the justice has almost no power to use for her own benefit. She is using her power to pay debts she owes to a retired justice and acquiring favors from a newly appointed justice.

This paper does not give a thorough comparison between the effects of having term limits versus life tenure. Indeed, it only focuses on one mechanism. Let us assume that having term limits is more beneficial than having life tenure. Would it possible to design a system with term limits that avoids lobbying without limiting itself to only having old nominees? This is functionally asking if the term limit system could resemble the case of life tenure. My answer is a resounding "yes".

The difference between the life tenure model and term limit model is that in the third turn the power of the retired justice in the term limit case is much lower than for sitting justices. The higher the power that a retired justice has, the more the term limit model resembles the life tenure model. If there was a post-retirement office that could be held by retired justices, like the Senior Judge office mentioned by Stras and Scott (2006) and Pfander (2012), the power of retired justices could be increased to a level equivalent to sitting justices. In turn, this would make the lobbying incentives faced by justices akin to the life tenure model rather than the term limit model.

## References

Alt, J, E Bueno de Mesquita, and S Rose. 2011. "Disentangling accountability and competence in elections: evidence from US term limits." The Journal of Politics 171-186.

Bailey, M.A., and A Yoon. 2011. "'While there's a breath in my body': The systematic effects of politically motivated retirement from the Supreme Court." Journal of Theoretical Politics 23(3), 293-316.

Burbank, S. B. 2006. "Alternative Career Resolution II: Changing the Tenure of Supreme Court Justices." University of Pennsylvania Law Review 154(6), 1511-1550.

Calabresi, and Lindgren. 2005. "Term limits for the Supreme Court: Life tenure reconsidered." Harv. JL \& Pub. Pol'y 29, 769.

Cummins, Jeff. 2013. "The Effects of Legislative Term Limits on State Fiscal Conditions." American Politics Research 41:3, 417-442.

Domingo, Pilar. 2000. "Judicial Independence: The Politics of the Supreme Court in Mexico." Journal of Latin American Studies 705-735.

Estevez, Dolia. 2013. "The 10 Most Corrupt Mexicans Of 2013." Forbes, December 16.

Fearon, James. 1999. "Electoral Accountability and the Control of Politicians." In Democracy, Accountability and Representation, by Adam Prezeworski, Susan Stokes and Bernard Manin.

Golden, Tim. 1995. "Salinas, at Successor's Request, Leaves for Virtual Exile in U.S." The New York Times.
Gordon, S., \& Huber, G. 2007. "The Effect of Electoral Competitiveness on Incumbent Behavior." Quarterly Journal of Political Science 2 (2), 107-138.

Hanssen, F. A. 2004. "Is There a Politically Optimal Level of Judicial Independence? ." American Economic Review Vol. 94 No. 3, 712-729.

Jackson, V. C. 2006. "Packages of Judicial Independence: The Selection and Tenure of Article III Judges." Geo. LJ 95, 965.

Maskin, Eric, and Jean Tirole. 2004. "The Politician and the Judge: Accountability in Government." American Economic Review 94(4): 1034-1054.

Pfander, J. E. 2012. "The Chief Justice, the Appointment of Inferior Officers, and the Court of Law Requirement." Nw. UL Rev. 107, 1125.

Ríos-Figueroa, Julio. 2007. "Fragmentation of Power and the Emergence of an Effective Judiciary in Mexico, 1994-2002." Latin American Politics \& Society vol. 49, no. 1, 31-57.

Ríos-Figueroa, Julio. 2012. "Justice System Institutions and Corruption Control. Evidence from Latin America." Justice Systems Journal vol. 33, no. 2, 195-214.

Ruiz Morales, Guillermo, and Alberto Rocha Arrieta. 2012. "La reforma al Poder Judicial de 1994, ¿un golpe de Estado?" El Cotidiano (172).

Stras, D. R. 2005. "The incentives approach to judicial retirement." Minn. L. Rev. 90, 1417.

Stras, D. R., and R. W. Scott. 2006. "Are Senior Judges Unconstitutional." Cornell L. Rev. 92, 453.

Stras, D. R., and R. W. Scott. 2005. "Retaining Life Tenure: The Case for a Golden Parachute." Wash. ULQ 83, 1397.

Taylor, Michael. 1997. "Why No Rule of Law in Mexico? Explaining the Weakness of Mexico's Judicial Branch." New Mexico Law Review.

Uelmen, Gerald. 1996. "Crocodiles in the Bathtub: Maintaining the Independence of State Supreme Courts in an Era of Judicial Politicization." Notre Dame Law Review 1133-1153.

Vargas, Jorge. 1996. "The Rebirth of the Supreme Court of Mexico: An Appraisal of President Zedillo's Judicial Reform of 1995." American University International Law Review 295-341.


[^0]:    *I thank Deborah Beim for her guidance and mentoring through the crafting of this paper. Thanks to Susan Stokes, Ana De La O, Alexandre Debs, Milan Svolik, and Gregory Huber for their feedback. I also want to thank Justices José Ramón Cossío Díaz, Jorge Mario Pardo Rebolledo, Fausta Moreno Flores de Corona, and Irma Cué Sarquís of the Mexican Supreme Court, who were willing to be interviewed in what is the foundation for this paper.

[^1]:    ${ }^{2}$ This observation is indebted to Justice José Ramón Cossío Díaz. The Mexican Supreme Court transitioned from life tenure to term limits in the presidential transition between Salinas and Zedillo (1994/95). Commentary on this transition and some of the characters involved, see Domingo (2000), Estevez (2013), Golden (1995), Ríos-Figueroa (2007), Ríos-Figueroa (2012), Ruiz Morales and Arrieta (2012), Taylor (1997), and Vargas (1996).

[^2]:    ${ }^{3}$ The asymmetric equilibria are harder to identify. One possible equilibrium is one where there are two generations, one generation ( $4 / 3,0,2 / 3$ ) while the second generation gets ( $5 / 3,0,1 / 3$ ). In this case for one generation the justices get the highest utility, UT, $a=2 / 3$, while in the other generation the utility they get is lower UT, $b=1 / 3$. There is no trade that could make the first generation better, and there is no trade that would make the second generation better without making the first generation worse. Indeed, any distribution with two alternating generations where the second turn have a consumption of zero, $\mathrm{CT} 2=0$, and where $\beta \mathrm{i} \in[-2 / 3,-1 / 3]$ should give an equilibrium, since no member of a generation could make a trade that would make him better off without making someone of the other generation worse off.

