

# Do Tax Judges Think About the Economy?

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*Does the macroeconomic environment affect judicial decisions and thereby shape the law? Even though the normative significance of understanding judicial decision-making is undeniable, empirical research into how judges make decisions is woefully incomplete. This is the first Article to empirically examine the stabilizing fiscal potential of judicial decisions in tax disputes. In this Article, I use empirical methods to test whether macroeconomic conditions—namely, the business cycle—affect the outcomes of judicial decisions in tax cases. Economic theory prescribes either an anti-cyclical response to the business cycle or no response at all. I test this hypothesis with a novel dataset constructed of judicial decisions made by specialized tax judges from the district courts of Israel before and after the 2008 financial crisis. The evidence suggests business cycles affect judges’ decisions in tax disputes. But counter to the theoretical prediction, judges favor the tax authorities during economic downturns and favor the taxpayers during economic upturns. This pro-cyclical decision-making pattern may exacerbate economic instability.*

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## INTRODUCTION

Legal scholars, economists, and social scientists have extensively studied how nonlegal factors affect judicial decision-making. A question that has not yet received much empirical attention is whether macroeconomic conditions affect judges’ decisions in the context of tax disputes and court litigation. Judicial decisions in tax cases have fiscal consequences and therefore have the potential to act as institutional fiscal stabilizers. Thus, there is great value in researching the relationship between macroeconomic variables—namely, the business cycle—and judicial decisions at the micro level.<sup>1</sup> This is especially the case given that fluctuations in economic stability are practically inevitable. This study fills this gap in the literature.

Macroeconomic theory focuses on aggregated market processes. It suggests potential solutions—in the form of market interventions made by central institutions—to market difficulties, including the

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1. A similar claim can be made regarding other tax institutions, such as the tax authorities. This article, however, focuses on the courts.

macroeconomic phenomenon of the “business cycle.” The business cycle consists of four consecutive stages: (1) recession, which is a slowdown of economic activity; (2) trough, which is a negative peak of economic activity; (3) expansion, which is an acceleration of economic activity; and (4) peak, which is a positive peak of economic activity. This cycle describes irregular and unpredictable fluctuations in economic activity over time, resulting in gross domestic product (GDP) instability. Periods of recession and expansion reflect this instability.<sup>2</sup> The cyclicity of business cycles, meaning their magnitude and length, is not consistent over time. Economists can positively identify changes in the business cycle only after some time has passed since the initial change occurred. Importantly, however, identification methods are not uniform and vary among economists.

Economists commonly disagree on the theoretical grounds of the business cycle phenomenon. There appears to be no clear normative recommendation regarding how the government, or any other central institution, should respond to fluctuations in the business cycle, and whether a response is needed at all. Classical economic theories suggest no response is needed. The Keynesian theory, however, recommends an anti-cyclical stabilizing response.<sup>3</sup> Assuming a response to the business cycle is the desired path, the two governmental institutional means of intervention to promote economic stabilization are monetary policy and fiscal policy.<sup>4</sup> Monetary policy consists of the management of the money supply in the market.<sup>5</sup> Fiscal policy consists of government expenditures and tax revenue.<sup>6</sup>

This Article focuses on revenue policy within fiscal policy, specifically the tax system. The tax system is a powerful fiscal tool and has the potential to function as a countercyclical stabilizer. Stabilizing tax policy is comprised of (1) the time lag between identifying the problem and passing the legislation and between passing the legislation and the

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2. N. GREGORY MANKIW, *MACROECONOMICS* 258 (7th ed., 2010).

3. Robert E. Lucas, Jr., *Some International Evidence on Output-Inflation Tradeoffs*, 63 *AM. ECON. REV.* 326, 326–27 (1973); Robert E. Lucas, Jr., *Macroeconomic Priorities*, 93 *AM. ECON. REV.* 1, 11 (2003); Jeff Strnad, *Some Macroeconomic Interactions with Tax Base Choice*, 56 *SMU L. REV.* 171, 173–78 (2003); RICHARD G. LIPSEY & K. ALEC CHRYSAL, *PRINCIPLES OF ECONOMICS* 418, 460, 470, 472 (9th ed., 1999); Finn E. Kydland & Edward C. Prescott, *Time to Build and Aggregate Fluctuations*, 50 *ECONOMETRICA* 1345, 1360 (1982); John B. Long Jr. & Charles I. Plosser, *Real Business Cycles*, 91 *J. POL. ECON.* 39, 43–46 (1983); Robert G. King & Charles I. Plosser, *Money, Credit, and Prices in a Real Business Cycle*, 74 *AM. ECON. REV.* 363, 378 (1984); Lawrence J. Christiano & Martin Eichenbaum, *Current Real Business Cycle Theories and Aggregate Labor Market Fluctuations*, 82 *AM. ECON. REV.* 430, 430–31 (1992).

4. See, e.g., RUDIGER DORNBUSCH ET AL., *MACROECONOMICS* (11th ed., 2010); LIPSEY & CHRYSAL, *supra* note 3; Strnad, *supra* note 3, at 173.

5. MANKIW, *supra* note 2, at 547–56.

6. DORNBUSCH ET AL., *supra* note 4, at 206.

policy's actual influence on the business cycle; and (2) the degree of discretion in operating stabilizing measures. The characteristics of a stabilizing tax policy vary across the different stabilization tools.

From a legal perspective, the tax system has two forms of stabilization: ad hoc legislation and automatic stabilizers. The main advantage of ad hoc legislation, such as enacting a law to lower tax rates as a response to a recession, is the design of a tailored response to particular economic conditions. This process involves a significant amount of discretion on the part of policymakers. Oftentimes, however, it takes too long to accomplish the desired fiscal result through ad hoc legislation. On the other hand, the tax system can respond to fluctuations in the business cycle automatically. When the tax base, commonly in the form of profits, shrinks during a recession, the tax burden subsequently decreases. Even so, automatic responses may be less accurate because changes in salaries are not always aligned with the business cycle. While the quicker, automatic response to macroeconomic instability may be more effective, a slower, discretionary response might be more accurate.

Scholars have used macroeconomic analysis to analyze, understand, and design legal rules and institutions, including in the taxation context.<sup>7</sup> More specifically, empiricists focused on tax legislation, tax reforms, and the effect of automatic and discretionary stabilizers. These same empiricists, however, often do not consider judicial decisions and their ability to effectively implement tax legislation.<sup>8</sup> The potential macroeconomic role of the courts has not been discussed—at least, not enough—in the long-term public and academic debate over macroeconomic policy. One welcome exception is Yair Listokin, whose articles and recent book discuss the potential macroeconomic role of the courts to implement tax legislation that acts as a response to variations in the business cycle.<sup>9</sup>

Judges can react faster than the legislature while still exercising discretion through individualized court decisions. These decisions

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7. Yair Jason Listokin, *Stabilizing the Economy Through the Income Tax Code*, 123 TAX NOTES 1, 1–2 (2009) [hereinafter Listokin 2009]; Yair Listokin, *Equity, Efficiency, and Stability: The Importance of Macroeconomics for Evaluating Income Tax Policy*, 29 YALE J. REG. 45, 56–57, 60 (2012) [hereinafter Listokin 2012]; Joy Sabino Mullane, *Perfect Storms: Congressional Regulation of Executive Compensation*, 57 VILL. L. REV. 589, 622–24 (2012); see also *infra* Part I providing additional examples.

8. See examples in Part I.

9. YAIR LISTOKIN, LAW AND MACROECONOMICS: LEGAL REMEDIES TO RECESSIONS 15–20, 156, 159–60, 162, 186–97 (2019) [hereinafter LISTOKIN 2019]; see, e.g., Yair Listokin, *Law and Macroeconomics: The Law and Economics of Recessions*, 34 Y. J. REG. 791, 837–39 (2017). I engage further with Listokin's work in a separate work-in-progress, that builds on my current empirical findings and offers a normative perspective on the potential role of tax judges during economic crisis.

frequently carry fiscal implications.<sup>10</sup> Furthermore, because judges regularly make determinations regarding the outcome of cases, the stabilizing effect of their decisions has the potential to be immediate. Even if it takes the legislature and the judges the same amount of time to identify the stage in the business cycle, a judicial decision is often reached more quickly and efficiently than the typical legislative process. Moreover, the judicial decisions often result in the immediate implementation of the decision. This is in contrast to the typical legislative process which may delay the implementation of such policies.

In this study, I assess whether judges who decide civil income tax disputes respond to the business cycle, and if so, how they respond. In other words, do business cycles affect judicial decision-making in cases that bear fiscal consequences? If so, do judges respond in a way that may potentially stabilize the business cycle? By doing so, I provide the first step in the analysis of the stabilization potential of tax institutions. I test these questions using regression analysis. I offer several ways of coding the main independent variable, the business cycle, which consider the way judges identify it.

The main empirical finding from this data set is counterintuitive and surprising. The empirical analysis suggests that business cycles not only seem to affect judges' decisions in tax disputes, but they also seem to manifest in decisions that have a destabilizing and pro-cyclical effect on the economy. Counter to the theoretical prediction, judges favor the tax authorities during economic downturns and favor the taxpayers during economic upturns. This decision-making pattern on the part of judges may exacerbate economic instability, which is the opposite of the desired outcome according to Keynesian theory.

This result has several normative implications. First, when judges employ macroeconomic policy of any kind in their decision-making process, they act as quasi-legislators. But judges are not appointed to act as legislators. What are the jurisprudential and separation of powers implications of judges implementing macroeconomic policy? Second, what should be the required level of macroeconomic proficiency of judges for reaching informed stabilizing decisions that would not harm the economy? Third, what cooperation mechanisms are available to the legislature and the judiciary to promote economic stability? And fourth, is a stabilizing fiscal response even desirable for resolving downturns in the business cycle? An empirical-positive foundation is necessary to better address these normative questions and concerns. This Article lays

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10. Although tax cases may represent a small fraction of total tax disputes, judicial decision-making in tax cases directly affects legal results outside of court. This also affects taxpayers' incentives. I refer to this idea again in Section II.A.

out the initial foundation required in order to consider the greater normative discussion.

This Article is organized as follows: Part I focuses on the tax system as a fiscal stabilizer. Part II sets forth the theory that underlies my hypotheses in this study, according to which judges respond to macroeconomic fluctuations when deciding tax cases and may act as fiscal stabilizers. Part III describes the methodology I used in this study, detailing primarily the method I used to code the business cycle variable in this context and in the research hypotheses. Part IV presents the results, and Part V discusses the results. Then, I offer concluding remarks on how these findings contribute to the larger normative discussion.

### I. THE STABILIZING POWER OF THE TAX SYSTEM

The tax system is a dominant and forceful fiscal tool. As such, it functions as a potential countercyclical fiscal stabilizer. Aligned with Keynesian macroeconomic theory, levying taxes lowers available income, which in turn, lowers the aggregate demand and the product level in the market. Conversely, lowering taxes increases the available income, which increases the aggregate demand and the product level in the market.<sup>11</sup>

The tax system defines the tax base and tax rates, which together determine the tax burden. It also includes tax expenditures<sup>12</sup>—e.g., deductions, credits, exemptions, preferential tax rates, and allowances for tax deferral—which lower tax collection. Thus, these expenditures act as a substitute for direct government spending.<sup>13</sup> The tax system also defines the tax base—meaning, what activities are subject to taxation—and tax rates. Together the tax base and the tax rate determine the tax burden—meaning, the taxes owed.

A stabilizing tax policy is composed of two primary aspects: (1) the

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11. See Listokin 2009, *supra* note 7, at 2 (noting that changes in tax policy can have a larger stabilizing effect than the size of the change itself, because of the “Keynesian Multiplier Effect.” This way, even when the product level goes up, the income level will not rise in the same rate, because of taxes; and vice versa); see MANKIW, *supra* note 2, at 292–95 (finding that increasing government purchasing leads to higher income, causing higher consumption); see also WILLIAM J. BAUMOL & ALAN S. BLINDER, *MACROECONOMICS: PRINCIPLES AND POLICY* 225 (11th ed., 2009) (addressing government transfer payments as the opposite of taxes and a way to add to earned income); see also Listokin 2012, *supra* note 7, at 51–53 (describing the Keynesian multiplier effect as having a larger stabilizing or destabilizing effect than government officials expect).

12. Several examples of tax expenditures are the deduction of health insurance costs incurred by the employer, earned income tax credit (EITC), and the deduction of charitable contributions. See, e.g., *Credits and Deductions for Individuals*, INTERNAL REVENUE SERVICE, <https://www.irs.gov/credits-deductions-for-individuals> [<https://perma.cc/795J-PSLW>] (last visited Nov. 31, 2020).

13. See Listokin 2012, *supra* note 7, at 60–61 (finding that the government can either fund health insurance or allow for a deduction of health insurance costs, so taxable income is lower).

time lag between identifying the problem and the policy's actual influence, and (2) the degree of discretion in operating stabilizing means, meaning whether it is an automatic stabilizer or a discretionary stabilizer. These characteristics vary across the different stabilization tools. The general notion regarding stabilization is that there is a tradeoff between the degree of discretion and the speed of the response to macroeconomic instability. In other words, while the swifter automatic response will generally be more effective, a slower discretionary response might lead to a more accurate stabilizing outcome.<sup>14</sup>

The tax system has two forms of stabilization: ad hoc stabilizing legislation and automatic stabilizers. An ad hoc response is the enactment of tax laws in response to the macroeconomic environment. Automatic stabilizers are tax laws initially designed to respond to the macroeconomic environment without the need for further legislation or policymaking.<sup>15</sup>

Ad hoc tax stabilizing legislation can establish and change tax rates and the tax base in a stabilizing manner. In other words, the legislature has the ability to raise or lower tax rates and to expand or narrow the tax base to promote fiscal stabilization. Changes to tax rates and the tax base are means of discretionary stabilization because their enactment requires a governmental act. The primary advantage of ad hoc legislation is that it allows for the tailoring of the response depending upon the corresponding stage of the business cycle.<sup>16</sup> The process of implementing tax legislation involves discretion and experts' deliberation over the characterization of the business cycle and the desired fiscal response. Therefore, a discretionary response is potentially more accurate.

On the other hand, the primary shortcoming of discretionary fiscal legislation is the time it takes to implement and achieve the desired fiscal result. This time lag consists of: (1) the time spent identifying the appropriate stage in the business cycle;<sup>17</sup> (2) the time it takes to design

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14. Listokin 2009, *supra* note 7, at 4–5; Listokin 2012, *supra* note 7, at 55.

15. Milton Friedman, *A Monetary and Fiscal Framework for Economic Stability*, 38 AM. ECON. REV. 245 *passim* (1948); Robert M. Solow, *Rethinking Fiscal Policy*, 21 OXFORD REV. ECON. POL'Y 509, 509–14 (2005).

16. See LISTOKIN 2019, *supra* note 9, at 16 (“But macroeconomic considerations should dictate legal decisions only when the decision will clearly increase spending and when the macroeconomically desirable legal ruling requires little sacrifice of other legal goals, such as equity.”).

17. Historically, the National Bureau of Economic Research (NBER) determined the peak and trough dates of the business cycles approximately six to twenty-one months after that date, even though “there is no fixed timing rule.” The NBER uses macroeconomic indicators such as real GDP, employment, and real income to identify the stages of the business cycle. See *Business Cycle Dating*, NAT'L BUREAU ECON. RSCH., <http://www.nber.org/cycles/recessions.html> [<https://perma.cc/M9HJ-DPLA>] (last visited Nov. 2, 2020); *The NBER's Business Cycle Dating*

and pass the legislative response, which may be prolonged as a result of political or technical reasons;<sup>18</sup> and, (3) the time between the initial implementation and initial results are seen. Consequently, by the time the legal response is implemented, oftentimes it no longer stabilizes the business cycle. This results in unintended destabilizing effects that might worsen the recession or expansion.<sup>19</sup> Even when there are no delays in the process, the actual means of stabilization implemented might differ from the one originally designed due to the political process of implementing policy. Accordingly, although ad hoc legislation might be designed more accurately, the legislative process has intrinsic difficulties casting doubt on its timely implementation.

Alongside discretionary fiscal stabilizers, there are also automatic stabilizers which can be designed and implemented to reach stabilizing results. Economists argue that automatic stabilizers are preferred compared with discretionary ones—and, hence, frequently advocated for—because they offer a quicker response to the business cycle.<sup>20</sup> For example, the tax system can be designed to respond automatically to macroeconomic parameters serving as indicators of the business cycle. Another example of an automatic stabilizer is transfer payments, such as unemployment compensation, which grow as the levels of employment, income, and product decline.<sup>21</sup>

Several types of taxes, such as income taxes and consumption taxes, also have the ability to respond automatically to changes in the business cycle. For example, the tax base narrows during a recession, because incomes decrease. This, in turn, automatically lowers the tax burden and serves as an anti-cyclical stabilizer. This means if the product level of an economy decreases during a time of recession, income levels will also

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*Procedure: Frequently Asked Questions*, NAT'L BUREAU ECON. RSCH., [http://www.nber.org/cycles/recessions\\_faq.html](http://www.nber.org/cycles/recessions_faq.html); [https://perma.cc/Z52X-D8LS] (last visited Nov. 2, 2020); *US Business Cycle Expansions and Contractions*, NAT'L BUREAU ECON. RSCH., <http://www.nber.org/cycles/cyclesmain.html> [https://perma.cc/776S-2NP5] (June 8, 2020).

18. John B. Taylor, *The Lack of Empirical Rationale for a Revival of Discretionary Fiscal Policy*, 99 AM. ECON. REV.: PAPERS & PROC. 550, 550 (2009); LISTOKIN 2019, *supra* note 9, at 3, 9.

19. Listokin 2009, *supra* note 7, at 4–5; Listokin 2012, *supra* note 7, at 47 (finding these tax policies may have the effect of pulling stimulus funds out of the economy); JOSEPH STIGLITZ, *ECONOMICS OF THE PUBLIC SECTOR passim* (3d ed., 2000); see John B. Taylor, *Reassessing Discretionary Fiscal Policy*, 14 J. ECON. PERSP. 21, 27 (2000) (arguing that action may come from political pressure and the need to be seen as acting amidst an economic downturn); see also Strnad, *supra* note 3, at 173 (noting that a government may enact tax cuts or temporary tax increases in government spending in order to stimulate demand); LISTOKIN 2019, *supra* note 9, at 6, 9.

20. Friedman, *supra* note 15, at 250 (advocating for the government to use automatic adaptations, eliminating discretionary action, in order to offset fluctuations in the supply and demand of money); Robert M. Solow, *Rethinking Fiscal Policy*, 21 OXFORD REV. ECON. POL'Y 509, 509–14 (2005).

21. See Taylor, *supra* note 19, at 26 (noting the increase in spending on unemployment compensation along with a decrease in tax revenue from declining employment).



decrease. Concurrently, the average tax rates will go down, and the tax burden will decrease in an anti-cyclical way.<sup>22</sup> This response does not require an identification of the stage of the business cycle or the implementation of any explicit legislation.<sup>23</sup>

Even so, automatic responses are expected to be less accurate in comparison to their discretionary counterparts. Automatic stabilizers do not necessarily align with the business cycle in terms of timing, type, and size of the required response.<sup>24</sup> An adequate response to the business cycle requires an accurate identification, or at least a good prediction, of the business cycle. Identifying the phases of the business cycle is by no means a trivial task. Economists use various economic indicators to predict, identify, and characterize the stage of the business cycle. Not one of these indicators, however, combined or on its own, is a perfect predictor of the business cycle. As a result, we should expect automatic fiscal stabilizers, which are designed based on one or a few macroeconomic indicators, will not function as sufficient stabilizers. For example, it is expected an automatic response of the income tax to a decline in income levels will affect the business cycle. Yet, this effect is not always timely or stabilizing in nature. Therefore, while a quicker response to macroeconomic instability through an automatic fiscal stabilizer may be more effective, it will ultimately be less accurate than the potentially slower discretionary response.

Many empirical studies investigating the stabilizing effect of the tax system on the economy have primarily focused on tax legislation and tax reform. Despite the number of empirical studies, however, these studies neglected to investigate the macroeconomic effect of judicial decisions that ultimately implement these tax laws. Instead these empirical studies focused on the effect of automatic fiscal stabilizers as compared to the effect of discretionary fiscal stabilizers.

For example, Auerbach and Feenberg considered the effect of federal taxes, specifically individual income and payroll taxes, as automatic stabilizers of income fluctuations. The results of their study showed that direct individual taxation can offset two to eight percent of the shock to GDP. Their findings highlight the fact that despite the changes in the American economy and American tax system throughout the years, there has not been a significant change in the role of the tax system as an automatic stabilizer over time. They also suggested that progressive

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22. Strnad, *supra* note 3, at 173; MANKIW, *supra* note 2, at 287; Stiglitz, *supra* note 19.

23. See Listokin 2012, *supra* note 7, at 53, 56 (arguing that the stabilization effect of the larger income tax rate and government spending rate having an automatic effect).

24. LISTOKIN 2019, *supra* note 9, at 160–62 (finding that some of the U.S. states and European countries that have constitutional budget restrictions are limited in their ability to pursue fiscal stabilization, especially during an economic downturn).

taxation would have an automatic stabilizing effect through the work supply.<sup>25</sup>

Taylor studied whether automatic stabilizers should be favored over discretionary stabilizers. After reviewing empirical evidence on tax benefits, the response of automatic stabilizers, and monetary policy in times of zero interest rates, he concluded that countercyclical discretionary fiscal policy should not be revitalized.<sup>26</sup>

Mabbett and Schelkle discussed whether the Lisbon Strategy, which supports reform of tax-benefit systems, and the fiscal philosophy of the EU's Economic and Monetary Union (EMU) that only automatic stabilizers built into tax-benefit systems should be allowed to smooth aggregate income, fit together. They found tax reform might interfere with the stabilizing potential of tax-benefit systems.<sup>27</sup>

Dolls et al. compared the effectiveness of the European Union (EU) and U.S. tax and transfer systems to provide income insurance through automatic stabilization in the last financial crisis. They found automatic stabilizers absorbed a larger portion of the income shock and the employment shock in the EU than in the United States. Also, these anti-cyclical responses had a larger stabilizing effect on the aggregate demand in the EU than in the United States, although the use of automatic stabilizers in European countries is heterogenous. They also considered whether countries with weak automatic stabilizers enact larger fiscal stimulus programs but did not find supporting evidence.<sup>28</sup>

McKay and Reis measured the effect of tax and transfer programs on stabilizing the business cycle. They found that transfer programs, which are automatic stabilizers, had a stabilizing effect on economic output levels, while lowering taxes or reducing taxes' progressivity did not have a stabilizing effect on the business cycle.<sup>29</sup>

Galle and Klick focused their research on the state level of taxation, rather than on the federal level of taxation. States' budgets are procyclical because during times of recession, tax revenue decreases and the

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25. See Alan J. Auerbach & Daniel Feenberg, *The Significance of Federal Taxes as Automatic Stabilizers*, 14 J. ECON. PERSP. 37, 37 (2000) (arguing that in order to reduce changes in after-tax income, a progressive income tax and a high marginal tax rate should be used).

26. See Taylor, *supra* note 18, at 551 (listing the tax rebates in 2001 and 2008 as clear countercyclical discretionary policy periods).

27. Deborah Mabbett & Waltraud Schelkle, *Bringing Macroeconomics Back to the Political Economy of Reform: The Lisbon Agenda and the 'Fiscal Philosophy' of the EMU*, 45 J. COMMON MKT. STUD. 81, 86 (2007).

28. Mathias Dolls et al., *Automatic Stabilizers and Economic Crisis: US vs. Europe*, 96 J. PUB. ECON. 279, 281 (2012).

29. Alisdair McKay & Ricardo Reis, *The Role of Automatic Stabilizers in the U.S. Business Cycle*, 84 ECONOMETRICA 141, 141 (2016).

recession worsens.<sup>30</sup> But a state's decision to raise taxes or borrow funds to address budgetary concerns may result in negative migration or public protest.<sup>31</sup> Therefore, Galle and Klick argue that states need federal assistance to address recessions because they cannot implement stabilizing policy by themselves. Due to difficulties in anti-cyclical implementation of federal programs, policymakers should utilize automatic fiscal stabilizers, such as the state Alternative Minimum Tax (AMT).<sup>32</sup> The AMT liability increases as a taxpayer's income increases. While state income taxes may be deductible from the taxpayer's federal income tax liability and therefore act as a federal subsidy,<sup>33</sup> the AMT liability is not deductible. Thus, the AMT serves as an automatic fiscal stabilizer. During recessions, fewer taxpayers are subjected to the AMT, which in turn causes the federal tax subsidy to increase and subsequently instigates public pressure to increase government expenditure. The AMT can encourage the government to save during times of expansion and to spend during times of recession.

In comparison with empirical studies on individual income taxes, Buettner and Fuest studied how effective the corporate income tax is as an automatic stabilizer. They found the corporate income tax offsets eight percent of the effect of the economic shock on the corporate income. This stabilizing effect is not constant throughout the business cycle and tends to rise during recessions.<sup>34</sup>

To conclude this Part, I will note existing empirical studies on fiscal stabilization focused on stabilizers designed by the legislature, whether discretionary or automatic. This Article sheds light on another aspect of the stabilizing effect of the tax system, as it focuses on the judiciary, which has not yet received significant theoretical or empirical attention.

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30. Brian Galle & Jonathan Klick, *Recessions and the Social Safety Net: The Alternative Minimum Tax as a Countercyclical Fiscal Stabilizer*, 63 STAN. L. REV. 187, 191 (2010). For a discussion on the pro-cyclicality of state budgeting, see Yilin Hou, *Fiscal Reserves and State Own-Source Expenditure in Downturn Years*, 33 PUB. FIN. REV. 117, 123 (2005).

31. Galle & Klick, *supra* note 30, at 190.

32. For a description of the way the AMT operates, see Galle & Klick, *supra* note 30, at 191, 211–19. Galle & Klick focus on microeconomic, rather than macroeconomic, theory to analyze this social insurance mechanism. See *id.* at 190, 192–95. The authors suggest designing a policy where wealth is pushed from times of economic expansion to times of recession, as in the case of the AMT, acts as an expanding policy and increases social welfare. *Id.*

33. See I.R.C. § 164 (setting forth an itemized deduction of certain types of taxes from a taxpayer's income). In 2017, Congress implemented a broad tax reform and enacted the Tax Cuts and Jobs Act (2017) which limits the state and local taxes deduction to \$10,000 (the SALT cap).

34. Thiess Buettner & Clemens Fuest, *The Role of the Corporate Income Tax as an Automatic Stabilizer*, 17 INT'L TAX & PUB. FIN. 686, 686 (2010).

## II. THE EFFECT OF THE MACROECONOMIC ENVIRONMENT ON JUDICIAL DECISION-MAKING IN TAX CASES

### A. Theory

As stated previously, the tax system can be used as a fiscal stabilizer in two primary ways: ad hoc legislation and automatic stabilizers. On the one hand, ad hoc legislation can be designed more accurately, but the entire process takes time. On the other hand, automatic stabilizers act instantly but might be less accurate due to the lack of discretion and oversight in their operation.

Accordingly, legal institutions, which include in this context both judicial decisions in tax disputes and tax authorities' determinations, are an additional, quite interesting fiscal tool.<sup>35</sup> This tool could be characterized as a concrete fiscal decision made by a fiscal expert in a dispute between a taxpayer and the government. Judicial decisions are frequently reached faster than the legislature can enact new laws resulting from the exercised discretion through the decisions of individual policymakers.<sup>36</sup> Further, judicial decisions are made with greater frequency in comparison to the implementation of legislation and can therefore provide a continuous stabilizing response to changes in the business cycle.

It was surprising to find there are no theoretical or empirical studies on the fiscal stabilizing potential of judicial decision-making. Such articles would complement the theoretical and empirical discussion in the realms of judicial decision-making and fiscal policy.

Several theoretical difficulties might stem from the claim regarding the fiscal stabilizing potential of judicial decision-making. First, this stabilizing tool and its stabilizing potential are solely dependent upon the disputes brought to court and resolved at the tax authority's level. Tax litigation is not a dominant part of the economic activity in the judicial realm. Frequently, those involved in tax disputes go to great lengths to avoid litigation. Accordingly, one might argue this potential did not receive much attention in the macroeconomic and judicial decision-making literature because the macroeconomic impact of judicial and quasi-judicial decisions in tax cases might not be of significance. However, court decisions in tax disputes—as in other areas—affect the economic behaviors of unrelated parties. This institutional effect occurs

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35. *But see* LISTOKIN 2019, *supra* note 9, at 19–20 (focusing on the use of legal policies).

36. Even though some time passes from the initiation of the dispute until it is resolved in court, a stabilizing judicial decision is one which responds to the current stage of the business cycle and not to the macroeconomic environment at the time of initiation.

in the “shadow of trial.”<sup>37</sup> Taxpayers and tax assessors internalize both existing court decisions and anticipated ones. Therefore, the expected impact of court decisions is broader and does not affect only the immediate parties involved in the dispute.

Second, even if judges consider the business cycle in their rulings, they are limited when these rulings have a binding power. If a judge decides a case in a way that promotes stabilization, fiscal stabilization at the time of the decision might be promoted; however if this decision becomes precedent, it may become destabilizing in the future when the business cycle has progressed to a different stage. For example, an expanding fiscal decision—one that is in favor of the taxpayer—during a recession is anti-cyclical and stabilizing but following the same decision in times of expansion will have pro-cyclical and destabilizing effects. If judges understand this potential consequence, they should not be guided by macroeconomic considerations and only follow the law. Even so, this study considers district courts, courts of first instance. Their rulings are neither binding nor precedential, unlike appellate court rulings.<sup>38</sup>

In this study, I attempt to narrow the existing gap in the macroeconomic literature regarding judicial fiscal responses and the stabilizing potential of implementing stabilizing macroeconomic policy in tax disputes. I do so by measuring the effect of the macroeconomic environment on judicial decision-making in tax cases.<sup>39</sup> The findings, in

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37. This concept was originally discussed and developed in Robert H. Mnookin & Lewis Kornhauser, *Bargaining in the Shadow of the Law: The Case of Divorce*, 88 YALE L.J. 950 (1979). In the criminal plea-bargaining context, see also Oren Bar-Gill & Oren Gazal Ayal, *Plea Bargains Only for the Guilty*, 49 J. L. & ECON. 353 (2006); Stephanos Bibas, *Plea Bargaining Outside the Shadow of Trial*, 117 HARV. L. REV. 2463, 2466 (2004). Criminal procedure is a good comparison because these are also cases where the government is a party. See Bibas, *supra*, at 2464 (offering examples). Many subsequent articles have taken up this idea in the civil context. See, e.g., Robert Cooter et al., *Bargaining in the Shadow of the Law: A Testable Model of Strategic Behavior*, 11 J. LEGAL STUD. 225 (1982); George L. Priest & Benjamin Klein, *The Selection of Disputes for Litigation*, 13 J. LEGAL STUD. 1, 1–2 (1984); Steven Shavell, *Suit, Settlement, and Trial: A Theoretical Analysis Under Alternative Methods for the Allocation of Legal Costs*, 11 J. LEGAL STUD. 55, 56 (1982).

38. Even so, this difficulty is not fully resolved, since district court decisions might turn to precedent if they are affirmed by the Supreme Court.

39. Two empirical studies researched the potential impact of judicial decisions and the business cycle in other legal fields. Donohue & Siegelman studied the effect of the unemployment rates on the volume of litigation in employment discrimination cases. They observed an anti-cyclical response: judges awarded higher compensation amounts to employees subjected to discrimination during recessions (which are correlated with longer unemployment periods). This high expected value of filing suit during recessions results in more litigation. At the same time, more weak cases are filed, which results in a lower win rate, in times of recession. See John J. Donohue III & Peter Siegelman, *Law and Macroeconomics: Employment Discrimination Litigation Over the Business Cycle*, 66 S. CAL. L. REV. 709, 711, 719 (1993); Peter Siegelman & John J. Donohue III, *The Selection of Employment Discrimination Disputes for Litigation: Using Business Cycle Effects to*

turn, can allow for and promote further theoretical and empirical discussions of the stabilizing potential of the courts.

After laying the theoretical foundations and before introducing my empirical study and findings, I briefly review two positive hypotheses raised in other legal empirical literature regarding judges' responses to business cycles in tax cases. These hypotheses are not based on macroeconomic theory and are different than the current study.

*B. Empirical Research on Macroeconomics and Tax Decision-Making*

Brennan, Epstein, and Staudt conducted two empirical studies on the effect of macroeconomic variables on judicial decision-making in the U.S. Supreme Court during the 1920s and 1930s. They raised two hypotheses. The first hypothesis was based on a cooperation theory of judging. According to this hypothesis, during recessions judges will give deference to the government by deciding in favor of it. Because judges do not specialize in economics, they would support the government by giving deference to it. This means that judges will support the government's economic policy by favoring the government more frequently during times of crisis compared with ordinary times.<sup>40</sup>

The second hypothesis proposed by Brennan, Epstein, and Staudt was based on an informational theory of crisis jurisprudence. According to this hypothesis, judges prefer a growing economy than one that suffers from recessions. Because judges could not apply fiscal policy to directly affect the economy, they communicated their dissatisfaction of the government's economic policy through judicial decisions. Therefore, during a "regular" recession—i.e., one not reaching the level of a depression—judges will respond as voters and will decide in favor of the taxpayer and not the government. They will do so to signal to the government they do not approve of its flawed economic policy which resulted in the recession. During economic upturns, judges will signal their approval of the government's economic policy by siding with the government. The prediction would be different during extreme economic circumstances that occur as a result of an exogenous shock and not

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*Test the Priest-Klein Hypothesis*, 24 J. LEGAL STUD. 427, 428–30 (1995). Bachmeier, Gaughan & Swanson reached similar findings in their research on the effect of macroeconomic indicators (GDP, consumption levels, inflation rates, unemployment rates, and interest rates) on litigation in antitrust, bankruptcy, contracts, body injuries and product liability. They analyzed the data using different models, each time with a different explanatory macro variable. They found GDP, consumption levels, and inflation rates had an anti-cyclical effect on litigation. When an economic shock, connected to one of these variables, occurred, more cases were litigated in the above-mentioned legal areas. Lance Bachmeier et al., *The Volume of Federal Litigation and the Macroeconomy*, 24 INT'L REV. L. & ECON. 191, 193–94 (2004).

40. Thomas Brennan et al., *The Political Economy of Judging*, 93 MINN. L. REV. 1503, 1516–17 (2009).

because of the government malfunction (e.g., the Great Depression). During extreme economic conditions, judges may be inclined to decide in favor of the government as a way to assist in mitigation of the economic crisis.<sup>41</sup>

This Article takes a different theoretical approach than these articles. I propose focusing on tax judges' potential as fiscal stabilizers. The first step in the analysis of whether tax judges have the potential to act as fiscal stabilizers is to consider whether their decisions follow a pattern that corresponds with a macroeconomic theory.

### III. METHODOLOGY

Next, I turn to the empirical analysis. First, I describe the research design, the relevant variables, and the hypotheses. These hypotheses are based on macroeconomic theory. The following parts of this study focus primarily on the empirical results—descriptive statistics and the results from the regression model—followed by their analysis.

#### A. *The Legal Process*

This study focuses on judicial decisions in income tax cases decided by Israeli district court judges from 1993 to 2010. These disputes were between taxpayers and the Israeli Tax Authority (tax authority). Tax procedure in Israel is as follows. The Israeli Income Tax Ordinance determines whether a taxpayer is required to file an annual tax report in which they state their income for the preceding tax year. Other tax information, such as income sources and filing status, is attached to this report.<sup>42</sup> A tax assessor can confirm or deny the taxpayer's report. In certain circumstances, the tax assessor will prepare a tax report on the tax authority's behalf.<sup>43</sup> If the taxpayer does not agree with the assessor's

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41. Thomas Brennan et al., *Economic Trends and Judicial Outcomes: A Macrotheory of the Court*, 58 DUKE L.J. 1191, 1195, 1212 (2009) [hereinafter Brennan et al., *Economic Trends*]. Two other articles have already discussed Brennan et al., *Economic Trends* as part of a symposium on judicial decision-making held at Duke University School of Law in 2009. See Scott Baker et al., *Justices as Economic Fixers: A Response to A Macrotheory of the Court*, 58 DUKE L.J. 1627 (2009); see Ernest A. Young & Erin C. Blondel, *Does the Supreme Court Follow the Economic Returns? A Response to A Macrotheory of the Court*, 58 DUKE L.J. 1759 (2009). They have raised several concerns regarding the authors' argument and analysis. First, the theory that underlies the judges-acting-as-voters decision-making mechanism is unclear. Second, they measured judges' responses to the macroeconomic environment at the time of oral arguments and not at time of decision. The final decision in the case, however, can take place long after oral arguments, which means that judges' responses might be missing the stabilization point. Finally, they do not consider the normative implications of the behavioral pattern they identified, including on separation of powers and judges' actions being ultra vires.

42. See § 131, Israeli Income Tax Ordinance [New Version], LSI (1961). It should be noted this section deals with self-employed taxpayers and not wage earners subject to a different tax-reporting regime. For rules dictating wage earners, see *id.* § 164.

43. See *id.* § 145 (discussing the Power to assess and the assessment procedure).

report, they can challenge it, at which point another assessor examines the case.<sup>44</sup> If the taxpayer disagrees with the second assessor's decision, they can turn, as a matter of right, to an Israeli district court, a court of first instance in these types of disputes.<sup>45</sup> The cases—referred to as “tax appeals”—are heard by and decided by one judge, unless the Chief District Court Judge orders otherwise.<sup>46</sup> The taxpayer and the tax authority can both appeal the district court's decision, as a matter of right, to the Israeli Supreme Court.<sup>47</sup>

Four characteristics of this legal process make this setting an ideal scheme for quantitative empirical analysis. First, cases are decided by one judge, similar to the procedures of the U.S. Tax Court, so controls to mitigate the impact of panels are not necessary. Second, and similar to U.S. Tax Court procedures, only the taxpayer can file the initial appeal to the district court. This means the current dataset of district court decisions has a practical and methodological advantage over other datasets that include appeals filed by the tax authorities. Third, the nomination process of judges in Israel is not as politically charged in comparison to the judicial nomination process in the United States.<sup>48</sup> Fourth, the economic impact of the Great Recession on the Israeli economy was mild when compared with the effect on the U.S. economy.<sup>49</sup> This fact mitigates any concerns about a significant shock that caused a structural shift in the data.

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44. *See id.* § 150–150a (illustrating the right of objection before the Assessing Officer).

45. *See id.* § 153 (discussing the Right of Appeal).

46. *See id.* § 154 (explaining the Court of Appeal).

47. *See id.* § 157 (describing the Appeal to Supreme Court).

48. Israeli judges are appointed by a committee consisting of nine members: three Supreme Court judges, two lawyers representing the Israeli Bar Association, two parliament members, and two ministers (including the Minister of Justice). This committee composition is meant to neutralize, as much as possible, any political influence on the appointment process. The practical empirical implication of such an appointment process is that it is difficult to specify a good proxy for ideology or for political opinions of Israeli judges. But this is less significant in the Israeli judiciary context.

49. *See generally* KOBİ BRAUDE ET AL., BANK OF ISRAEL, ISRAEL AND THE GLOBAL CRISIS 2007–09 5–7 (September 2011), [https://www.boi.org.il/deptdata/mehkar/crisis/crisis\\_2007\\_2009\\_eng.pdf](https://www.boi.org.il/deptdata/mehkar/crisis/crisis_2007_2009_eng.pdf) [<https://perma.cc/95AR-8YSR>] (reporting Israel's response to the global economic crisis including the policies implemented and the impact on the Israeli financial system and economy). *See also* Dylan Matthews, *Stanley Fischer Saved Israel from the Great Recession. Now Janet Yellen Wants Him to Help Save the U.S.*, WASH. POST (Jan. 13, 2014, 8:58 AM), <https://www.washingtonpost.com/news/wonk/wp/2014/01/13/stanley-fischer-saved-israel-from-the-great-recession-now-janet-yellen-wants-him-to-help-save-the-u-s/> [<https://perma.cc/U5LF-6AK9>] (“No Western country weathered the 2008–09 financial crisis better [than Israel]. For only one quarter—the second of 2009—did the Israeli economy shrink, by a puny annual rate of 0.2 percent. That same period, the U.S. economy shrank by an annual rate of 4.6 percent. Many countries, including Britain and Germany, fared even worse. While they were languishing, by September 2009 Fischer [the leader of the Israeli central bank] was raising interest rates, all but declaring the recession defeated.”).



### B. Data Collection

The sample consists of income tax cases—civil cases, called income tax appeals—which I hand-collected and coded from the most comprehensive Israeli electronic database of tax cases, “Misim Online.”<sup>50</sup> After retrieving a computed list of all income tax appeals taxpayers filed to the district courts,<sup>51</sup> I sampled every fifth case<sup>52</sup> to minimize selection bias.<sup>53</sup> Then I filtered cases that were decided by generalist judges who do not specialize in tax cases. Nine judges decided the 207 cases remaining in the sample (after screening out about 45 cases that were decided by general judges).<sup>54</sup>

The study covers the period between the beginning of the second quarter of 1993 and the end of the third quarter of 2010, which corresponds with the period for which I have reliable business cycle data. During these seventeen-and-a-half years, the Israeli economy had both downturns and upturns: I identified four full business cycles and one-half cycle.<sup>55</sup> This provides an appealing empirical setting for a natural experiment. In addition, the 2008 economic crisis did not have the significant effect on the Israeli economy compared with other countries, such as the United States. Therefore, there is no methodological need to define different business cycles.<sup>56</sup>

I observed different variables in the sample, including case data and judges’ personal and professional attributes.<sup>57</sup> I collected and coded data

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50. The database is called “Misim On-Line” and includes cases from 1987 to today.

51. The search proceeded as follows: for each year I chose the options: Court=“District Court”; Legal Area=“Civil Cases”; Tax Area=“Income Tax”; search word=“Tax”.

52. In comparable studies, seven to fifteen percent of the cases were sampled.

53. Three appeals filed by partnerships were excluded from the list because of the low and negligible frequency.

54. For an explanation on the identification of specialized tax judges, see Orli Oren-Kolbinger, *Measuring the Effect of Social Background on Judicial Decision-Making in Tax Cases*, 22 FLA. TAX REV. 579, 589–96 (2019) (discussing the personal and professional background parameters of judges).

55. The recession period which started during the second quarter of 2008 reached a trough during the first quarter of 2009. It was followed by an expansion period which started during the second quarter of 2009, and the last observation of it was made by Djivre & Yakhin (2011) during the second quarter of 2010. See Yosi Djivre & Yossi Yakhin, *Business Cycles in Israel, 1987–2010: The Facts*, 13 (The Maurice Falk Institute for Economic Research in Israel, the Hebrew University, Working Paper No. 11.02, 2011).

56. *Contra* Brennan et al., *Economic Trends*, *supra* note 41. Also, the global economic crisis which started in 2007 affected many economies. But the Israeli market was less affected than other economies hit by the economic crisis. The Israeli economy was relatively resilient, and different economic indices have improved during 2008–2012 from their values in 2007, compared with other countries. See DANIEL ROSENMAN, BANK OF ISRAEL REPORT: INDICATOR CHANGES IN THE ISRAELI ECONOMY IN COMPARISON WITH OECD COUNTRIES 2 (August 2014), <http://www.boi.org.il/he/Research/DocLib1/PP1405h.pdf> [<https://perma.cc/4VQG-HT9H>].

57. *The Israeli Judicial Authority—Israeli Judges*, GOV.IL, <https://judgescv.court.gov.il/> (last visited Dec. 17, 2020) (search engine, information about current and former judges, in Hebrew).

such as the prevailing party, taxpayer type, taxpayer legal representation, length of decisions (as measured by word count), year the case started, date of decision, and length of proceedings. I also collected and coded information about the judges who decided the cases, including the judge's name, age at the time of appointment, gender, seniority at the time of the decision, age at the time of the decision, previous professional occupation, specialization in tax (if any), law school, place of birth, and religious tendencies. In addition, I gathered data on the main independent variable: the business cycle. I coded the business cycle data in several ways that track the possible ways in which judges identify the changes in the cycle.

Income tax cases provide an excellent case study for investigating the hypotheses presented in this Article about the effect of the macroeconomic environment on judicial decision-making.<sup>58</sup> First, the government is always a party in the dispute. Second, it is known to all—not only to tax scholars and economists—that tax laws affect growth rates and economic stability. Therefore, it is reasonable to assume judges understand their decisions in tax disputes have fiscal consequences.<sup>59</sup>

### C. *The Regression Variables*

The dependent variable is the case outcomes, or more specifically, the judge's level of acceptance of the taxpayer's claim. The main explanatory variable in the regression model is the business cycle, and I discuss several alternative ways of coding it.<sup>60</sup> The model also includes the following control variables: judges' gender, previous occupation, seniority, the taxpayer's type, and court's district.<sup>61</sup>

#### 1. The Dependent Variable: The Judge's Level of Acceptance of the Taxpayer's Claim

The dependent variable is an ordinal variable measured by the judge's level of acceptance of the taxpayer's claim. I divided this variable into three categories that are ordered in a way that has legal meaning: (1) taxpayer claims the court fully accepted, (2) taxpayer claims the court partly accepted, and (3) taxpayer claims the court fully rejected.

This coding manner better reflects the legal reality of nonbinary

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58. See Brennan et al., *Economic Trends*, *supra* note 41, at 1209 (explaining why and how taxation is a good way to investigate the effects of the economy on judicial behavior).

59. FARROKH K. LANGDANA, *MACROECONOMIC POLICY: DEMYSTIFYING MONETARY AND FISCAL POLICY* 10 (2002) (“Adherents of this model, the supply-siders, have claimed responsibility for the US macroeconomic performance of the 1980s through the early 2000s.”).

60. Meaning during which phase in the cycle the case was decided, e.g., during a recession or expansion.

61. Race and nationality of judges were not included in the model because all the judges in the dataset share the same race and nationality.

outcomes. This distinguishes my Article from most of the earlier empirical literature assessing the prevailing party. It allows for an intermediate category standing for cases where the court accepted at least one of the taxpayer's claims. Another way of describing this intermediate category is a place for cases where the court did not decide the outcome in a binary way. Further, this coding manner considers the ordinal feature of potential legal outcomes, while binary division does not. The distribution of case outcomes demonstrates about 40% of cases were not decided completely in favor of either the taxpayer or the government. This emphasizes the importance of including at least one intermediate category when analyzing the prevailing party so relevant empirical information is not lost.

## 2. The Independent Variable: Business Cycles

### a. Measuring the Business Cycle

The economic literature shows measuring the business cycle is no easy task. Different schools of economic thought advocate for different methods of measurement.<sup>62</sup> For example, economists usually declare a recession after two consecutive quarters of downward GDP levels.<sup>63</sup> But during the recessionary period of 2001 in the United States, the two quarters with negative GDP rates were not consecutive.<sup>64</sup> Conversely, the National Bureau of Economic Research (NBER) explicitly declares its determination of the various stages of the business cycle is not subject to a rigid rule of demarcation.<sup>65</sup> In its work, the NBER considers the changes in various macroeconomic variables besides the GDP levels, including the real GDP, unemployment rate, and real wages.<sup>66</sup>

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62. Victor Zarnowitz, *What Is a Business Cycle*, in *THE BUSINESS CYCLE: THEORIES AND EVIDENCE* 3, 3 (Michael T. Belongia & Michelle R. Garfinkel, eds., 1992).

63. See *The NBER's Business Cycle Dating Procedure: Frequently Asked Questions*, NAT'L BUREAU ECON. RSCH. (July 28, 2020), [https://www.nber.org/cycles/recessions\\_faq.html](https://www.nber.org/cycles/recessions_faq.html) [<https://perma.cc/7WZU-BCPG>] (discussing how the financial press states the definition of a recession).

64. See MANKIW, *supra* note 2, at 258–59 (reiterating in 2001 the two quarters with negative GDP rates were not consecutive).

65. See *The NBER's Business Cycle Dating Procedure: Frequently Asked Questions*, *supra* note 63 (discussing what indicators the committee uses to determine peak and trough dates).

66. See *US Business Cycle Expansions and Contractions*, NAT'L BUREAU ECON. RSCH. (June 8, 2020), <http://www.nber.org/cycles/cyclesmain.html> [<https://perma.cc/7JMG-H2RA>] (showing contractions start at the peak of a business cycle and end at the trough); see also *Business Cycle Dating*, NAT'L BUREAU ECON. RSCH., <http://www.nber.org/cycles/recessions.html> [<https://perma.cc/5CBG-PF37>] (last visited Jan. 31, 2019) (explaining how the National Bureau maintains a chronology of U.S. business cycles). In comparison, the Real Business Cycle economists focused on technological shocks as affecting the GDP levels for business cycle estimation, whereas Keynesian economists focused on changes in the aggregate demand as causing

The research on business cycles in Israel has expanded since 2002.<sup>67</sup> For this study, I used the data and analysis from Djivre and Yakhin of the Bank of Israel.<sup>68</sup> In their study, they documented the business cycles in Israel between 1987 and 2010, starting a year-and-a-half after the implementation of the “1985 Stabilization Plan,” and using fifty-one time-series of various macroeconomic variables.<sup>69</sup> They measured the variance in the variables compared to the GDP of Israel during this time and how much the variables were correlated with the GDP, given different time lags. This study also measured the business cycle as a diversion of each series from its trend using several filters offered in earlier economic literature.<sup>70</sup> They identified the peaks and troughs in the business cycles after calculating the data on five main macroeconomic variables: the GDP, the level of investment in fixed assets, the levels of consumption of durable goods, the number of employed persons, and the number of hours each employee worked.<sup>71</sup>

The main difference between the identification method used by Djivre and Yakhin compared with the method in previous studies is that Djivre and Yakhin identified the 1990s, a period associated with a significant wave of immigration in Israel, as a period of two business cycles rather than an extended period of expansion. Djivre and Yakhin identified a

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the fluctuations in GDP levels. See Finn E. Kydland & Edward C. Prescott, *Time to Build and Aggregate Fluctuations*, 50 *ECONOMETRICA* 1345, 1365–66 (1982); see also Edward C. Prescott, *Theory Ahead of Business Cycle Measurement*, in *REAL BUSINESS CYCLES* 83 (James E. Harley et al. eds., 1998); John B. Long Jr. & Charles I. Plosser, *Real Business Cycles*, 91 *J. POL. ECON.* 39, 43 (1983). But Christiano & Eichenbaum (1992) claimed that considering the effect of technological shocks is not enough, because government expenditure also affects the employment supply. See generally Lawrence J. Christiano & Martin Eichenbaum, *Current Real Business Cycle Theories and Aggregate Labor Market Fluctuations*, 82 *AM. ECON. REV.* 430 (1992).

67. Rafi Melnick & Yehudit Golan, *Measurement of Business Fluctuations in Israel*, 67 *BANK OF ISRAEL, DISCUSSION PAPER NO.* 91.01, 3 (Jan. 1991); Rafi Melnick, *Business Cycles in Israel*, 49 *THE ECONOMIC QUARTERLY* 219, 219 (2002) (in Hebrew); Arie Marom et al., *The State-of-the-Economy Index and the Probability of Recession: the Markov Regime-Switching Model*, *BANK OF ISRAEL, DISCUSSION PAPER NO.* 2003.05, (June 2003), <https://www.boi.org.il/deptdata/mehkar/papers/dp0305e.pdf> [<https://perma.cc/XA5A-HCZG>] (discussing how business cycles are measured in Israel and worldwide); Michel Strawczynski & Karnit Flug, *Persistent Growth Episodes and Macroeconomic Policy Performance in Israel*, *BANK OF ISRAEL SURVEY, DISCUSSION PAPER NO.* 2007.08 (July 2007); Polina Dovman, *Recessions in Israel and Macroeconomic and Financial Crises—Their Duration and Severity*, *BANK OF ISRAEL, DISCUSSION PAPER SERIES NO.* 2010.08, (Aug. 2010), <http://www.boi.org.il/deptdata/mehkar/papers/dp1008h.pdf> [<https://perma.cc/F4VK-KU7Q>] (in Hebrew); Djivre & Yakhin, *supra* note 55, at 8 (explaining how business cycles of Israeli economy are measured).

68. See Djivre & Yakhin, *supra* note 55, at 8–32 (highlighting the data and analysis used in the study).

69. See *id.* at 1. Among the variables they covered are variables of the national accounts, labor, money and capital markets, and exchange rates.

70. See *id.* at 12 (explaining the use of principle component methodology).

71. See *id.* at 11–12 (highlighting the principle components analysis).

trough in the second quarter of 1993 after using actual information on GDP and additional macroeconomic variables instead of proxies to economic activity used in previous studies.<sup>72</sup>

b. Coding the Business Cycle

In this Article, I suggest four separate options for coding the independent variable—the business cycle—to estimate its effect on judicial decision-making in Israeli tax cases. Here, I describe them and posit two of the four options are more appropriate for operationalizing the dependent variable for the regression analysis.

*i. Four Categories, in Line with the Traditional Stages in the Business Cycle*

As explained above, each business cycle is comprised of four consecutive stages. To code it, I can refer to it as an ordinal variable with four categories: recession coded as one (1); trough coded as two (2); expansion coded as three (3); and peak coded as four (4). The recession period reflects the time between the peak and the following trough, whereas the expansion period reflects the time between the trough and the following peak.

*ii. Transforming the Four Categories from Subsection i to Two Categories*

This empirical study sets forth a series of natural experiments, in which a treatment group is compared with a control group to investigate how exposure to the treatment affects the outcome. In this study, the business cycle can be treated as a variable describing the relative macroeconomic state of the market, meaning whether the market is generally contracting or expanding.<sup>73</sup> The four categories can thus be transformed into a dummy variable, which has two categories: the market is contracting (recession and trough) being 0; and the market is expanding (expansion and peak) being 1.

But these first two options of coding are based on retrospective identification of the stage in the business cycle. Economic institutions, such as the NBER, identify the stages in the business cycle after sufficient information has accumulated, which takes time. Because this study focuses on judges' responses to the macroeconomic environment at the time of the decision, and not in retrospect, the business cycle variable should reflect this. The theoretical assumption is judges can identify the macroeconomic trend and respond to it. But it is safe to assume judges

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72. See Djivre & Yakhin, *supra* note 55, at 14 n.13–14 (describing an example of a proxy).

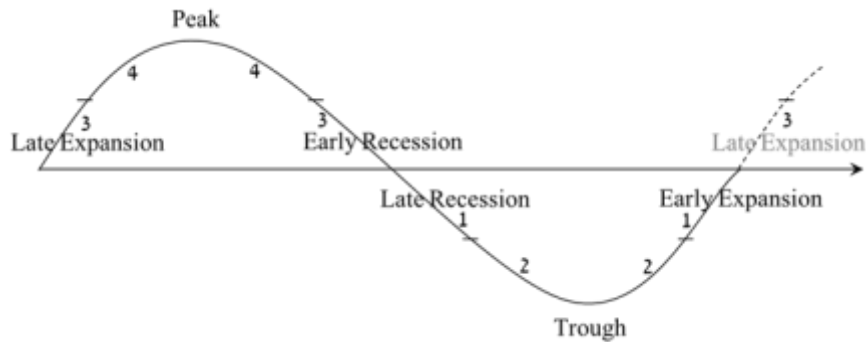
73. See Brennan et al., *supra* note 41, at 1213 (explaining how cycles were incorporated into the statistic model).

can find it difficult to identify exactly when transitions happen, whether from recession to trough and then upward, and from expansion to peak and then downward. I suggest the following two coding options of the business cycle that focus on *the way* judges identify the stage in the cycle, rather than *when* judges identify the stage in the cycle.

*iii. Four Categories, Which Describe the Stages in the Business Cycle as They Are Identified by Judges During the Business Cycle and Not in Retrospect*

Judges might experience difficulties when they need to accurately identify the transition between the various stages of the business cycle. Even so, they can estimate when there is an upturn or a downturn, and when the market is around a peak or a trough.

**Figure 1: Business Cycle Stages as Identified by Judges<sup>74</sup>**



This coding option assumes that when the market begins to move away from the peak area (labeled as 4), it will take some time until judges realize the market is no longer at the peak and economic conditions are instead worsening. At a certain point, judges realize that the market transitions to the early recession stage, which differs from the peak. Now the economic downturn is noticeable, and judges identify a late recession stage. This represents a clear identification that the market is getting closer to a trough. At a certain point, which is not the actual trough, judges will assume things cannot worsen and the market has reached a trough. Only after the market is clearly showing signs of recovery will judges notice the market is no longer at a trough. When they do notice the change, the market will be in an early expansion, which judges perceive as similar to the late recession, because the economic hardship before and after the trough is still significant. Later, the market transitions to a late

74. For this figure, I modified figure 5 in Gary Gorton & K. Geert Rouwenhorst, *Facts and Fantasies About Commodity Futures*, 62 *FIN. ANALYSTS J.* 47, 56 fig.5 (2006), and adapted it to the analysis offered in this Article.

expansion, which is similar to the early recession, because the market is getting better, even if it did not yet reach the peak.

To match the cases in the sample with the corresponding stage in the business cycle, I divided each half-cycle period, between a peak and a trough, and then between a trough and a peak, to four equal parts, as shown in Figure 1, above. I coded each of the four parts according to the economic intuition I described. According to this coding option, the variable is a nominal-categorical one, and not ordinal.

In addition, we can expect judges to identify these stages by observing some economic indicators, such as the unemployment rate or the interest rate. Because the reports on such indicators—whether official or in the media—are somewhat delayed, each stage in the cycle will be identified by the judges as soon as reports are made available. Therefore, I allowed for four different shifts in the business cycle coding, ranging from one to four quarters, and matched the court cases accordingly.<sup>75</sup>

*iv. Transforming the Four Categories from Subsection iii to Two Categories*

Following the rationale of defining Subsection *ii*, I transformed the four categories from Subsection *iii* to a binary dummy variable as well. I combined categories 1 and 2, as defined in Subsection *iii*, which represent an economic contraction (now labeled as 0) and categories 3 and 4, as defined in Subsection *iii*, which represent an economic expansion (now labeled as 1).

I will note that the business cycle variable was found to be statistically significant when coding options (3) and (4) of the business cycle, and when allowing for a one-quarter shift in the data.<sup>76</sup>

In addition, because the business cycle is an index of several macroeconomic variables, one cannot include those variables in the regression alongside the business cycle variable. Doing so will lead to multicollinearity.<sup>77</sup>

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75. For example, a one-quarter shift means that decisions that were made during quarter #1 will be matched to the stage in the business cycle during quarter #2.

76. A two-quarter shift, or more, leads to a decrease in the significance of the business cycle variable. In Part V I explain why I reject these models.

77. An alternative analysis may substitute the business cycle variable with a deficit to GDP ratio variable and the unemployment rate variable.

### c. Control Variables

Based on the theoretical literature on judicial decision-making, the following explanatory variables were included in the analysis as control variables:

1. *Gender of judge*: a dummy variable, coded as either “male” or “female.”
2. *Previous occupation*: a categorical variable, coded as (1) former private practice experience with no (or little) public sector experience, (2) combined private practice and public sector experience, or (3) former public sector experience with no (or little) private practice experience.
3. *Seniority*: a continuous variable, measured as the number of months a judge served in the position when she or he decided the case.
4. *Taxpayer type*: a categorical variable, coded as (1) individual taxpayer, (2) business entity, or (3) combined individual and business entity.
5. *The district where the court sits*: a categorical variable, coded as (1) Jerusalem, (2) Tel-Aviv, (3) Haifa, (4) North, or (5) South.

### D. Hypotheses

Two normative economic hypotheses can be derived from the macroeconomic theories discussed earlier about the way the business cycle affects judicial decision-making in tax cases. Because these hypotheses are grounded in economic theory, it is assumed judges are aware of these theories and they understand, to some extent, that their decisions have fiscal consequences. But I cannot estimate which macroeconomic theory judges’ behavior follows. Therefore, I offer two alternative hypotheses following the two main groups of macroeconomic theories on the business cycle:

(1) According to monetary or “real business cycle” theories, there will be no need for fiscal intervention to stabilize the economy. Therefore, the state of the macroeconomic environment will not affect judicial decision-making in tax cases and judges’ decisions will be noncyclical and independent of the business cycle.

(2) According to the Keynesian theory, judges will reach stabilizing decisions when deciding tax cases. Therefore, the specific stage in the business cycle will affect their decisions in an anti-cyclical and stabilizing way. This means judges will favor the tax authorities in times of expansion and will favor the taxpayers in times of recession.



#### IV. RESULTS

Here, I describe the data, using descriptive statistics, followed by the results from the regression analysis. As part of the estimation process, I estimated four regression models corresponding with the four coding options of the business cycle. To do so, I ran each of the four models four times, accounting for the four shifting options, totaling sixteen regression models. The purpose was to identify the model better explaining the effect of the business cycle on judicial decision-making in tax cases. This model was the one in which the business cycle was coded as described in Subsection *iii*<sup>78</sup> and allowed for a one-quarter shift in the data, meaning it takes the judges one quarter to identify the change.

A one-quarter shift also means a shift in the start and end of the period this study covers. Therefore, although matching the timing of the decision in the original sample with the business cycle data means covering the first quarter of 1993 until the end of the second quarter of 2010, the actual cases which were the basis of the analysis were decided between the second quarter of 1993 and the third quarter of 2010. Nonetheless, the research covers a period of seventeen-and-a-half years.

This Part of the Article focuses on the one specific model mentioned above. But in the discussion, I compare it to the parallel model where the business cycle was coded according to Subsection *iv*<sup>79</sup> and allowed for a one-quarter shift in the data.

##### *A. Descriptive Statistics*

The sample in this study includes 207 decisions in tax disputes decided by nine judges who are considered specialized tax judges in Israeli district courts. The cases were decided from the beginning of the second quarter of 1993 through the end of the third quarter of 2010, as explained above. The main findings are the following:

**Table 1: Distribution of Taxpayers' Appeals by Levels of Acceptance (N=207)**

<i>Court's Acceptance Level of the Taxpayer's Appeal</i>	<i>No. of Cases</i>	<i>% of Cases</i>
The taxpayer's appeal was fully accepted = 0	35	16.92%
The taxpayer's appeal was partly accepted = 1	83	40.14%
The taxpayer's appeal was fully rejected = 2	89	42.94%

78. See *supra* Section III.C.2.b.iii.

79. *Supra* Section III.C.2.b.iv.

Table 1 shows that only 16.92% of appeals, which are filed only by taxpayers, were fully accepted and 42.94% of appeals were fully rejected. The remaining 40.14% of appeals were partly accepted, meaning that at least one of the taxpayer's claims in these cases was accepted.

**Table 2: Distribution of Taxpayers' Appeals by Levels of Acceptance and by the Business Cycle Category (N=207)**

	<i>The Stage in the Business Cycle</i>				<b>Total No. of Cases</b> (% of Cases in Sample)
	Updated Recession (=1) No. of Cases (% of Cases in Sample)	Updated Trough (=2) No. of Cases (% of Cases in Sample)	Updated Expansion (=3) No. of Cases (% of Cases in Sample)	Updated Peak (=4) No. of Cases (% of Cases in Sample)	
Appeal fully accepted = 0	9 (4.35%)	11 (5.32%)	5 (2.42%)	10 (16.92%)	<b>35</b> (16.92%)
Appeal partly accepted = 1	17 (8.21%)	16 (7.73%)	25 (12.1%)	25 (12.1%)	<b>83</b> (40.14%)
Appeal fully rejected = 2	35 (16.91%)	26 (12.55%)	16 (7.73%)	12 (5.75%)	<b>89</b> (42.94%)
<b>Total</b>	<b>61</b> (29.47%)	<b>53</b> (25.6%)	<b>46</b> (22.25%)	<b>47</b> (22.68%)	<b>207</b> (100%)

Table 2 shows that almost 30% of cases were decided during the updated recession period, followed by the updated trough period, with almost 26% of cases. About 22.5% of cases were decided during each of the updated expansion and peak stages. This means that about 55% of cases were decided during periods when the economy was perceived as being relatively in "bad" shape, whereas about 45% of cases were decided during periods when the economy was perceived as being relatively in "good" shape. Moreover, during times of recession and trough, more appeals were rejected, whereas during times of expansion and peak, more appeals were partly or fully accepted.

*B. Econometric Analysis: Ordinal Regression*

## 1. General

In this Article, I analyze the effect of the business cycle in Israel on the judge's level of acceptance of the taxpayer's claim, using an ordinal regression model. I am using this model because the dependent variable—the case outcome—has three categories ordered in a legally meaningful order.

In their studies on the effect of the business cycle on U.S. Supreme Court decision-making in tax cases, Brennan, Epstein, and Staudt coded the dependent variable of the case outcome as binary.<sup>80</sup> Accordingly, they mostly used a logistic regression model for estimation purposes. This means they had to take the range of outcomes and categorize it in a binary way.<sup>81</sup> But doing so may result in a loss of meaningful legal data.<sup>82</sup>

The value of allowing a middle category when coding the dependent variable is clear, because in about 40% of cases the judge decided to partly accept the taxpayer's appeal.

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80. See Brennan et al., *Political Economy*, *supra* note 40, at 1520–21 (describing the statistical models and predictions); Brennan et al., *Economic Trends*, *supra* note 41, at 1211 (explaining the ways the primary dependent variable was coded).

81. See Brennan et al., *Political Economy*, *supra* note 40, at 1520–21 (describing the process for examining variables); Brennan et al., *Economic Trends*, *supra* note 41, at 1220. In their second empirical study, *Economic Trends*, the authors coded the case outcomes dependent variable once as binary and then as continuous. This allowed them to estimate the effect of the business cycle on case outcomes using logistic regression but also using linear regression. For using linear regression, they defined the dependent variable as the number of justices—of the nine Supreme Court Justices—who decided in favor of the taxpayer. But the number of justices is finite rather than continuous and has a top and bottom limit. Therefore, a linear regression is not the best methodology in this circumstance. The authors mentioned they were aware of this difficulty but wished to present a general trend compared with the results received from the logistic regression. See Brennan et al., *Economic Trends*, *supra* note 41, at 1220.

82. See Oren-Kolbinger, *supra* note 55 (explaining how a binary set of outcomes may result in the loss of data).

## 2. Regression Model Results

**Table 3: Ordinal Regression Model: Results**

<i>Independent Variable</i>	<i>Coefficient (Std. Div.)</i>	<i>Odds Ratio</i> <sup>83</sup>	<i>Sig.</i>
The Business Cycle	1.157***	$\frac{\text{odds Recession}}{\text{odds Peak}} = 3.18$	0.006
	1.046**	$\frac{\text{odds Trough}}{\text{odds Peak}} = 2.85$	0.013
	0.457	$\frac{\text{odds Expansion}}{\text{odds Peak}} = 1.58$	0.281
Previous Occupation	1.024*	$\frac{\text{odds Private Practice}}{\text{odds Public Service}} = 2.78$	0.066
	2.117**	$\frac{\text{odds Private \& Public}}{\text{odds Public Service}} = 3.92$	0.052
Gender	-1.029**	$\frac{\text{odds Male}}{\text{odds Female}} = 0.36$	0.039
Seniority			Nonsignificant
District			Nonsignificant
Taxpayer Type			Nonsignificant

*Link Function: Cauchit; N=207; Chi-Square=33.07\*\*\* ; df=10; Pseudo R-square=16.9%; Model Predictability=55.1%; \*p<0.1, \*\*p<0.05, \*\*\*p<0.01*

The main independent variable in the analysis is the business cycle, which was coded in a way that tracks how judges perceive it.

The chi-squared test estimates the significance of the regression model itself, meaning whether the combination of the independent variables affects the dependent variable of the case outcome. The chi-squared value calculated for the model is 33.07 and is statistically significant ( $p=0.000$ ). This means the likelihood that this combination of independent variables explains the dependent variable only by random happenstance is practically zero. The model predictability is 55.1%. The pseudo R-squared is 0.169, although the independent variable of the business cycle

83. The odds of one category of an independent variable over the odds of another category to choose higher categories of the dependent variable.

and most of the control variables are statistically significant. Although the R-squared value is not high, this means there are other potential variables not included in the analysis which might be affecting the case outcomes. As I explain below, this outcome is still meaningful. This is because the claim was not that judges solely follow macroeconomic considerations, but rather these considerations direct judges' decisions alongside the rule of law.

#### V. DISCUSSION AND IMPLICATION

Here, I analyze the results described above and whether the hypotheses can be rejected or affirmed. This way I can assess the positive and, to some extent, the normative implications of the results, as well as the contribution of this study to the existing literature.

The alternate hypotheses were the "independent" hypothesis, where the macroeconomic environment does not affect judicial decision-making, and the "stabilizing" hypothesis, where judges will favor tax authorities in times of expansion and taxpayers in times of recession.

Interpreting the odds ratio shows the business cycle has a statistically significant effect on the level of acceptance of the taxpayer's claim. More specifically, the tendency to favor the tax authorities is higher during recessions, as compared to the tendency to favor taxpayers during expansions. In times of recessions, judges were inclined to choose a higher category of the dependent variable, meaning they rejected more taxpayers' claims (odds ratio=3.18,  $p<0.01$ ). During troughs, judges were inclined to choose a higher category of the dependent variable as well, meaning again that they rejected a larger portion of the taxpayers' appeals (odds ratio=2.85,  $p<0.05$ ). When comparing the odds of deciding in favor of the tax authority during peaks and expansions, the difference was not statistically significant.<sup>84</sup> The observed effect between recessions and troughs regarding favoring the tax authority is very similar, and even slightly stronger during recessions.<sup>85</sup>

Nonetheless, this tendency follows a pro-cyclical trend. This means judicial decisions are more favorable to the tax authority during times of economic downturns and are more favorable to the taxpayers during economic upturns. This is, by definition, an anti-stabilizing fiscal policy.

The alternative regression model, where the business cycle was coded in the binary way of option *iv*,<sup>86</sup> produced the same results. This can serve as a robustness check. As described above, I combined the recession and

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84. The reference category in the regression is the "peak" stage. I also ran the regression with the other three stages as reference categories, and the results follow the same trend.

85. Although one would expect the effect to be the strongest during troughs.

86. *See supra* Section III.C.2.b.iv.

trough into one category and expansion and peak into a second category. When the business cycle is defined this way, there is a statistically significant difference between judges' responses when the economy is generally considered to be good and when the economy is generally considered to be bad. The interpretation of the odds ratio is that judges are more inclined to choose a higher category of the dependent variable—they favor the tax authority—when the state of the economy is considered bad as compared to when the state of the economy is considered good. This also means judges are more inclined to decide in favor of the taxpayer when times are generally considered good. The dual-phase description of the business cycle and the regression results support the more specific results received by using a four-phase business cycle in the regression model.

These positive findings are not in line with any of the two theoretical predictions following macroeconomic theory. The empirical findings are surprising when considering the Keynesian theory (prescribing a countercyclical response) and the other theories (prescribing no response). But the results reveal a pro-cyclical response by judges deciding tax cases, which leads to anti-stabilizing outcomes. This means that courts are failing to realize their stabilizing potential as fiscal stabilizers while actually responding in a way that undermines economic stability. As I propose in this Article, courts can respond—at least potentially—to the business cycle faster than the legislature, while exercising discretion and reaching a more fine-tuned macroeconomic outcome. But it appears the direction of the response is not the one predicted by economic theory.

Although the empirical findings cannot be explained normatively by macroeconomic theory, other positive explanations can be offered to explain this pattern of judicial decision-making. For example, consider the macroeconomic policy designed by Israeli policymakers during times of market instability. This piece of information will complement the interpretation of the empirical findings.

Data from different economies shows developed economies apply anti-cyclical stabilizing fiscal policy whereas developing economies use pro-cyclical fiscal policy.<sup>87</sup> When it comes to the fiscal policy applied by Israeli policymakers, it has been shown to be pro-cyclical over time, although the Israeli economy is categorized as a developed one and one that uses automatic stabilizers.<sup>88</sup> This means Israeli policymakers apply contractionary fiscal policy—mainly, lowering government spending—

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87. Michel Strawczynski & Joseph Zeira, *Cyclicality of Fiscal Policy in Israel*, 5 ISRAEL ECON. REV. 47, 50 (2007).

88. *See supra* note 67.

during economic downturns, although this policy can worsen an economic crisis.

Economists have labeled the findings of the Israeli government's expenditure policy as pro-cyclical.<sup>89</sup> Strawczynski and Zeira found government spending is pro-cyclical, but not to the extent found in earlier studies.<sup>90</sup> Specifically, they showed that over time, especially since the implementation of the Economic Stabilization Program of 1985,<sup>91</sup> the expenditure policy has become relatively more countercyclical.<sup>92</sup> But Israeli fiscal policy is still pro-cyclical, despite this identified improvement. Strawczynski and Zeira suggest that the Israeli economy suffered a trauma because of uncontrollable fiscal policy between 1973 and 1985.<sup>93</sup> This policy led to elevated levels of government expenditure and subsequent deficit, which resulted in a high public debt.<sup>94</sup> The government has been trying to reduce this debt for many years.<sup>95</sup>

These facts can help explain why the government is using recessions, during which tax collection is lower, to reduce expenditures and debt. But this means implementing pro-cyclical policy. Strawczynski and Zeira conclude their article by wondering when the effects of the economic trauma will fade away. They claim minimizing the levels of procyclicality is the first step for the Israeli economy to move toward the implementation of a countercyclical fiscal policy, as is expected from a developed country.<sup>96</sup> Therefore, it is safe to say during the time frame this Article covers, Israeli fiscal policy was pro-cyclical.

A similar hypothesis can be made with respect to the Israeli judges sitting for tax cases. These judges were exposed to the economic trauma and internalized it, which can explain their pro-cyclical response to the business cycle when they decide tax disputes. This hypothesis holds even more if we focus on the six out of nine specialized tax judges who started their judicial careers in the 1970s and 1980s. Moreover, six out of the nine specialized tax judges gained previous professional experience in the public sector prior to their judicial nomination, which could increase their exposure to the government's policy when addressing economic issues.

I will note again the third and fourth regression models, which use the

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89. Strawczynski & Zeira, *supra* note 87, at 55.

90. *Id.*

91. See generally Stanley Fischer, *The Israeli Stabilization Program, 1985–86*, 77 AM. ECON. REV. 275, 275–78 (1987) (offering an assessment of the program the Israeli government implemented to stabilize hyper-inflation while avoiding an increase in unemployment rate); Strawczynski & Zeira, *supra* note 87, at 53.

92. Strawczynski & Zeira, *supra* note 87, at 56, 62.

93. *Id.* at 53.

94. *Id.* at 59–60.

95. *Id.* at 64–65.

96. *Id.* at 65.

four-phase coding and the binary coding of the business cycle, allow for a one-quarter shifting of the judges-business-cycle data points. As discussed above, we should expect a time lag between the actual stage of the business cycle and its identification by the public, and subsequently the judges.<sup>97</sup>

#### CONCLUSION

It is socially and academically important to empirically analyze judges' decisions. The positive findings have normative implications; they provide policymakers with information. Furthermore, these findings can assist in the design of legal rules and institutions that produce more socially desirable outcomes. This empirical study contributes to the existing, although limited, body of knowledge about the relationship between the macroeconomic environment and judicial decision-making, especially in the taxation context. This study is the first to suggest using macroeconomic theory in making normative-economic predictions concerning the potential effect of the business cycle on judicial decision-making in tax cases. It is also the first study to empirically test these predictions.

The fiscal consequences of judges' decisions in tax cases are clear. When judges decide in favor of taxpayers, the taxpayer can consume more, and the aggregate demand may increase as a result. If the tax court decides in favor of the government, taxpayers are in turn able to consume less, and the aggregate demand may decrease as a result. As changes in the aggregate demand define the business cycle, it is important to have a comprehensive understanding of the various factors that affect the aggregate demand.

I offered several ways to methodologically model how judges identify the stage of the business cycle and its changes. I offered an alternative way to describe how judges identify the stage in the business cycle. I found it methodologically preferable to use it over the traditional identification method, which identifies the stages of the business cycle only retroactively. Further, I coded the dependent variable—the case outcome—as an ordinal variable, rather than a binary one, to capture more information about the prevailing party. This method of coding

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97. As mentioned in Section IV.B., I ran the regressions for models three and four, allowing also for a two-, three-, and four-quarter shifting of the judges-business-cycle data points. This means I shifted the beginning and ending of the time period this study covers, accordingly. Of course, in all cases it was seventeen-and-a-half years. I did so to identify the model best describing the relationship between the main explanatory variable of the business cycle and the dependent variable of the case outcome. The best fit was the model in which the business cycle variable was defined according to the third option. In this model, the judges identify the changes in the economic environment as they occur, and not retroactively as economic experts; and it takes them three months—a quarter of the year—to identify the current stage.



better reflects legal reality, especially when a sizeable portion of the cases are not decided in a binary way.

The literature on law and macroeconomics is limited, especially in the context of judicial decision-making. This study introduced normative hypotheses relying on macroeconomic theory. According to these hypotheses, judges will use anti-cyclical fiscal policy for stabilizing purposes or will not respond at all. The main finding derived from the econometric model was rather surprising: there was positive support to the claim that judges decide tax cases in a pro-cyclical way. The explanation I suggested for this positive finding is judges implement the Israeli government's policy to respond to pro-cyclical economic fluctuations. Judges do so because this is the macroeconomic policy with which they are familiar.

Although the business cycle variable coefficient, other control variables, and the high prediction rate of the model were statistically significant, the explained variance rate was not very high. This means there is a possibility that other variables the model does not cover may affect the level of acceptance of the taxpayer's claim. Specifically, the classic and basic normative model of judicial decision-making—legal reasoning—cannot be rejected.

This study was positive, rather than normative. Even so, the positive findings can provide decision-makers with data and guidance on how to design laws and institutions, especially as to whether the macroeconomic environment is present in courts. The empirical findings suggest judges do respond to the business cycle. Judges use discretion when they decide legal disputes. Their decisions have the opportunity to provide a faster response to the stage in the business cycle, especially when compared to the implementation of legislation. Therefore, judges' decisions can act as fiscal stabilizers. However, at least in the Israeli setting, their stabilizing potential is not fully realized, for judges frequently make pro-cyclical and destabilizing decisions.

I plan to expand this research in two main directions: empirical and normative. First, I will replicate the current research design and test the hypotheses I developed in this study using additional datasets, mainly of cases that were decided in the U.S. Tax Court. Doing so will offer both a U.S. domestic point of view and an opportunity to compare judicial behavior in jurisdictions that vary in their economies and legal traditions. Second, I will discuss the normative implications of the empirical findings. Given the stabilizing potential of the judiciary, I will analyze whether judges should consider the macroeconomic environment, and if so, how should we design this stabilizing mechanism. I will focus on issues, such as the impact on separation of powers, requiring judges to be economically proficient, and requiring the judiciary to be coordinated

with the other branches and within the courts.<sup>98</sup>

Finally, the world is currently facing a global pandemic which is causing a world-wide economic crisis. Reflecting on the fiscal stabilizing potential of the judiciary can equip governments with a broader spectrum of tools they may utilize, in addition to the more traditional fiscal stabilizers they have been implementing in attempt to slow down the current deep recession. Therefore, I would recommend decision-makers to take advantage of this opportunity and not overlook this stabilizing fiscal potential of the courts.

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98. Orli Oren-Kolbinger, *Tax Judges' Responses to Economic Crises: A Normative Analysis* (working paper, manuscript available upon request from the author).