

Efficient Legal Rules in a Cyclical Economy

By Yair Listokin and Peter Bassine*

Abstract:

This article argues:

1. The economic effects of many legal rules change over the business cycle.
2. Most legal rules do not change over the business cycle.
3. The time-invariant legal rule chosen tends to be the rule that performs best in ordinary macroeconomic conditions.
4. The efficient time-invariant legal rule considers both performance in ordinary macroeconomic conditions and performance in recessions.
5. Because recessions cause extraordinary harms, a rule's performance in recessions deserves a surprising amount of weight when calculating the best time-invariant legal rule.
6. The pursuit of efficiency in law and economics needs to change accordingly.

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Introduction

This article argues:

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2. Most legal rules do not change over the business cycle.
3. The time-invariant legal rule chosen tends to be the rule that performs best in ordinary economic conditions.
4. The efficient time-invariant legal rule considers both performance in ordinary economic conditions and performance in recessions.
5. Because recessions cause extraordinary harms, a rule's performance in recessions deserves a surprising amount of weight when calculating the best time-invariant legal rule.
6. The pursuit of efficiency in law and economics needs to change accordingly.

Laws and regulations designed for robust economies often perform miserably in deep recessions. In a healthy economy, the best legal rule from an economic perspective maximizes productive capacity. In a recession, however, spending, and not productive capacity, limits the size of the economy. Recessions also shift incentives, meaning that the efficient legal rule changes with the business cycle for microeconomic as well as macroeconomic reasons. As a result, legal rules that are efficient in a growing economy often waste resources in recessions.

Unemployment insurance ("UI") eligibility rules illustrate the business cycle variability of the efficient legal rule. In robust economies, tight unemployment eligibility rules maximize capacity by encouraging greater labor supply and consequently higher output. In recessions, by contrast, labor supply does not constrain output. Boosting incentives to find work does not increase employment when jobs, not workers, are scarce. Instead, spending ("aggregate demand") is the economy's limiting factor. In recessions, generous unemployment eligibility rules reduce inequality and enhance spending and demand for labor, resulting in higher output.

Previous writing in law and macroeconomics prescribes a "countercyclical legal policy" response to variability in the efficient legal rule over the business cycle.¹ If strict UI eligibility rules raise output in ordinary times but permissive rules raise output in recessions, then UI eligibility rules should be tight in the growth phase of the business cycle but lax in recessions. Legal policy sometimes follows this recommendation.² In the CARES Act passed in March 2020 to mitigate Covid-19's devastating impacts on the economy, Congress changed the legal rule for UI eligibility, expanding UI eligibility to "gig economy" workers who had previously been ineligible.³

But the majority of legal rules do not vary with the business cycle. Business cycle invariance may reflect macroeconomic ignorance, but it may also reflect pragmatism. While critics of countercyclical legal policy agree that the effects of a law change with the business cycle, they reject the idea that this

¹ For a thorough treatment, see YAIR LISTOKIN, *LAW AND MACROECONOMICS: LEGAL REMEDIES TO RECESSIONS* (2019)

² For a prominent example, see modern trends in financial regulation. See Douglas Elliott, Greg Feldberg, and Andreas Lehnert, *The History of Cyclical Macropprudential Policy in the United States* (FEDS Working Paper No. 2013-29, 2013).

³ Coronavirus Aid, Relief, and Economic Security (CARES) Act, Pub. L. No. 116-136, Title II, Subtitle A; *In Focus: Unemployment Insurance Provisions in the Cares Act*, CONGRESSIONAL RESEARCH SERVICE (2020).

variation implies that law and regulation should be time-varying.⁴ If legal and regulatory regimes lack the dexterity to effectively shift gears with the business cycle, then they should not be directed towards countercyclical ends.⁵ Implementing radical changes to a bureaucracy to mitigate a recession, for example, may prove infeasible or even counterproductive.

If laws cannot vary, how should we choose a single legal rule that applies in both recessions and booms? At present, legal analysis prioritizes performance during ordinary economic times—when spending does not constrain the economy. Law and economics, for example, simply ignores the effects of legal rules on aggregate demand. Every prominent model in law and economics implicitly assumes that spending plays no role in determining output.⁶ Instead, spending is treated entirely as a cost to be minimized. Once this assumption is made, legal regimes that maximize capacity become efficient, even if these regimes fare poorly in recessions.

Other modes of legal analysis fare only slightly better. While other perspectives recognize the possibility of ancillary effects from legal rules,⁷ they seldom if ever recognize that these effects usually vary with the business cycle. If we design legal rules to work well under prevailing conditions and the economy generally grows, then most rules will not be designed to withstand recessions.

Like most other legal rules, policymakers design UI eligibility regimes for normal economic times. As one scholar of unemployment recently concluded, the “guiding principle [of unemployment eligibility] in most states is that people don’t need to be on unemployment and that there are plenty of jobs available. So they’ve built in processes to try to get people off it quickly.”⁸ As a result, many state bureaucracies make unemployment hard to access through complicated application rules; this difficulty discourages potential claimants from filing, preferring instead to quickly find another job.

Outside of a recession, this guiding principle, though harsh, may promote efficiency. If aggregate demand is adequate, then unemployment is determined by structural factors in the economy. A restrictive unemployment eligibility regime encourages labor supply, reducing structural unemployment and increasing output.⁹ From a traditional law and economics perspective, tight UI eligibility is therefore

⁴ See Daniel Tarullo, *Time-Varying Measures in Financial Regulation*, L. & CONTEMP. PROBS. 3 (Forthcoming, 2020).

⁵ *Id.*

⁶ For example, Cooter and Ulen’s textbook on law and economics makes no mention of macroeconomics. ROBERT COOTER AND THOMAS ULEN, *LAW AND ECONOMICS* (6th ed. 2016). Each model in the textbook (and in the field more generally) therefore implicitly assumes that macroeconomic effects are irrelevant. This assumption is a reasonable simplification in ordinary expansion conditions, but it fails importantly in recessions, and in unemployment “overhangs” from recessions.

⁷ See Douglas A. Kysar, *Sustainability, Distribution, and the Macroeconomic Analysis of the Law*, 43 B.C. L. REV. 1 (2002).

⁸ Sean Illing, *Why the Government Makes it Hard for Americans to Get Unemployment Benefits*, VOX (Apr. 26, 2020) (Quote of Pamela Herd from a lightly edited transcript).

⁹ The prevailing microeconomic model of unemployment benefits tradeoffs is the Chetty-Baily model. See Raj Chetty, *A General Formula for the Optimal Level of Social Insurance*, 90 J. OF PUB. ECON. 1879 (2006). For a sample of other developments of microeconomic factors in optimum UI benefits levels, see the later work of Chetty and see, e.g., Andrew Atkeson and Robert E. Lucas Jr, *Efficiency and Equality in a Simple Model of Efficient Unemployment Insurance*, 66 J. OF ECON. THEORY 64 (1995), Peter A. Diamond, *Mobility Costs, Frictional Unemployment, and Efficiency*, 89 J. OF POL. ECON. 798 (1981), Christian Gollier, *Unemployment Insurance: Risk Sharing Versus Efficiency*, 16 THE GENEVA PAPERS ON RISK AND INS. THEORY 59 (1991). For a recent macroeconomically-informed revision of the Baily-Chetty model, see Camille Landais, Pascal Michaillat and Emmanuel Saez, *A Macroeconomic Approach to Optimal Unemployment Insurance: Theory*, 10 AM. ECON. J.: ECON. POLICY 152 (2018).

desirable.¹⁰ Indeed the system “worked” before Covid-19, with US unemployment at record lows and initial weekly unemployment claims consistently below 300,000 from 2017-early 2020 (on a base of more than 130 million workers).¹¹

Critics of this tight unemployment insurance regime emphasized its injustice rather than emphasizing the business cycle dependent nature of its effects.¹² The critiques fell on deaf ears, however. If policymakers disagreed with the moral calculus of the critics, then they had no reason to design a different eligibility regime that might be more robust in recessions.

In recessions, however, normally efficient policies often backfire. Legal rules designed to maximize capacity often do not stimulate spending, which limits output in downturns. Unemployment insurance provides a striking case in point. The UI system failed miserably in the face of the March-May 2020 upsurge in unemployment caused by Covid-19 lockdown measures. In Florida, for example, only 30% of first-time Florida UI claimants through April 30 (7 weeks into the economic crisis) received payment by the end of April.¹³ This failure to get desperately needed funds to the unemployed exacerbated an already unprecedented recession, reducing spending at a time when aggregate demand fell far short of even diminished capacity. Indeed, the failure of unemployment insurance regimes undermined the stimulatory purpose of more generous unemployment benefits provided by Congress under the CARES ACT.¹⁴

It is no surprise that unemployment insurance eligibility regimes, along with many other legal rules, prove inefficient in recessions. The rules were not designed with recessions in mind. This needs to change. Instead of designing legal rules exclusively for periods of adequate aggregate demand, law and economics should consider all phases of the business cycle. Efficient time-invariant legal rules minimize the sum of the cost of diminished capacity in economies with full employment *and* the cost of lost output caused by a rule’s effects on aggregate demand in recessions.

This hybrid definition of efficiency departs significantly from the exclusively microeconomic meaning of efficiency that dominates conventional law and economics.¹⁵ To arrive at the efficient rule, law and economics scholars need to consider a rule’s performance in all phases of the business cycle. This requires sustained engagement with the macroeconomic effects of legal rules.

Further, designing robust legal rules for recessions as well as expansions will tend to reduce inequality as well as enhance efficiency. Because the poor consume more of each dollar earned than the

¹⁰ Luciana Yeung, *Economic Analysis of Labor Law*, in ENCYCLOPEDIA OF LAW AND ECONOMICS (Alain Marciano, Giovanni Battista Ramello eds. 2017) (accessed online, see discussion of unemployment compensation at 6).

¹¹ U.S. Bureau of Labor Statistics, Unemployment Rate in Florida [FLUR], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/FLUR>, June 8, 2020.

¹² See, e.g., PAMELA HERD AND DONALD P. MOYNIHAN, ADMINISTRATIVE BURDEN (2018).

¹³ See Amanda Novella and Andrew Stettner, *Unemployment Payouts Accelerated during April and May—But Are Still Too Slow*, THE CENTURY FOUNDATION: COMMENTARY ECONOMICS (June 2, 2020), <https://tcf.org/content/commentary/unemployment-payouts-accelerated-april-may-still-slow/?agreed=1>.

¹⁴ Coronavirus Aid, Relief, and Economic Security (CARES) Act, Pub. L. No. 116-136. Note that the Act’s Division A is titled “Keeping Workers Paid and Employed, Health Care System Enhancements, and Economic Stabilization.”

¹⁵ Fatih Deyneli, *Efficiency*, in ENCYCLOPEDIA OF LAW AND ECONOMICS (Backhaus J. eds. 2013) (“The economic analysis of law relies upon microeconomic principles. Efficiency, a significant concept within microeconomic theory, is one of the key concepts in the economic analysis of law”).

rich,¹⁶ directing money to the poor is an effective way of stimulating demand.¹⁷ Because stimulating demand in recessions raises efficiency, legal rules that reduce inequality fare better when we expand our definition of efficiency to account for the entire business cycle.

Instead of designing unemployment insurance eligibility rules exclusively for healthy labor market conditions, we should consider recessionary environments as well. In recessions, we want to process UI quickly and offer it broadly to raise spending. As a result, the efficient business cycle invariant UI eligibility regime is less tight than the rule that currently prevails. Policymakers should expedite application procedures and make them more inclusive until the benefits of higher output from higher aggregate demand in recessions equals the harm to output from inefficiently low labor supply in ordinary times.

This argument for a looser unemployment regime differs from most earlier critiques of tight UI eligibility rules.¹⁸ While many critics argue (quite plausibly) that unemployment eligibility rules are always too tight, we do not critique existing UI rules in normal economic conditions. Instead, we argue that tight unemployment rules are inefficient in recessions. If we could change UI regimes in tune with the business cycle with tight rules in robust economies and lax rules in recessions, then we could have the efficient rule in place at all times. In practice, however, we are stuck with a single regime. Because the current regime fails so miserably in recessions, UI eligibility rules need to be more generous at all times.

In choosing the efficient time-invariant legal rule, how much weight should we give to the rule's performance in recessions versus its performance in expansions? The frequency of recessions is one important factor. If recessions are very rare, then a rule that enhances aggregate demand and performs well in recessions but poorly in expansions (such as expansive UI eligibility) is less desirable. In practice, expansions are much more frequent than recessions. The U.S. economy has only suffered a recession approximately 8% of the time since the end of World War II.¹⁹ A naive analysis might therefore conclude that the current regime, which favors rules that perform well in expansions and ignores recessions, is desirable. If any time-invariant rule will be inefficient in some phases of the business cycle and recessions are infrequent, then a time-invariant rule that performs well in expansions is the best we can do.

Not so. While any time-invariant rule is inefficient in some phases of the business cycle, the inefficiency associated with a rule grows non-linearly as the rule becomes more inappropriate.²⁰ Rules that are very far from the efficient rule at any phase of the business cycle cause much more inefficiency than rules that are slightly off the mark.²¹ A compromise time-invariant legal rule, sitting between the

¹⁶ Jonathan Fisher, David Johnson, Timothy Smeeding and Jeffrey Thompson, *Estimating the Marginal Propensity to Consume Using the Distributions of Income, Consumption and Wealth*, 65 J. OF MACROECONOMICS (Forthcoming, 2020).

¹⁷ For general discussion of the efficiency costs of inequality, see e.g., Josh Bivens, *Inequality is Slowing US Economic Growth*, ECON. POLICY INSTITUTE (2017), Laura Carvalho and Armon Rezai, *Personal Income Inequality and Aggregate Demand*, 40 CAMBRIDGE J. OF ECON. 491 (2016), and Adrien Auclert and Matthew Rognlie, *Inequality and Aggregate Demand* (Washington Center for Equitable Growth Working Paper Series, Feb. 2018).

¹⁸ See, e.g., Raj Chetty, *Moral Hazard Versus Liquidity and Optimal Unemployment Insurance*, 116 J. OF POL. ECON. 173 (2008), David Card, Raj Chetty and Andrea Weber, *Cash-on-Hand and Competing Models of Intertemporal Behavior: New Evidence from the Labor Market*, 122 Q. J. OF ECON. 1511 (2007), Daron Acemoglu and Robert Shimer, *Efficient Unemployment Insurance*, 107 J. OF POL. ECON. 893 (1999).

¹⁹ U.S. Bureau of Economic Analysis, Real gross domestic product per capita, retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/A939RX0Q048SBEA>, August 13, 2020.

²⁰ For more detailed exploration, see *infra* Section III.

²¹ *Id.*

efficient rule in recessions and the efficient rule in expansions, thus outperforms (on average) the rule that maximizes efficiency in either phase of the business cycle. The efficient UI eligibility rule is slightly too permissive in expansions but reduces the extreme inefficiencies associated with a rule that is far too tight in recessions. For efficiency, it is more important for a legal rule to avoid being egregiously wrong in recessions than to be precisely right when the economy is expanding.

A compromise rule means that the efficient time-invariant rule places weight on a rule's performance in recessions. If we cannot change legal rules in tune with the business cycle, then every rule needs to consider all phases of the business cycle.

In setting this intermediate rule, performance in recessions deserves considerably more weight than suggested by recession frequency alone. Diminishing marginal utility implies that output is worth more in recessions because it is dearer.²² As a result, a rule that performs well in recessions but poorly in expansions is more efficient than a rule that causes the same average inefficiency but performs best in expansions. Moreover, many legal rules are designed to be triggered more often in recessions, implying that the frequency of recessions alone should not determine their weight.²³ For example, many more people apply for unemployment in recessions than in expansions, implying that the likelihood that a randomly selected UI applicant will apply in a recession is higher than the amount of time the economy spends in recessions.²⁴ Finally, while recessions are relatively rare, the economy often takes a long time to fully recover from their effects.²⁵ In the aftermath of recessions, unemployment is often much higher than "potential", meaning that aggregate demand plays a role in determining output.²⁶ Thus, a rule that increases aggregate demand may not only be more efficient in recessions but also in their sometimes prolonged aftermath. And the cumulative frequency of recessions and their aftermath (as measured by unemployment well above its potential rate) is much higher than frequency of recessions alone.²⁷

Collectively, these factors imply that a rule's performance in recessions is as important as its performance in expansions for formulating the efficient time-invariant rule. Unemployment insurance eligibility should be broader at all times to guarantee that the program works effectively when we need it

²² For an economic explanation of diminishing marginal utility, see N. GREGORY MANKIW, *PRINCIPLES OF ECONOMICS* 421, 443 (7th ed. 2014).

²³ See discussion *infra* at III(B)(1).

²⁴ U.S. Employment and Training Administration, Initial Claims, retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/ICSA>, July 9, 2020.

²⁵ Expansion is the norm, occurring about 92% of the time in the United States since World War II. U.S. Bureau of Economic Analysis, Real gross domestic product per capita, retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/A939RX0Q048SBEA>, August 13, 2020. However, periods of deficient aggregate demand—evidenced by elevated unemployment—have become much more pervasive than periods of actual recession alone. For the entirety between January 2008 and June 2013, the economy was either in recession and/or experiencing unemployment rates over 7.5%—significantly above the natural rate of approximately 5%. Unemployment again soared well above 7.5% in 2020 because of the recession caused by COVID-19 and looks likely to stay above 7.5% through 2021. U.S. Congressional Budget Office, Natural Rate of Unemployment (Long-Term), retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/NROU>, July 29, 2020; U.S. Bureau of Labor Statistics, Unemployment Rate [UNRATE], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/UNRATE>, July 29, 2020. Thus, aggregate demand has constrained output in the U.S. for just under 50% of the time since the beginning of 2008. Rather than an extraordinary case, deficient aggregate demand effects relating to earlier recessions now look like a regular occurrence. For more discussion, see *infra* at III(B).

²⁶ *Id.*

²⁷ *Id.*

most—in recessions. The law and economics status quo, emphasizing expansions exclusively, is thus very far from characterizing the efficient time-invariant rule. And other methodologies for forming legal rules perform no better unless they explicitly account for recessions.

Our argument is structured as follows. Section I develops a basic model of macroeconomics, analogizing the entire economy to a restaurant. Legal rules that work well when the restaurant economy is operating at capacity fall short when the restaurant is part empty and demand for meals determines output. Section I then translates these macroeconomic insights into the standard microeconomic model of law and economics (supply and demand), demonstrating how the efficient legal rule varies with the business cycle. Throughout the paper, we illustrate our ideas using a model of the efficient UI eligibility rule over the business cycle. In Section II, we first examine countercyclical legal rules as a response to business cycle variation in efficient legal rules. We then explain why countercyclical legal rules are exceptional. The practical difficulty of effectively varying law and regulation with the business cycle means that time-invariant legal rules will remain the norm. Section II then explains why most time-invariant legal rules are designed for periods of economic expansion. Section III develops a framework for identifying efficient time-invariant legal rules. Because inefficiencies rise with the square of a rule's distance from the efficient rule in the relevant phase of the business cycle, efficient time-invariant rules strike a compromise between the efficient rule in expansions and the efficient rule in recessions. Section III then explains why a rule's performance in recession deserves disproportionate weight. In Section IV, we apply our framework to characterize efficient time-invariant rules in bankruptcy law (laws governing unsecured debt discharge), property (laws regulating foreclosure on property), and contract law (laws concerning impossibility and impracticability). We then conclude.

I. Legal Rules, Macroeconomics and Microeconomics

What determines an economy's output? The answer depends on macroeconomic conditions. In an economy fully utilizing its capital and labor, the economy's production capacity determines output. In this economy, microeconomic analysis is all that is needed. In recessions, by contrast, spending falls short of capacity. Because the economy never produces more than people want to buy, aggregate demand (a fancy word for spending) determines output. In an economy producing below capacity due to inadequate spending, more spending stimulates the economy, leading to higher capacity utilization and more output. In an economy operating below capacity, these macroeconomic considerations often change conventional microeconomic analysis of efficiency.

A. Output in the Restaurant Economy

To make these general concepts more concrete, imagine that the entire economy is a single restaurant, with the restaurant's workers also its consumers.²⁸ What determines the restaurant's output? The restaurant's output is the minimum of two factors—capacity to produce meals (“aggregate supply”) and desired spending on meals (“aggregate demand”). When desired spending on meals equals or exceeds the restaurant's capacity, then output equals the restaurant's capacity to supply meals, determined by its labor force, available space, and cooking and serving technology. (When desired spending at the restaurant exceeds capacity, lines or price inflation follow, but output cannot go higher than capacity). When desired spending on meals falls short of capacity, by contrast, then the restaurant's output equals spending on meals. Although the restaurant could produce more meals in theory, it only produces as much as its consumers demand.

²⁸ For a thorough treatment, see LISTOKIN, *supra* note 1.

When the economy is operating below capacity, spending (or a lack thereof) becomes part of a feedback cycle known as the Keynesian Multiplier.²⁹ When demand for meals falls short of capacity, the restaurant lays off unneeded workers. The decrease in employment further reduces the demand for meals as laid-off workers cut back on spending, decreasing demand for meals still further. As a result, even more workers are laid off, reducing output still further. In deep recessions, empirical estimates of this multiplier effect range from 1.5-2.³⁰ A one-dollar reduction in demand and production does not simply lower GDP by a dollar but rather by \$1.50-\$2.00 because of this multiplier effect.

In periods of adequate aggregate demand, by contrast, the feedback effects captured by the Keynesian multiplier are small. If someone decides to cut back and buy fewer meals at the restaurant, then output may not change at all. Someone else buys the meal that would have been bought by the person who cut back, implying a multiplier effect of zero. In reality, multipliers in periods of healthy demand exceed zero because production “capacity” is a somewhat fungible concept. (In the short run, the restaurant can almost always increase output by squeezing more people around tables or pushing its employees ever harder.) Empirical estimates of expanding economy multipliers of .5, however, indicate that more than 50% of one person’s reduction in meal consumption will be offset by increased meal consumption by others in the economy.³¹

In sum, the question of what determines an economy’s output has two different answers, depending on macroeconomic conditions. When aggregate demand is robust, capacity (the restaurant’s ability to produce meals) determines output. When aggregate demand is inadequate, by contrast, spending limits output to a level below capacity and the economy is in recession.

You might wonder how demand for meals ever manages to be in rough balance with capacity. After all, it is rare for a single restaurant to have just enough diners to remain relatively full without lines. Unlike a single restaurant, however, the restaurant economy as a whole benefits from equilibrating mechanisms that ordinarily keep total spending in rough balance with capacity. Chief among these is the interest rate. Suppose that consumers get nervous about the future and start saving more rather than buying meals at the restaurant. In the short term, demand for meals goes down and the restaurant produces less. The Keynesian multiplier effect may even drag the economy down further. But in the medium and long term, more savings translates into lower interest rates as plentiful savings chases scarce borrowers. As interest rates go down, buying meals becomes more attractive relative to saving and spending on meals rises again, until it is equal to capacity. A central bank can hasten this process by using its control over the money supply to make loans even cheaper.

Interest rate adjustments also prevent demand for meals from remaining above the restaurant’s capacity for long periods of time. If more people want to borrow (or simply save less) in order to buy extra meals from the restaurant, then demand temporarily exceeds capacity. In the short run, there are lines and possibly price increases.³² With time, the interest rate goes up, making borrowing more

²⁹ *Id.* at 27. For another overview, see ROBERT SKIDELSKY, *MONEY AND GOVERNMENT* 133 (2018)

³⁰ John Coglianesse and Gabriel Chodorow-Reich, *Unemployment Insurance and Macroeconomic Stabilization, in RECESSION READY: FISCAL POLICIES TO STABILIZE THE AMERICAN ECONOMY* 153, 168 (Heather Boushey, Ryan Nunn and Jay Shambaugh eds. 2019).

³¹ Coglianesse and Chodorow-Reich, *supra* note 30, 168. See also Nicoletta Batini, Luc Eyraud, Lorenzo Forni and Anke Weber, *Fiscal Multipliers: Size, Determinants, and Use in Macroeconomic Projections* 3 (International Monetary Fund Technical Notes and Manuals No. 2014/04, 2014).

³² In the restaurant economy, the role of price level changes resemble the role of interest rate adjustment. Because the only thing to buy in the economy is meals, a temporary increase in prices in response to high demand makes purchasing meals now expensive relative to purchasing meals later. An increase in interest rates similarly makes

expensive and mitigating the desired increase in meal spending. With enough of an increase in interest rates, the demand for meals falls back into balance with capacity. The central bank can hasten this process by using its control over the money supply to make the interest rate rise more rapidly.

When interest rates are above zero, periods in which restaurant output is determined by spending—recessions—are temporary. Decreases in the interest rate, some in response to changing macroeconomic conditions and some induced by the central bank, increase demand for meals until it is back in balance with the restaurant’s capacity. The restaurant does not stay empty for too long. Thus, most recessions are temporary and will end without policy intervention due to interest rate adjustments.

When interest rates hit zero, however, the economy loses its adjustment mechanism. At the “zero lower bound” on interest rates, aggregate demand (and not capacity) can limit output for extended periods of time.³³

Modern economies typically have many assets, such as cash, tax prepayments, and gift cards, with fixed nominal interest rates of zero. If interest rates on other assets go well-below zero, savers will transfer their savings to these zero-yielding assets. To compete, the market for loans cannot offer interest rates below zero. With nominal interest rates fixed at zero, the economy loses its primary corrective to deficient aggregate demand. As a result, inadequate spending can persist indefinitely, leading to a prolonged period of output below capacity.

Persistent shortfalls in demand at the zero lower bound cause a phenomenon called hysteresis.³⁴ After an extended period of producing meals below capacity, the restaurant’s capacity may fall. If the restaurant, for example, has laid off workers in response to flagging demand, then these workers’ skills may atrophy over time, meaning that the restaurant’s old capacity to produce meals may not be achievable even if demand for meals subsequently recovers. At the zero-lower bound on interest rates, then, economic output is frequently determined by demand and not capacity in both the short run and the long run.

B. Legal Rules, Efficiency, and the Business Cycle

1. Macroeconomic Effects of Legal Rules Vary with the Business Cycle

Because the determinants of output change with the business cycle, legal rules have different effects at different phases of the business cycle. A legal rule that is efficient in the sense of maximizing output³⁵ in a growing economy may prove inefficient in recessions, and vice-versa.

purchasing meals now expensive relative to purchasing meals later. Thus, the two mechanisms are very similar. We emphasize interest rate because the price level is notoriously sticky, making interest rate movements the primary macroeconomic adjustment mechanism.

³³ Michael T. Kiley and John M. Roberts, *Monetary Policy in a Low Interest Rate World*, BROOKINGS PAPERS ON ECONOMICS ACTIVITY (2017).

³⁴ Giovanni Dosi, Marcelo Pereira, Andrea Roventini and Maria Enrica Virgillito, *Causes and Consequences of Hysteresis: Aggregate Demand, Productivity and Employment* (Global Labor Organization Discussion Paper Series No. 64, 2017).

³⁵ For simplicity, we assume in this paper that the efficient legal rule maximizes output. This corresponds to Kaldor Hicks efficiency as it is commonly framed. In reality, the rule that maximizes output may not be efficient. If extra output is produced at too high a cost (e.g., to the environment), then the additional output is not efficient, even in a Kaldor-Hicks sense. These subtleties, however, do not relate to the points about macroeconomics that we emphasize in this paper. We therefore simplify the discussion by assuming that the Kaldor Hicks efficient rule is the rule that maximizes output. See, e.g., Jules Coleman, *Efficiency, Utility, and Wealth Maximization*, 8 HOFSTRA L. REV. 523 (1980).

Consider the restaurant “economy.”³⁶ When demand for meals equals or exceeds the restaurant’s capacity to supply them, the restaurant’s capacity determines the economy’s output. Legal rules that maximize capacity therefore become efficient. The same rule’s effect on demand for meals matters little because spending does not hold back the economy. In recessions, by contrast, demand for meals determines output. Legal rules that increase demand for meals raise output and efficiency. A rule’s effect on capacity has no effect on output in recessions because capacity does not determine output; demand is inadequate. Thus, the efficient legal rule for the restaurant economy depends on the state of the macroeconomy. Rules that maximize the restaurant’s capacity are efficient in expansions, while rules that maximize demand for meals are efficient in recessions.

For example, suppose the government of the restaurant economy offers UI to unemployed workers. Generous UI rules incentivize workers to stay out of the labor force rather than accept a job at the restaurant. Tight UI eligibility rules, by contrast, encourage more restaurant work. Because labor is one of the determinants of the restaurant’s capacity, tight rules that increase labor force participation at the restaurant raise capacity. In economies with adequate spending, capacity determines output. As a result, tight UI eligibility rules raise output and efficiency.³⁷

The efficient rule for unemployment eligibility, however, looks very different in recessions. In recessions, inadequate demand for meals, and not capacity, limits the restaurant’s output. Rules that raise demand for meals therefore become efficient.

When demand for meals falls, the restaurant is likely to lay off workers. Reduced income for these workers induces them to cut spending on meals, bringing demand still lower (the Keynesian multiplier effect). UI payments interrupt this cycle. With rapid access to unemployment benefits, laid-off workers continue to buy meals, stopping the downward spiral in demand and keeping output closer to capacity. But workers only benefit from rapid access to UI with simple and expansive eligibility rules administered by adequate staff. Otherwise, benefits for many workers will be delayed or even denied, causing demand for meals from these workers to plunge.

Expansive UI eligibility reduces the restaurant’s capacity by making non-work more attractive. But the restaurant’s capacity does not determine output in recessions. Demand for meals does. By increasing demand, expansive UI eligibility rules efficiently increase output in recessions.

The efficiency of an unemployment eligibility rule, like the efficiency of any legal rule, thus depends on the business cycle. In expansions, the efficient rule maximizes capacity, which determines output. Microeconomic analysis determines this rule. When aggregate demand falls below capacity, by contrast, spending demand determines output. Efficient rules maximize demand because a rule’s effects on spending effect output more than the rule’s effects on capacity.

Finally, note that the UI system in the restaurant economy is composed both of legal and fiscal elements. When the government of the restaurant economy raises taxes or borrows money in order to pay

³⁶ For further treatment of this explanation by way of the restaurant economy, see LISTOKIN, *supra* note 1.

³⁷ In more realistic models of the economy, more generous provision of unemployment benefits may be efficient. For example, generous unemployment benefits may offer valuable insurance to workers and encourage workers to search for better job matches rather than taking the first available job. For a more fulsome model of the problem drawing from recent research, see Johannes F. Schmieder and Till von Wachter, *The Effects of Unemployment Insurance Benefits: New Evidence and Interpretation*, ANN. REV. OF ECON. 547 (2016). While important, these considerations are accessory to this paper’s focus on the macroeconomic and cyclical impacts on unemployment efficiency. Consequently, in this work we generally assume that more generous UI eligibility in expansions does indeed create some efficiency costs. Where we question or qualify this working assumption, we are explicit.

restaurant employees higher benefits, keeping the UI program otherwise structurally constant, we term the expansion “fiscal”; it involves changes in state spending and revenue collection without any other changes in law. On the other hand, if the government of the restaurant economy changes the law and regulation of UI to expand who is eligible for benefits in the first place (as in the above scenario), we call this a change in a legal rule. The modification in the unemployment regime is occurring purely by changing a legal requirement, not through an explicit act of state spending. Expansionary changes in legal rules are sometimes connected to the fiscal elements of state policy: if the government of the restaurant economy ends up writing many more checks because of the new, looser, unemployment eligibility rule, it may need to raise taxes or borrow money later to pay for those benefits.³⁸ But they are meaningfully distinct forms of policy action.

2. Microeconomic Effects of Legal Rules also Vary with the Business Cycle

The microeconomic “costs” of legal rules also shift over the business cycle. Structural market incentives change with the cycle, meaning that a legal incentive that is efficient in expansions may be inefficient in recessions.

Consider the primary microeconomic costs of a more generous UI eligibility regime, whether in the sense of wider eligibility for benefits, or more generous benefits for recipients. The more generous the benefits offered, the more workers will be disincentivized to quickly find employment, which ultimately results in a decrease in the economy’s capacity. If unemployment benefits are conceptualized as social “insurance” against difficulty in finding replacement work after being laid off, then this cost is the “moral hazard” created by having a good insurance policy.³⁹ Just as a property and casualty insurer might be concerned that policyholders with generous fire protection may be less careful in removing combustible threats around their residences, a government offering generous UI may be concerned that its citizens are returning to productive work less quickly than they would be absent the safety net of regular benefits payments.⁴⁰ This is a purely microeconomic cost, because it does not relate to aggregate demand levels in the economy as a whole. The cost is produced merely by the change in the supply of productive labor the unemployment benefits rule produces.

However, this microeconomic cost does not remain constant when the economy enters recession.⁴¹ Instead, it approximately halves.⁴² In recessions, a 1% increase in unemployment benefits increases the duration of unemployment by .3%, half the moral hazard effect in times of robust aggregate demand.⁴³ Generous unemployment rules are less costly in purely microeconomic terms in a recession. This effect makes sense, because incentive structures in the labor market shift in a recession. In a growing economy, there may very well be available jobs for most willing individuals. If unemployed individuals search for jobs with urgency, we expect them to find new employment quickly. However, in a recession, there will not be jobs for many such individuals. Many may face a long period of unemployment,

³⁸ Not always. Some forms of expansionary legal policy exclusively impact private sector spending and revenue collection. A mandate that private homes improve their energy efficiency, for example, stimulates private sector spending without changing government spending or revenue collection.

³⁹ Jonathan Gruber, *Chapter 12.5 The Problem with Insurance: Moral Hazard*, in PUBLIC FINANCE AND PUBLIC POLICY 321 (2005).

⁴⁰ Gruber, *supra* note 39.

⁴¹ Kory Kroft and Matthew Notowidigdo, *Should Unemployment Insurance Vary with the Unemployment Rate? Theory and Evidence*, 83 REV. OF ECON. STUD. 1092, 1093 (2016).

⁴² Kroft and Notowidigdo, *supra* note 41.

⁴³ *Id.*

regardless of how quickly they are incentivized to start looking for work by smaller benefits payments.⁴⁴ In other words, the hardship a less generous unemployment policy inflicts on workers in a recession avoids far less microeconomic costs than it would in a growth economy, because labor market forces are very different in the two economic periods.

Variable microeconomic costs in a recession add to the importance of making a recession-specific analysis of legal rules. Not only do the macroeconomic benefits of stimulative legal rules spike in recessions due to the effects of the Keynesian multiplier, but the microeconomic costs often drop as well, due to extreme changes in incentives in the relevant markets.

The efficient UI eligibility rule in recessions thus differs dramatically from the efficient rule in ordinary times. If more expansive eligibility for unemployment benefits produces only half the moral hazard effects in recessions, then many more workers should be made eligible. And if an extra dollar spent by an unemployment insurance recipient in recessions has three to four times the multiplier effect of a dollar spent in expansions, then even more of those without work should be eligible for unemployment benefits.

3. Conceptualizing Efficient Rules Formally

Building on the discussion above, there are three principle determinants of the efficiency of a UI benefits rule:

1. Microeconomic Costs: Unemployment insurance causes “moral hazard.” More readily available UI benefits make people less likely to work, which reduces the productive potential of the economy. As described above, we assume a cost elasticity of .6 in good times, .3 in recessions.⁴⁵ In other words, the microeconomic cost is half as severe in recessions as in growth economies.
2. Microeconomic Benefits: UI enables households to smooth their consumption across periods of employment and unemployment. Because money is dearer and so more valuable in times of unemployment, this consumption smoothing provides a microeconomic benefit for all workers.⁴⁶ Another commonly cited benefit involves the flexibility unemployment insurance provides workers to seek better work prospects. Research suggests that these benefits remain roughly constant over the business cycle.⁴⁷
3. Macroeconomic Benefits: When an unemployed person spends an additional dollar in a recession, it results in more than a dollar of increased GDP. Economic research suggests a multiplier of 1.5-2x; implying that each dollar of spending produced by unemployment benefit disbursements

⁴⁴ By way of example, consider that the average duration of unemployment spikes with the rate of unemployment (in recessions) demonstrating predictably increased difficulty of finding employment during the period, and, further, that the length of unemployment duration has been on an upward climb over the last three decades. Toshihiko Mukoyama and Aysegul Sahin, *Why Did the Average Duration of Unemployment Become So Much Longer?*, 56 J. OF MONETARY ECON. 200, 201 (2009).

⁴⁵ Kroft and Notowidigdo, *supra* note 41.

⁴⁶ For recent work on consumption smoothing, see, e.g., Schmieder and Wachter, *supra* note 37; Chloe N. East and Elira Kuka, *Reexamining the Consumption Smoothing Benefits of Unemployment Insurance*, 132 J. OF PUB. ECON. 32 (2015). Classic work see Johnathan Gruber, *The Consumption Smoothing Benefits of Unemployment Insurance*, 87 AM. ECON. REV. 192 (1997).

⁴⁷ Kroft and Notowidigdo, *supra* note 41. Other research suggests that the liquidity benefits are greater in recessions because credit is harder to find. For example, Schmieder and Wachter report “various estimates of the consumption decline at unemployment. In the United States, these range from 6–15% in expansions to up to 20–27% in recessions.” Schmieder and Wachter, *supra* note 37 at 564. If the microeconomic benefits of UI are greater in recessions than in expansions, then there will be an even greater difference between the efficient UI eligibility rule in an expanding economy and the efficient rule in recessions.

creates 1.5-2 dollars of additional demand in the economy.⁴⁸ In expansions, by contrast, the multiplier is approximately .5, indicating that higher spending by the unemployed is partially offset by reduced spending elsewhere, as capacity limits the ability of the economy to accommodate extra spending.⁴⁹

4. Macroeconomic Costs: When the debt incurred to finance broader UI eligibility is repaid, aggregate demand goes down. Output shrinks by the value of the multiplier.⁵⁰ If debt is repaid only in expansionary periods of the business cycle (a proposition both normatively attractive and empirically defensible), then the relevant multiplier is (negative) .5.

Macroeconomic costs of debt repayment offset the macroeconomic benefits of broader UI eligibility in expansions. In recessions, however, the macro benefits of broader eligibility significantly exceed the demand depressing effects of debt repayments.

By combining these microeconomic and macroeconomic costs and benefits, we obtain a rough estimate of the total effects of a dollar of additional unemployment benefits across both expanding and recessionary economies. These effects are given a graphical interpretation in Figures 1 and 2.

The X axis in these figures represents different UI eligibility rules (E). Higher E represents a broader eligibility rule.⁵¹ The Y axis plots marginal economic benefits and costs (factors 1 through 4) of different eligibility rules.⁵² The marginal benefits (MB) of looser eligibility rules are decreasing with E because unemployment rules first target the people who need benefits most. As society expands unemployment eligibility to more people, such as those who voluntarily quit because they have adequate savings and do not like their job, the marginal benefits of smoothing consumption via UI decrease. The marginal costs (MC) of looser eligibility rules are increasing with eligibility (E). With tight eligibility, we can focus benefits on the subset of people with low moral hazard costs (such as the involuntarily laid off). As we expand eligibility, we start paying unemployed workers who have more realistic work options.

Figure 1 depicts the efficient rule in an expanding economy. In expansion phases of the business cycle, we can ignore macroeconomic benefits and costs because the negative macro effects of repaying additional debt (-.5) cancel out (on average) the macroeconomic benefits of higher spending associated with more expansive UI eligibility (.5).⁵³ When the restaurant is full, we do not have to worry about a legal rule's effects on demand—only its effects on the restaurant's ability to produce meals.

⁴⁸ Auerbach and Gorodnichenko, *Fiscal Multipliers in Recession and Expansion* (Nat'l Bureau of Econ. Research, Working Paper No. 17447, 2011). *See also, supra* note 31.

⁴⁹ *Id.* A dollar of additional UI benefits does not translate into an additional dollar of spending. Chodorow-Reich and Coglianesse estimate that an extra \$1 in unemployment benefits increases spending by \$.27. The remaining \$.73 of benefits is "saved." (Unemployed households deplete savings. For each \$1 of unemployment benefits, they deplete \$.73 from their savings.) *Supra* note 30, at 168.

⁵⁰ *Supra* note 1.

⁵¹ E, or the share of a location's unemployed workers who receive UI benefits, varies widely across states. In some U.S. states, more than 50% of unemployed workers in March 2020 qualified for UI. In other states (including Florida), fewer than 20% of unemployed workers received UI benefits. *See* Drew Desilver, *Not All Unemployed People Get Unemployment Benefits; in Some States, Very Few Do*, PEW RESEARCH CENTER (April. 24, 2020), <https://www.pewresearch.org/fact-tank/2020/04/24/not-all-unemployed-people-get-unemployment-benefits-in-some-states-very-few-do/>.

⁵² Because the Keynesian multiplier is a macroeconomic phenomenon, neither macroeconomic benefits nor costs change as the UI eligibility rule (E) changes. Instead, macroeconomic benefits and costs vary across the business cycle.

⁵³ What about the part of the UI benefits that are saved? If only part of the UI benefits are spent, then won't the macro costs of debt repayment outweigh the macro benefits of UI? No. UI benefits raise private sector saving,

In a growing economy, setting an efficient unemployment benefits eligibility rule means expanding eligibility until the marginal microeconomic benefits of expanded eligibility (factor 1) equal the marginal micro costs (factor 2).⁵⁴ This occurs at point C in Figure 1, where $MB_{\text{expansion}} = MC_{\text{expansion}}$. In expanding economies, the efficient eligibility rule is at $E_{\text{expansion}}$.

The latest empirical research on the microeconomics of unemployment benefits (ignoring macro effects) suggests that the socially optimal UI eligibility rule offers broader eligibility (and higher benefits) than the prevailing rules applied in most states.⁵⁵ That is ($E_{\text{expansion}} > E_{\text{actual}}$). The insurance gains associated with broader UI eligibility (factor 2) exceed the moral hazard costs (factor 1). For the purposes of this macroeconomically-oriented paper, however, we will assume for simplicity that the eligibility rule is set optimally from a microeconomic perspective, that is ($E_{\text{expansion}} = E_{\text{actual}}$). Relaxing this assumption only strengthens the results described in Section 3.

Figure 1: Efficient Rule Setting in a Good Economy (Constraints Based only on Microeconomics Factors)

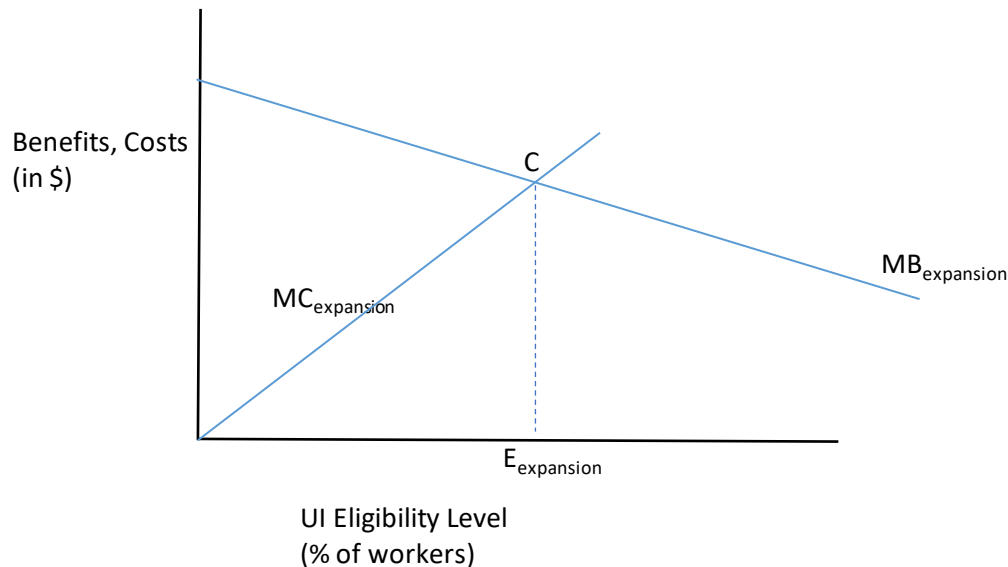


Figure 2 graphs the efficient UI eligibility rule in a recessionary economy. Because the microeconomic costs of expanded unemployment eligibility in recessions (factor 1) are half the costs in expansions,⁵⁶ the marginal cost of expanded eligibility in recessions, $MC_{\text{recession}}$, sits below the marginal cost curve of UI eligibility in growing economies, $MC_{\text{expansion}}$. And because the spending multiplier in

reducing total debt in the economy. When government debt is repaid, the aggregate demand costs are mitigated by this private sector saving. If some of each dollar of UI benefits are saved, then both the macroeconomic costs and the macroeconomic benefits are less than .5.

⁵⁴ We define “normal” economic times for these purposes as an unemployment level within 2% of the natural rate of unemployment.

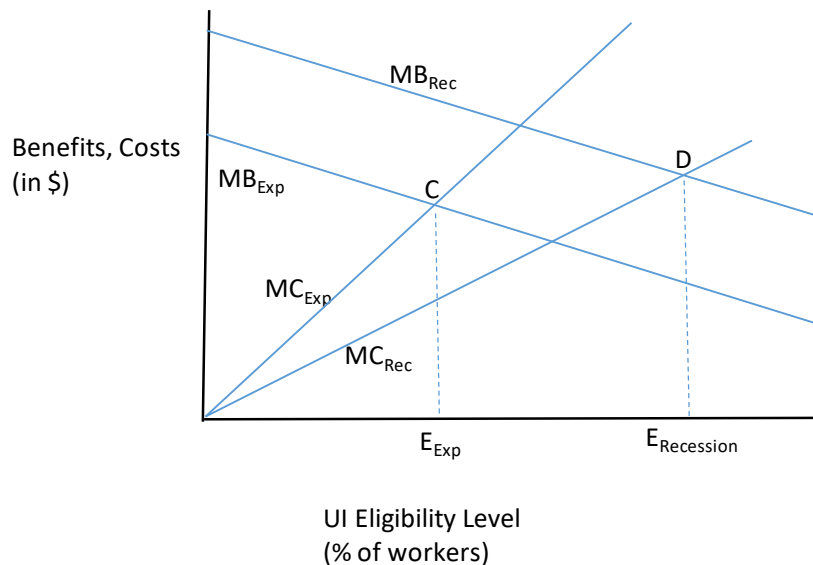
⁵⁵ See Schmieder and Wachter, *supra* note 37 at 565, Raj Chetty, *Moral Hazard Versus Liquidity and Optimal Unemployment Insurance*, 116 J. OF POL. ECON. 173, 221 (2008).

⁵⁶ Kroft and Notowidigdo, *supra* note 41.

recessions (1.5-2) is 3 to 4 times the value of the multiplier in expansions (.5), the marginal benefits curve in recessions, $MB_{recession}$, sits well above its value in a growing economy, $MB_{expansion}$. A much higher multiplier means that the added spending caused by expanded UI eligibility (factor 3) will have much greater social benefits than the same spending causes in a growing economy. (Factors 2 and 4 remain the same in both figures.) In restaurant economy terms, increasing UI spending when the restaurant is empty causes the number of meals purchased to increase (shifting the marginal benefits curve outwards) rather than reshuffling the identity of meal purchasers in a full restaurant (as it does in booms).

The dramatic decreases in marginal costs and increases in marginal benefits of expanded UI eligibility in recessions shift the optimal eligibility rule outward to point D, (where $MB_{recession} = MC_{recession}$.) The efficient level of UI eligibility in recessions, $E_{recession}$, significantly exceeds the eligibility level in growing economies, $E_{expansion}$. Given the size of the change in moral hazard costs and economic multiplier between recessions and expansions, the optimal UI eligibility rule in recessions might be twice as inclusive as the optimal rule in expansions. (Twice as many workers should be eligible for UI in recessions as in expansions.) Efficient legal rules vary dramatically over the business cycle.

Figure 2: Efficient Rule Setting in a Recession (Altered microeconomic costs and macroeconomic benefits included)



II. Legal Rules Are Designed for Expansions

A. Countercyclical Legal Policy

If the efficient legal rule varies with the business cycle, how should law respond? One option is countercyclical legal policy.⁵⁷ If legal rules change with the business cycle, then law can be efficient across all phases of the cycle. Countercyclical legal policy offers legal rules that stimulate demand in

⁵⁷ For extensive discussion of countercyclical legal policy see LISTOKIN, *supra* note 1, Yair Listokin and Daniel Murphy, *Macroeconomics and the Law*, 15 ANN. REV. OF L. & SOC. SCI. 1 (2019), Yair Listokin, *A Theoretical Framework for Law and Macroeconomics*, 21 AM. L. & ECON. REV. 46 (2019), Jonathan S. Masur and Eric A. Posner, *Should Regulation by Countercyclical?*, 34 YALE J. ON REG. 857 (2017).

recessions and maximize capacity in expansions. In the conceptualization introduced in Section I, countercyclical legal policy allows a community to have both $E_{\text{expansion}}$ and $E_{\text{recession}}$, depending on the period.

1. The Benefits of Countercyclical Legal Policy

Consider unemployment insurance eligibility rules. With a countercyclical legal policy, the legal rule would change with the business cycle, so the restaurant economy could benefit from efficient UI eligibility rules at all times. Unemployment eligibility rules would flip from being tight while the economy is expanding to generous at confirmed signals of a recession. In 2020, Congress took exactly this approach to the COVID-19-induced slump in economic activity. The CARES act temporarily inserted two countercyclical forces into the United States unemployment regime: First, an increase in the level of UI benefits by \$600 weekly, and, second, an expansion of unemployment benefits to gig workers and part-time workers who were laid off for reasons directly attributable to COVID-19.⁵⁸ Both measures were crafted to aid the damaged spending capacity of American households, and both were sunset for a few months time.⁵⁹ In other words, they were archetypical examples of countercyclical federal policy.

Countercyclical policy, while novel in discussions of setting legal rules, is commonplace with respect to setting fiscal and monetary postures.⁶⁰ When recessions hit, concerns about government deficits and inflation, which help determine a country's long run economic capacity, subside. Loose monetary and fiscal policy to stimulate demand becomes the norm. When COVID-19 shattered the U.S. economy in March 2020, the Fed introduced lending programs to businesses worth many trillions and Congress also passed an unprecedented multi-trillion dollar support for American businesses, along with personal stimulus checks and the aforementioned unemployment expansion.⁶¹ When the recession ends, we expect that fiscal and monetary policy will revert back to "normal." Indeed, counter-cyclicity is central to the modern institutions of macroeconomics. A basic justification for the contemporary central bank, for instance, is that a nation may have the benefits of dynamic control of the money supply – if it is willing to delegate the rate setting power to an expert independent observer.⁶²

Unlike fiscal and monetary policy, most areas of law do not adjust to the business cycle. The rules that govern the foreclosure process, the requirements of a bankruptcy discharge, or the damages in a tort action are static across the economic cycle, for instance. However, there are important exceptions. Since the Great Recession of 2008, "macroprudential" financial regulation has been countercyclical.⁶³ In periods of robust lending growth (such as from 2018- early 2020), financial regulators imposed relatively tight regulatory hurdles on lenders, such as high capital requirements, to restrain lending and ensure that banks had adequate capital to withstand economic turbulence.⁶⁴ Bank capital measurements increased

⁵⁸ *Supra* note 3.

⁵⁹ *Supra* note 3.

⁶⁰ For a high level overview of countercyclical fiscal considerations in policy-making, see Mark P. Keightley, *Fiscal Policy Considerations for the Next Recession*, CONGRESSIONAL RESEARCH SERVICE (2019). For one overview of the modern theoretical thinking in countercyclical fiscal policy, see Listokin, *supra* note 1 at 31. For an overview of the Keynesian historical foundations in fiscal countercyclicity, see ROBERT SKIDELSKY, *MONEY AND GOVERNMENT* (2018).

⁶¹ Note that the CARES Act, despite some initial opposition to various of its elements, passed the House 419-6, and the Senate 96-0. Note that the Federal Reserve's unprecedented lending facilities were not only not challenged by Congress but were promptly capitalized with appropriations from the CARES Act.

⁶² For an introduction to a long discussion, see Speech of Chairman Ben S. Bernanke at the Institute for Monetary and Economic Studies International Conference, Bank of Japan, Tokyo (May 25, 2010) and Charles Goodhart, *The Changing Role of Central Banks*, 18 FIN. HIST. REV. 135 (2011).

⁶³ For an overview of macroprudential processes in the US and UK, see Elliott, Feldberg, and Lehnert, *supra* note 2.

⁶⁴ *Supra* note 2.

accordingly. In the coronavirus crisis, financial regulators dramatically relaxed capital requirements to encourage lending, which in turn raised aggregate demand.⁶⁵ As *The Economist* summarized, “this (presumably temporary) regulatory forbearance has created \$5trn of lending capacity.”⁶⁶ This financial regulatory forbearance offers an example of the potential of countercyclical legal policy, but it is the exception that proves the rule: most legal rules are time-invariant, and most regulators do not apply a lighter touch when recessions arrive.

If countercyclical rules have such demonstrated potential, and are so common in monetary and fiscal policy, then why do we not see more countercyclical legal rules? Why are most of our legal regimes not built to switch between $E_{\text{expansion}}$ and $E_{\text{recession}}$?

2. The Challenges of Countercyclical Policy

There are many concerns about countercyclical legal rules. These include: (1) Non-expert legal actors like judges and regulators are ill-equipped to correctly identify changes in the economic cycles; (2) it would be difficult to have agencies prepared to effectively administer two separate legal regimes for both $E_{\text{expansion}}$ and $E_{\text{recession}}$; (3) countercyclicity in legal regimes would create perverse economic incentives; and (4) political pressures would likely make switches from $E_{\text{expansion}}$ back to the stricter $E_{\text{recession}}$ difficult or impossible.

Critics observe that effective countercyclical legal policy would likely rely on regulators and judges changing rules in tune with the business cycle.⁶⁷ As a recession begins, we want legal rules to maximize spending. When the recession ends, we want the rules to change promptly so that they maximize capacity. But recognizing recessions quickly is very difficult. Central banks, staffed by legions of macroeconomic experts and with special mandates for the task, very often get things wrong. By the time a recession is clearly recognizable to regulators and judges, it may well be nearly over.⁶⁸ Unless judges and regulators get the timing right, countercyclical legal policy may be a cure that is worse than the disease. Almost any time-invariant legal rule outperforms a pro-cyclical rule that stimulates during expansions (causing inflation) and enhances capacity during recessions (exacerbating unemployment).

Macroprudential regulation illustrates the difficulty. It can be very difficult to determine if a rapid increase in lending reflects unsustainable “animal spirits” or a rational response to new economic opportunities.⁶⁹ If financial regulators confuse an investment expansion in response to a new technology for an irrational bubble, then they may raise capital requirements unnecessarily, crimping healthy economic growth. The end of a period of depressed lending can be equally hard for experts to identify. A sudden increase in lending may represent the return of lax lending standards or it may represent a return

⁶⁵ Press Release, Federal Reserve Board Announces Temporary Change to its Supplementary Leverage Ratio Rule to Ease Strains in the Treasury Market Resulting from the Coronavirus and Increase Banking Organizations’ Ability to Provide Credit to Households and Businesses (Apr. 1, 2020), <https://www.federalreserve.gov/newsevents/pressreleases/bcreg20200401a.htm>.

⁶⁶ *How Sick Might Banks Get?*, *THE ECONOMIST* (Apr. 8, 2020), <https://www.economist.com/finance-and-economics/2020/04/08/how-sick-might-banks-get>.

⁶⁷ Masur and Posner, *supra* note 57 at 890.

⁶⁸ For example, the official U.S. arbiter of recessions, the National Bureau of Economic Research, typically dates a recession years after it has ended. If the NBER tried to date the business cycle in real-time, it would undoubtedly make many errors.

⁶⁹ The term, of course, comes to us by way of Keynes, *see* JOHN MAYNARD KEYNES, *THE GENERAL THEORY OF EMPLOYMENT, INTEREST AND MONEY* (1936). For a recent revival of the complex role of emotion and irrational exuberance in investment decisions, *see* GEORGE A. AKERLOF AND ROBERT J. SHILLER, *HOW HUMAN PSYCHOLOGY DRIVES THE ECONOMY, AND WHY IT MATTERS FOR GLOBAL CAPITALISM* (2009).

to normal after a prolonged slump.⁷⁰ As a result, countercyclical macroprudential regulation remains a contested policy.

Second, effective administration of countercyclical rules may simply be too complex, even if legal actors are macroeconomically sophisticated. Countercyclical rules require judges and regulators to implement and administer (at least) two different sets of rules,⁷¹ as well as rules of recognition for when the two different sets of rules will be applied. This is a much more difficult task than implementing a uniform legal rule that applies in all phases of the business cycle. Countercyclical macroprudential rules, for example, require financial regulators to develop and effectively administer one set of regulations for periods of robust lending, another for periods of inadequate loan supply and demand, and also a procedure for navigating between the two sets of rules as needed. Daunted by this imposing task, many sophisticated commentators remain skeptical about the long-run efficacy of countercyclical macroprudential rules.⁷²

Both of these concerns apply to countercyclical UI eligibility rules. Loosening rules in periods of slack spending requires legislative action by federal or state legislatures (or both) and rapid implementation of the revised rules by state administrators. Legislatures, however, usually promulgate new legislation slowly. Giving administrators discretion to change application of the rules as the business cycle shifts eliminates one bottleneck but relies on an imperfect state bureaucracy to identify sometimes subtle shifts in the business cycle.

Third, even if regulators and judges possess the requisite expertise and capacity, countercyclical law generates systemic legal risk and consequent negative economic incentives. If a particular investment is profitable under a legal rule that stimulates demand but unprofitable when the rule maximizes capacity, then investors need to predict which of the two rules apply. Of course, their predictions may be wrong. Because uncertainty reduces even profitable investments, the harm caused by increased legal uncertainty may outweigh the benefits of tailoring law to the macroeconomic environment.⁷³ A financial investment that thrives under loose macroprudential regulation but fails under tight regulation, for example, faces more risk than an investment subject to a fixed regulatory environment. As a result, countercyclical financial regulation may permanently retard investment, or perhaps as bad, inefficiently push capital to industries with less exposure to cyclical rules.⁷⁴

Countercyclical law also raises the risk of opportunism. When a rule varies over time, people may arrange their activity to take advantage of the variation. A controversial model for a new type of financial institution, for example, may wait until a recession to apply for approval, confident that regulators looking to encourage loan growth will approve. After approval, regulators will be reluctant to rescind their

⁷⁰ For an overview on modern thinking on financial bubbles, and the challenges in their identification, see Markus K. Brunnermeier and Martin Oehmke, *Bubbles, Financial Crises, and Systemic Risk*, in *HANDBOOK OF THE ECON. OF FIN.* 1221 (George M. Constantinides, Milton Harris, Rene M. Stulz, eds., 2013).

⁷¹ For simplicity, we assume that countercyclical legal regimes implement only two regimes, one for periods of health aggregate demand and one for periods when spending is below capacity. In reality, countercyclical regimes can include multiple legal regimes. For example, a legal rule that varies continuously with aggregate demand allows for an infinite number of (slightly) different legal regimes.

⁷² See Tarullo, *supra* note 4.

⁷³ Nicholas Bloom, Stephen R. Bond and John Michael Van Reenen, *Uncertainty and Investment Dynamics* (NBER Working Paper No. w12383, 2006).

⁷⁴ For recent discussion of the potential distortive effects of policy uncertainty on investment mechanisms like the cost of capital to investment ratio, see Wolfgang Drobetz, Sadok El Ghouli, Omrane Guedhami and Malte Janzen, *Policy Uncertainty, Investment, and the Cost of Capital*, 39 *J. OF FIN. STABILITY* 28 (2018).

approval when lending conditions change. Thus, countercyclical regulation will have enabled a previously banned model to move forward by exploiting lax rules in recessions.

Fourth, introducing true countercyclical law invites political economy problems. The legal status quo tends to be sticky. Once people adapt to a rule, they often become resistant to change. The difficulty of changing rules becomes even more acute when the change requires pain in the present for benefits sometime in the future. Requiring more capital from banks may be the right course in expansions, but it will be fiercely resisted by banks and anyone else benefiting from an expanding economy. Alternatively, once UI eligibility rules are loosened in recessions, it may be hard for states to tighten them again once the business cycle turns, even if tight rules are more efficient. Workers may have become used to the more relaxed system, which will make them resistant to a change that imposes higher hurdles.⁷⁵ As a result, changing the eligibility rules with the business cycle may be politically impossible. A legal rule intended to both loosen and tighten ends up as a one-way ratchet – moving only towards more stimulative policy.

3. The Limits and Potential of Countercyclical Rules

The practical impediments to countercyclical law and regulation are significant. We should not exaggerate them, however. Although similar critiques (e.g. lack of expertise, the stickiness of the status quo, political realities etc.) have been directed at countercyclical fiscal policy, fiscal policy remains a vital countercyclical tool.⁷⁶ The benefits of filling up an empty restaurant justify making fiscal policy more complicated and spendthrift than it otherwise would be. Likewise, the critiques leveled at countercyclical financial regulation have not prevented it from becoming an important new macroeconomic policy tool, used to great effect in early 2020 to mitigate the macroeconomic harm caused by COVID-19. Indeed, for all the prior discussion of legislative complexity and imperfect incentives, the CARES Act expansion of unemployment to part-time workers was a direct act of countercyclical legal policy that is broadly commended by economic commentators.⁷⁷ Indeed, the examples of macroprudential regulation and CARES Act unemployment eligibility suggest that, whatever their dangers, countercyclical legal rules offer an important tool for fighting recessions in an era when the harm caused by prolonged economic slowdowns has been considerable.

Whatever the merits of countercyclical legal rules, the vast majority of legal rules do not adjust to the business cycle for the reasons described in the previous section. This is likely to remain true for the foreseeable future. If we are to have a single rule, we should hope that it performs reasonably well in all phases of the business cycle. No such luck. Legal rules are designed to perform well in periods of healthy demand, with little to no attention paid to the rule's effects in recessions. We keep our legal rules stable at *E_{expansion}* through economies strong and weak, simply tolerating the resulting wasted capacity in recessions. We are so focused on the macroeconomic picture of a growth economy, that we neglect a recession economy and the changed economic landscape it presents.

B. Legal Rules Are Designed for Healthy Economies

⁷⁵ Employers may accept more bureaucracy even if it increases the amount of work because fewer claimants translate to lower unemployment insurance tax burdens for employers.

⁷⁶ For such a critique, see John B. Taylor, *Reassessing Discretionary Fiscal Policy*, 14 J. OF ECON. PERSP. 21 (2000).

⁷⁷ See, for example, wide support for extension and concern about the impacts of UI benefits expiration. Amelia Thomson-DeVeaux, *What Economists Fear Will Happen Without More Unemployment Aid*, FIVETHIRTYEIGHT (Aug. 11, 2020).

1. A Single Rule in Action: Florida UI

The failure of American unemployment insurance administration in Florida and many other states between March and July of 2020 vividly illustrates the cost of time-invariant legal rules optimized solely for periods of healthy demand.

Before March 2020, the US enjoyed more than a decade of steady job growth and economic expansion. The job growth drew previously discouraged job-hunters back into the labor force, dramatically increasing the labor force participation rate.⁷⁸ Unemployment rates plunged to post-war lows.⁷⁹ In this job market, unemployment insurance application procedures focused on preventing fraud rather than facilitating benefits provision. Florida provides a signal example. As one observer described Florida's system, "Florida is a terrible state to be an unemployed person...It's hard to get in [to unemployment insurance compensation]. Once you do, it's easy to get disqualified."⁸⁰ This system minimized opportunities for fraud. It also made unemployment insurance "nearly impossible to use so that the unemployment numbers would remain artificially low."⁸¹

The system "worked" reasonably well in the latter half of the 2010s. Florida's unemployment rate sat below the national rate from 2017-2020.⁸² Its economy used more of its labor force than other states. Moreover, Florida faced a much lower false unemployment claims rate than other U.S. States.⁸³ While the system was undeniably harsh for anyone laid off, the broad availability of alternative employment limited the pain.

The system failed, however, when Covid-19 restrictions triggered an avalanche of unemployment claims. An unprecedented number of claimants overwhelmed the deliberately cumbersome application infrastructure both online and in person, preventing timely payment of claims that were filed, and impeding the ability of huge numbers to file at all. Between early March and early May there was an average gap of 220,000 between filers seeking unemployment benefits over the course of each week, and those successfully receiving them.⁸⁴ Only 30% of first time Florida UI claimants through April 30 (7 weeks into the economic crisis) received payment by the end of April.⁸⁵ Especially egregiously, as the Covid economic downturn hit between March 14 and March 28th only 2,800 Floridians were approved for benefits, a tiny fraction of those laid off.⁸⁶ Numbers are much worse if one attempts to account for the

⁷⁸ U.S. Bureau of Labor Statistics, Labor Force Participation Rate, retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/CIVPART>, August 13, 2020.

⁷⁹ U.S. Bureau of Labor Statistics, Unemployment Rate, retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/UNRATE>, August 13, 2020.

⁸⁰ Patricia Mazzei and Sabrina Tavernise, 'Florida Is a Terrible State to Be an Unemployed Person', N. Y. TIMES (Apr. 24, 2020), <https://www.nytimes.com/2020/04/23/us/florida-coronavirus-unemployment.html>.

⁸¹ *Id.*

⁸² U.S. Bureau of Labor Statistics, Unemployment Rate in Florida, retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/FLUR>, June 8, 2020; U.S. Bureau of Labor Statistics, Unemployment Rate, retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/UNRATE>, June 8, 2020.

⁸³ DEPARTMENT OF LABOR, UNEMPLOYMENT INSURANCE PAYMENT ACCURACY BY STATE, retrieved Aug. 13, 2020, <https://www.dol.gov/general/maps>.

⁸⁴ Comparing total filers over the course of a week, plus filers at the end of the previous week, to claims actually being paid at the end of the week. Thus, reflecting the gap between claims recognized and recorded in the unemployment system at the end of the week, and claims that were successful processed and transitioned to payment. Department of Labor, Unemployment Insurance Weekly Claims Data- Florida, <https://oui.doleta.gov/unemploy/claims.asp>, retrieved for period from 3/16/2020 to 5/16/2020.

⁸⁵ See Novella and Stettner, *supra* note 13.

⁸⁶ *Id.*

reportedly large percentage of unsuccessful Floridians trying to file, who were unable to enter statistical “filer” status because of failed state application infrastructure resulting from under-investment in personnel and technology.⁸⁷ This failure to get desperately needed funds to the unemployed exacerbated an already unprecedented recession, reducing spending at a time when aggregate demand fell far short of even diminished capacity.

The failure of unemployment insurance regimes undermined the stimulatory purpose of the expansion of unemployment eligibility provided by Congress under the CARES ACT. In theory, Congress enacted nation-wide countercyclical UI eligibility. In practice, the Florida UI system resisted the change, lacking the administrative capacity to expedite an unprecedented number of claims.

Florida’s policymakers pursued a short-sighted but widely shared version of efficiency. Indeed, their ideas were influenced by the conception of efficiency that is dominant to this day in the legal academy. And while it can be difficult to ascertain the precise values and motivations of legislatures, regulators, and judges – because they are seldom explicit about what they are trying to maximize – the assumptions of the legal academy are easier to examine. Because the legal academy both influences and is influenced by the law on the books, analysis of academic thinking on legal rules helps to explain why, in choosing the time-invariant legal rule adopted, the focus is almost solely on microeconomic impacts in periods of healthy aggregate demand.

2. Efficiency in Law and Economics

Efficiency in law and economics means microeconomic efficiency. As one survey article of the field explained, “Economic analysis of law applies the tools of *microeconomic* theory to the analysis of legal rules and institutions.” (emphasis added).⁸⁸

When the models of microeconomics are applied to legal rules, a legal rule’s effects on spending (or inflation, or unemployment etc.) are ignored. If supply incentives are appropriate, then demand will

⁸⁷ The gap is larger when one attempts to estimate the delta between those likely eligible for benefits, and those receiving benefits successfully. By the 4th of April, the Department of Labor reported only 98k actively paid unemployment claims in the state, reflecting those added to the benefits rolls through the end of March. Department of Labor, Unemployment Insurance Weekly Claims Data- Florida, <https://oui.doleta.gov/unemploy/claims.asp>, retrieved for period from 3/16/2020 to 5/16/2020. Meanwhile, the Bureau of Labor Statistics estimated an unemployment population of 457k during the month of March. Bureau of Labor Statistics, *Economy at a Glance: Florida*, https://www.bls.gov/eag/eag.fl.htm#eag_fl.f.1_1, retrieved August 11, 2020. By the 2nd of May, 444k unemployed were receiving benefits in the state, but the BLS estimates 1.2 million were unemployed in April. While not all unemployed in the state are eligible for benefits, the gap between successful benefits recipients and statistical estimates of real unemployment almost certainly reflect the failed architecture of Florida’s unemployment benefits system, and the widely-reported inability to successfully file for benefits. For a discussion of the differences in method between the BLS’s statistical estimate of unemployment, and the unemployment filing figures recorded by DOL, see, *How is the Unemployment Rate Related to Unemployment Insurance Claims?*, BUREAU OF LABOR STATISTICS (Oct. 16, 2001), <https://www.bls.gov/cps/uiclaims.htm>. For reporting on the breakdown in Florida’s unemployment benefits processing system, see, e.g., Associated Press, *Florida Governor Orders Investigation of Unemployment System*, U.S. NEWS AND WORLD REPORT (May 4, 2020), <https://www.usnews.com/news/best-states/florida/articles/2020-05-04/florida-governor-orders-investigation-of-unemployment-system>, Britt Kennerly, *Coronavirus: Delays in Filing for Unemployment Benefits Take Financial, Emotional Toll*, FLA. TODAY (Apr. 9, 2020), <https://www.floridatoday.com/story/news/2020/04/08/coronavirus-delays-filing-unemployment-take-toll-jobless/5110864002/>.

⁸⁸ Lewis Kornhauser, *The Economic Analysis of Law*, STAN. ENCYCLOPEDIA OF PHIL. (last edited July 17, 2017), <https://plato.stanford.edu/entries/legal-econanalysis/>.

always be sufficient to spend the supply; in microeconomics, there is no such thing as excess capacity.⁸⁹ If law and economics models do not include terms accounting for demand, then of course these models recommend rules that are efficient in ordinary times, when demand is not a constraint.

Models of tort law, some of the earliest and most influential models in law and economics, illustrate the issue.^{90 91} In these microeconomic models, society minimizes the sum of two costs—the costs of accidents and the costs of precautions. The optimal solution of these models—known as the Hand Rule, imposes liability for accidents on the tortfeasor until the marginal costs of additional precautions exceeds the marginal costs of accidents that these precautions prevent.⁹² In addition, a negligence rule allows for an inefficiently high “activity level” because, once the tortfeasor has taken enough precautions, extra activity incurs no additional liability even if the activity raises the risks of accidents. Strict liability, by contrast, provides incentives for efficient activity levels. The optimal solutions in these models increase “capacity”, where capacity is understood to mean the sum of economic and non-economic goods and services.⁹³

The canonical models include no provisions for demand. They implicitly assume that the restaurant economy is always full, so there is no need to worry about what a rule does to demand for meals. As a result, the models prescribe solutions that are time-invariant. The same Hand Rule applies in expansions and recessions.⁹⁴

In fact, legal rules, in tort or any other area of law, affect aggregate demand. Some precautions require additional spending, such as more expensive equipment to prevent accidents. In this regard, stricter negligence standards may increase demand. If victims are more likely to spend an incremental dollar than tortfeasors, then higher tort damage awards increase demand.⁹⁵ And negligence rules, unlike strict liability rules, increase aggregate demand by lowering the cost of any economic activity that raises the risk of accidents.⁹⁶

⁸⁹ For an overview of the historical foundations of supply-side engagement with demand constraints (or the lack thereof) see, *Say's Law, Supply Creates its Own Demand*, THE ECONOMIST (Aug. 12, 2017).

⁹⁰ For prominent treatments, see Guido Calabresi, *Some Thoughts on Risk Distribution and the Law of Torts*, 70 YALE L. J. 499 (1961), Richard Posner, *A Theory of Negligence*, 1 J. OF LEGAL STUD. 29 (1972), Steven Shavell, *An Analysis of Causation and the Scope of Liability in the Law of Torts*, 9 J. OF LEGAL STUD. 463 (1980), and Mitchell A. Polinsky and Steven Shavell, *Should Liability Be Based on the Harm to the Victim or the Gain to the Injurer*, 10 J. OF L., ECON., AND ORG. 427 (1994).

⁹¹ We discuss tort rules not because their effects on aggregate demand are particularly important but rather because they provide a good illustration of seemingly time-invariant law and economics policy recommendations that in fact only apply in periods of health demand.

⁹² Posner, *supra* note 90 at 32.

⁹³ The value of a healthy body is not officially included in output. As a result, this definition of capacity does not correspond perfectly to an output maximizing rule. Broader definitions of income and output, however, do include the value of services that are not usually traded on markets, such as the value of a healthy body. See, for example, the various definitions of income, John R. Brooks, *The Definitions of Income*, 71 TAX L. REV. 253 (2018).

⁹⁴ Not exactly. The microeconomically efficient amount of precaution may vary across the business cycle. Although the Hand Rule applies at all times, it may give different answers in different phases of the business cycle. If traffic is lighter in recessions, for example, then a driving speed that might be negligent on the crowded highways that characterize expansions may be reasonable and efficient. Thus, even the Hand Rule requires some counter-cyclical, implying that the notion of countercyclical law does not ask more of legal policymakers than existing rules already demand.

⁹⁵ Yair Listokin, *Law, Macroeconomics, and Aggregate Demand Externalities: An Application to Optimal Tort Law*, 5 CRITICAL ANALYSIS OF L. 50, 64-71 (2018).

⁹⁶ *Id.*

Ignoring demand effects makes little difference in periods of healthy demand. Demand does not constrain the economy, so demand effects change interest rates but not output.⁹⁷ The canonical economic models of tort law offer good advice to policymakers in periods of healthy demand.

Not so in recessions. In recessions, demand effects generated by different tort law rules help determine output.⁹⁸ But they are not accounted for in economic models of tort (or any other substantive area in law and economics).⁹⁹ In recessions, the law and economic analysis of tort law provides for rules that crimp aggregate demand and reduce output. By assuming that recessions are not a problem, the models inevitably yield efficient outcomes that are only efficient outside of recessions. Law and economics thus purports to maximize efficiency but makes assumptions about the economy that preclude truly efficient policy recommendations.

Because the poor spend more of an incremental dollar than the rich, rules that decrease inequality raise aggregate demand.¹⁰⁰ As a result, legal rules that perform well in recessions will gravitate towards rules that reduce inequality. This contrasts with the standard law and economics result that reducing inequality via tort law is inefficient because it creates a double “distortion.”¹⁰¹ Reducing inequality in recessions is not only good for its own sake, but it also increases efficiency.

Other theoretical perspectives on legal rules that do not pursue efficiency also implicitly ignore the macroeconomic implications of rulemaking. Analysis of tort law from a corrective justice perspective, for example, focuses on duties owed by one member of society to another.¹⁰² A negligence standard embodies the level of care a potential tortfeasor owes to potential victims. If the tortfeasor satisfies this duty, then they are not liable to the victim even if the victim has been injured. Unless the duty the tortfeasor owes to the victim varies with the business cycle, and to our knowledge no one has made this claim,¹⁰³ the corrective justice perspective on tort law, like the economic perspective, dictates a time-invariant rule of negligence.

⁹⁷ Rules that increase aggregate demand may in fact be undesirable when demand is healthy because they increase interest rates and inflation risk. While static output may be unchanged, higher long run interest rates and inflation potentially impede growth. See, for example, treatment in GREGORY MANKIW, *Chapter 14: Aggregate Supply and the Short-Run Tradeoff Between Inflation and Unemployment*, in MACROECONOMICS (10th Ed, 2018).

⁹⁸ *Supra* note 95.

⁹⁹ *Supra* note 95.

¹⁰⁰ For general discussion of the efficiency costs of inequality, see e.g., Josh Bivens, *Inequality is Slowing US Economic Growth*, ECON. POL’Y INST. (2017), Laura Carvalho and Armon Rezai, *Personal Income Inequality and Aggregate Demand*, 40 CAMBRIDGE J. OF ECON. 491 (2016) and Adrien Auclert and Matthew Rognlie, *Inequality and Aggregate Demand* (Washington Center for Equitable Growth Working Paper Series, Feb. 2018).

¹⁰¹ Louis Kaplow and Steven Shavell, *Why the Legal System Is Less Efficient than the Income Tax in Redistributing Income*, 23 J. OF LEGAL STUD. 667 (1994).

¹⁰² For accounts of corrective justice in tort, see Richard Posner, *The Concept of Corrective Justice in Recent Theories of Tort Law*, 10 J. OF LEGAL STUD. 187 (1981), JULES L. COLEMAN, *RISKS AND WRONGS* (1992), EJ WEINRIB, *THE IDEA OF PRIVATE LAW* 80 (1995), RW Wright, *Right, Justice, and Tort Law*, in PHILOSOPHICAL FOUNDATIONS OF TORT LAW 159, 161–5 (D. Owen ed. 1995).

¹⁰³ Even though they have not been articulated, duties that vary with the business cycle are plausible. If money is particularly tight (as it is during a recession), then the level of care owed to others might reasonably be different than it would be in ordinary conditions. Donohue and Siegelman, for example, demonstrate that the frequency and outcome of unemployment discrimination lawsuits varies with the business cycle, indicating some time-variability in practice if not in theory. Peter Siegelman and John J. Donohue, *The Selection of Employment Discrimination Disputes for Litigation: Using Business Cycle Effects to Test the Priest-Klein Hypothesis*, 24 J. OF LEGAL STUD. 427 (1995).

3. Precedent in the Common Law

While microeconomics provided one vision of efficiency analysis in the second half of the 20th century, the common law pursued its own version of desirable legal rules for hundreds of years, through its commitment to “stare decisis.”¹⁰⁴ This organizing principle, in which judges resolve legal questions by placing heavy weight on the decisions of prior courts, has produced a system of precedential reasoning unlike the simplified market models favored by microeconomics. Nevertheless, the common law method of judicial reasoning also demonstrates a bias towards making decisions for expansionary periods, rather than complete economic cycles.

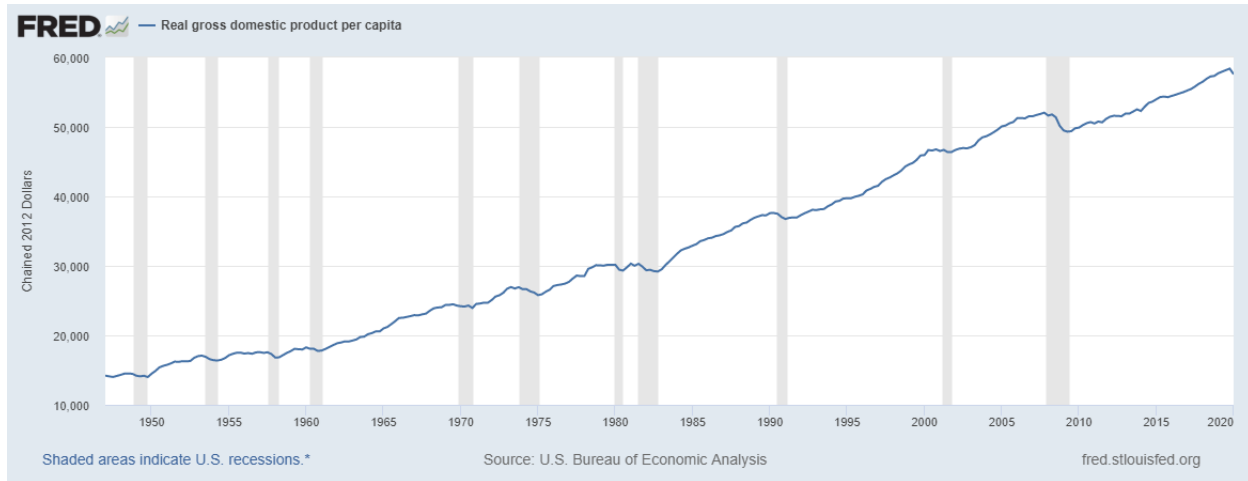
In a precedent-based system, judges incline towards the decisions of prior courts on similar issues. Hathaway describes the system by explaining that “the doctrine of stare decisis . . . creates an explicitly path-dependent process. The past forms the point of departure for the present. The present, in turn, forms the point of departure for the future. Therefore, the historical path leading to each new outcome or decision directly shapes that outcome in specific and systematic ways.”¹⁰⁵

The very nature of majoritarian historical reasoning produces decisions that de-emphasize macroeconomic considerations. When judges look to resolve issues of economic law, they necessarily look to what appears likely to be the right rule in the current historical moment. As Table 1 demonstrates, the economy expands in real per capita terms most (92%) of the time. (Recessions are in dark shading, and occur approximately 8% of the time in the post-WWII U.S. experience.¹⁰⁶) Over many years of judicial decision-making, the prevalence of expansionary periods over recessionary periods is likely to create a body of precedent supporting rules that work well in the dominant expansionary phase of the business cycle. Because precedential reasoning favors the weight of historical majority, a judge is likely to adopt this expansionary reasoning herself (that is the central mechanism of a precedent system), and thereby reinforce rules crafted with economic expansion as the backdrop. In other words, because the majority of cases will be decided in times of expansion, the majority of legal rules interpretation happens in times of expansion. And because the majority of legal rules interpretation happens in times of expansion, we should expect that the precedent so deeply influential under stare decisis is biased toward decisions judged as appropriate under expansionary circumstances.

¹⁰⁴ For a discussion of the force of precedent in shaping law in a common law system, see Oona A. Hathaway, *Path Dependence in the Law: The Course and Pattern of Legal Change in a Common Law System*, 86 IOWA L. REV. 601 (2001). For one of many general histories of the English common law, see THEODORE F. T. PLUCKNETT, *A CONCISE HISTORY OF THE COMMON LAW* (5th ed., 1956). For a concise modern discussion of the sources, scope, and basic history of American use of the common law, see Morris L. Cohen, *The Common Law in the American Legal System: The Challenge of Conceptual Research*, 81 LAW LIBR. J. 13 (1989).

¹⁰⁵ Hathaway, *supra* note 104 at 601. A further claim has been pursued in some circles over the last 30 years that the precedential decision-making model also tends towards microeconomic efficiency. See RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 542 (4th ed. 1992) for foundational overview, and Anthony Niblett, *On the Efficiency of the Common Law: An Application to the Recovery of Rewards*, 43 EUR. J. OF L. AND ECON. 393 (2017) for a more recent take. Note that Hathaway does not accept this view, but rejects it as underestimating the complexity and variability of a path-dependent decision-making process. See Hathaway, *supra* note 104.

¹⁰⁶ Recessions are often identified by shorthand as periods involving GDP declines in two consecutive quarters (although the precise dating procedure is more factor-intensive, it generally conforms to that rule). *The NBER's Recession Dating Procedure*, NATIONAL BUREAU OF ECONOMIC RESEARCH (2008). Table 2 presents real per capita GDP. Because the population is expanding, a decline in per capita GDP for two consecutive quarters is more common than a decline in absolute GDP for two consecutive quarters.

Table 1: Real Gross Domestic Product Per Capita

This Section outlined how most legal rules are designed for periods of robust demand because these are the most common background conditions for the development of the rules and because legal analysis has mostly chosen to assume away the problem of recessions. The problem is particularly acute in law and economics, which has explicitly excluded macroeconomic considerations. But the problem exists across many modes of legal analysis for the simple reason that recessions, though particularly important, are rare.

III. Efficient Time-Invariant Legal Rules for Expansions *and* Recessions

The efficient legal rule varies with the business cycle. But practical considerations (described in Section II) require most legal rules to be constant across the business cycle. The time-invariant legal rule generally chosen is the one most efficient in the expansion phase of the business cycle.

Unfortunately, the efficient rule in expansions often proves extremely inefficient in recessions. These inefficiencies dwarf the gains associated with the expansion-efficient rule when the economy is growing. As a result, most current legal rules are not efficient time-invariant legal rules, even if (or especially if) the rules are chosen to maximize efficiency as commonly understood in law and economics.

In this Section, we characterize the efficient time-invariant legal rule. It lies between the efficient legal rule in expansions and the efficient legal rule in recessions. Because a growing economy is more common than a shrinking one, the single rule should lie closer to the efficient rule in expansions. But the relative frequency of economic expansions and recessions alone does not determine how much the efficient time invariant rule resembles the efficient rule in recessions. Instead, a rule's performance in recessions should receive disproportionate weight. In practice, a rule's performance in recessions deserves nearly as much emphasis in efficiency analysis as its performance in expansions.

A. Why We Cannot Ignore the Problem

Any time-invariant legal rule will be inefficient in some phases of the business cycle. Given the inevitability of error, we might justify the status quo's emphasis on a rule's performance in expansions as follows: If every possible rule is flawed, why not focus on the expansion period rule that is inefficient the least often? True, the expansion period rule proves inefficient in recessions, but recessions are rare. Rules

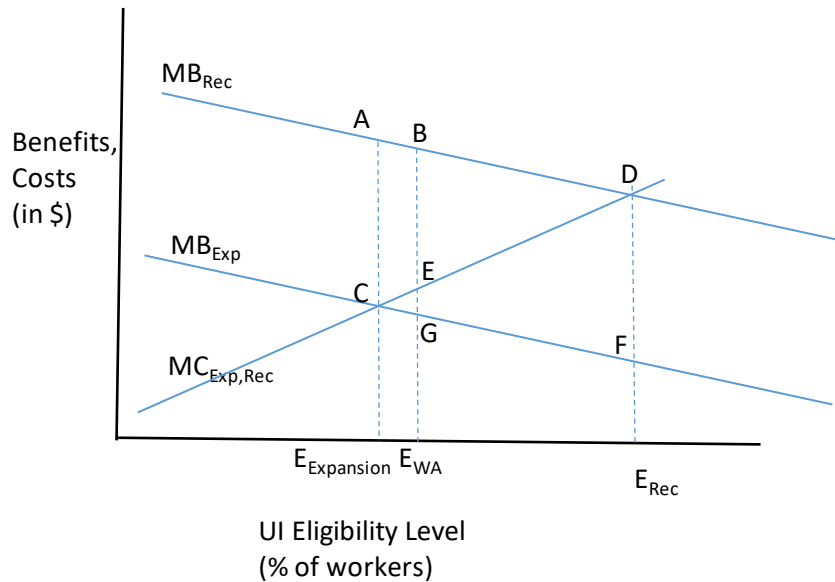
that perform well in recessions fare poorly in expansions. As we saw in Table 1, the likelihood of a recession is much smaller than the likelihood of an expanding economy. Expansion is the norm, occurring about 92% of the time in the United States since World War II. If we accounted for recessions when setting the legal rules, the efficiency gains in recessions might be offset by regular efficiency losses in expansions.

More concretely, consider the optimal UI eligibility rule. The efficient eligibility rule in expansions proves too tight in recessions, while the efficient rule in recessions provides for overly generous UI eligibility in expansions. By applying the efficient rule in expansions at all periods, we get the efficient rule more-often-than-not. And the inefficiency associated with the tight UI rule in recessions should be offset by the inefficiency caused by more generous rules in expansions. As a result, the efficient rule in expansions appears to be just as efficient as any other time-invariant UI eligibility rule.

Not so. In most economic models, the inefficiency associated with a rule does not grow proportionally to the rule's unsuitability. Instead, the inefficiency increases with the square of unsuitability. A legal rule that is far off the mark causes a disproportionate amount of inefficiency. It is better for a rule to be slightly inefficient most of the time and mitigate the worst outcomes than to maximize efficiency in most conditions but facilitate occasional catastrophic outcomes.

Because most legal rules are designed for expansions, they ignore considerations of aggregate demand and perform poorly in recessions, causing outside inefficiencies. To mitigate these inefficiencies, the efficient time-invariant rule needs to shift towards the efficient rule in recessions, even if this means applying an imperfect rule most of the time. The gains associated with applying a better rule in recessions exceed the losses associated with applying the (slightly) wrong rule in expansions.

Figure 3 demonstrates these points graphically. As in Figures 1 and 2 in Section I, Figure 3 depicts a marginal cost curve and a marginal benefits curve for different levels of legal eligibility for UI. As in Section I, the marginal benefits curve (MB) represents the social value of expanding unemployment insurance eligibility. Because the spending triggered by more expansive UI eligibility gets a much higher macro multiplier (3x-4x) in recessions than in expansions (reflecting the importance of aggregate demand), the marginal benefits curve in recessions lies well above the marginal benefits curve in expansions, ($MB_{Exp} < MB_{Rec}$). To keep Figure 3 as simple as possible, we assume (contra Figure 2) that the marginal costs of expanding UI eligibility are the same in expansions and recessions ($MC_{Exp} = MC_{Rec}$). In reality, the marginal costs of expanding unemployment insurance eligibility in recession lie below those in expansions ($MC_{Exp} > MC_{Rec}$) because moral hazard plays less of a role in determining employment status in recessions than in expansions. But including this consideration adds complexity without changing the fundamental analysis.

Figure 3: Efficient Time-Invariant Rule

As shown in Section I, the difference in macroeconomic marginal benefits causes the efficient unemployment eligibility rule to vary with the business cycle. In both Figure 2 and Figure 3, the efficient UI eligibility rule in recessions is more expansive than the efficient rule in expansion phases of the cycle ($E_{Exp} < E_{Rec}$).

Applying either eligibility rule in the “wrong” phase of the business cycle causes “deadweight loss”, wasting resources.¹⁰⁷ Applying the optimal eligibility rule for expansions (E_{Exp}) during recessions causes deadweight loss equal to the area of the triangle ACD . The deadweight loss is caused by the workers (those between E_{Exp} and E_{Rec}) who are (inefficiently) ineligible for UI benefits because the high marginal benefits of making them eligible for UI in recessions exceed the marginal costs. Applying the optimal eligibility rule for recessions (E_{Rec}) during economic expansions causes deadweight loss equal to the area of the triangle CDF . This deadweight loss is caused by the share of workers (again, those between E_{Exp} and E_{Rec}) who are (inefficiently) eligible for unemployment benefits in an expanding economy even though the marginal costs of their eligibility exceed the marginal benefits.

Knowing that different rules are efficient at different phases of the business cycle, how should a time-invariant UI eligibility rule be chosen to minimize inefficiency? The *best* time-invariant eligibility rule minimizes average inefficiency over the course of the business cycle. That is, the efficient time-invariant rule minimizes the average area of the relevant deadweight loss triangles over the course of the business cycle.

If the time-invariant legal rule is the rule that is efficient for expansions (E_{Exp}), then this rule proves inefficient. In expansions (most of the time), this rule maximizes efficiency. In recessions, however, this rule causes massive inefficiencies, equal to the area of ACD . A more efficient rule expands eligibility slightly in the direction of E_{Rec} , such as to point E_{WA} . In expansions, the new rule E_{WA} proves

¹⁰⁷ For a basic explanation of deadweight loss functions, see MANKIW, *supra* note 22 at 160.

less efficient than E_{Exp} . We are allowing some workers to become eligible for unemployment even though the marginal cost of unemployment insurance eligibility for these workers in expansions exceeds the benefit. But the efficiency cost is very small, equal to the area of the triangle ECG . This area is proportional to the square of the (relatively short) distance between E_{WA} and the optimal rule in expansions (E_{Exp}),¹⁰⁸. The workers benefitting from expanded eligibility are “close to the margin” in expansions—the benefits of making them eligible for UI are almost equal to the costs.

In exchange for this frequent but arbitrarily small inefficiency, an intermediate rule like E_{WA} offers a much more efficient rule than E_{Exp} in recessions. In recessions, rule E_{WA} is associated with deadweight loss equal to the area of the triangle BED , notably smaller than the deadweight loss area of ACD associated with the expansion period eligibility rule E_{Exp} . Intuitively, this reduction occurs because the intermediate rule expands eligibility to workers who are far from the margin in recessions—the marginal benefits of making them eligible for unemployment in recessions greatly exceed the marginal costs.

The intermediate rule tolerates recurring small inefficiencies from too expansive UI eligibility in expansions in order to prevent occasional large inefficiencies from excessively tight UI eligibility in recessions—a favorable tradeoff. At some point, however, the tradeoff from a more expansive time-invariant rule stops being favorable. The increase in inefficiency in expansions (the area of triangle ECG) from a more expansive rule multiplied by the frequency with which the economy expands equals the decrease in efficiency in recessions (the area of triangle BED) multiplied the frequency of recessions.¹⁰⁹ This point is the efficient time-invariant rule. Moving the rule closer to either the efficient rule in recessions or in expansions lowers average efficiency.

Because the efficient time-invariant rule is an intermediate rule, a legal rule’s performance in recessions cannot be ignored. Rather, efficiency in recessions should be a component of every efficiency analysis of legal rules.

B. How Much Weight to Put on Recessions?

Even if a time-invariant rule’s performance in recessions cannot be ignored, how much weight should recessions receive in determining the efficient rule? Focusing exclusively on the relative likelihood of expansions (roughly 92% of the time) vs recessions (roughly 8% of the time), an efficient time-invariant “weighted average” legal rule should closely resemble the efficient legal rule in expansions. This section argues, however, that performance in recessions deserves more emphasis because:

1. Many legal rules assume heightened relevance in recessions.

¹⁰⁸ In expansions, the efficient rule is E_{Exp} . Imposing a rule E_{WA} causes inefficiencies proportional to the square of the distance between the optimal rule and the rule that is being applied ($E_{WA} - E_{Exp}$). Deadweight loss in an expansion associated with rule E_{WA} equals the area of the triangle ECG . The area of triangle ECG is equal to one half of the triangle’s height multiplied by its length, $A = .5lh$. Triangle ECG ’s length (l) is $l = E_{WA} - E_{Exp}$. Triangle ECG ’s height (h) also proportional to $(E_{WA} - E_{Exp})$. $h \propto \tan(\angle CEG) * (E_{WA} - E_{Exp})$. The area of triangle ECG is thus proportional to the square of the distance between the rule in effect and the optimal rule at the relevant stage of the business cycle, $(E_{WA} - E_{Exp})$. $A = .5lh \propto \tan(\angle CEG) * (E_{WA} - E_{Exp})^2$.

¹⁰⁹ Formally, $U = \min_E p_{rec} * DWL_{Rec}(E) + p_{Exp} * DWL_{Exp}(E)$. At the efficient time invariant rule, $\frac{\partial U}{\partial E} = 0$.

2. People are poorer in recessions. As a result, the efficient rule in recessions maximizes income when it is most needed. It is worth sacrificing a bit of efficiency in growing economies to improve outcomes in recessions when every dollar matters more.
3. Although expansions are more frequent than recessions, the aftermath of recessions often lingers. Unemployment stays well above its “natural” rate for an extended period, implying higher spending multipliers. As a result, the efficient legal rule for the early part of an expansion will be closer to the efficient rule in recessions than the efficient rule for more mature expansions. Accordingly, the efficient time-invariant rule should shift closer to the efficient rule in recessions.

1. Many Legal Rules Grow More Salient in Recessions

Many legal rules grow in importance during recessions because more people take advantage of their protections in recessions than in expansions. As a result, the relative likelihood of economic expansions vs. recessions provides a misleading indicator of the appropriate weight to place on the performance of a legal rule in different phases of the business cycle. The efficient balance requires more weight to be placed on a rule’s performance in recessions.

Unemployment insurance provides a signal example. In recessions, many more people claim unemployment insurance benefits than in ordinary times. The recession induced by the coronavirus amplified this phenomenon. Between mid-2014 and March 2020, the number of new unemployment claims in a week never exceeded 300,000.¹¹⁰ Coronavirus precautions triggered a tidal wave of new unemployment claims, with new claims peaking at almost 7 million (10x the previous record number of weekly filings set in the Great Recession) in the last week of March 2020.¹¹¹ New unemployment claims continued to exceed previous records though mid-August 2020.¹¹²

This means that the distribution of individuals applying for unemployment in different phases of the business cycle is much less lopsided than the time distribution of different phases of the business cycle. If the economy is in recession 10% of the time but 10x more workers per week apply for unemployment in recessions than in expansions, then just as many workers apply for unemployment in recessions as in good times. A UI eligibility rule’s efficiency in recessions should therefore receive just as much weight as its efficiency in expansions, even if the size of inefficiencies in recessions is no larger than in expansions.

While unemployment insurance applications are extremely skewed towards recessions, the same is true (to a lesser extent) of many other important legal programs. Bankruptcy filings¹¹³ and applications for welfare and disability programs¹¹⁴ rise during recessions, and foreclosures spiked during the 2007-

¹¹⁰ U.S. Employment and Training Administration, Initial Claims, retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/ICSA>, July 9, 2020.

¹¹¹ *Id.*

¹¹² *Id.*

¹¹³ Benjamin Iverson, *Get in Line: Chapter 11 Restructuring in Crowded Bankruptcy Courts*, 64 MGMT. SCI. 5370 (2018) (“Bankruptcy filings rise 32% in recessions”).

¹¹⁴ Social Security Disability Insurance payments rose sharply between 2007-2010, and analysis has causally tied this trend to recession economics—although it is not the only impactful factor. SOCIAL SECURITY ADMINISTRATION OFFICE OF RETIREMENT AND DISABILITY POLICY, *Trends in Social Security Disability Insurance* (Briefing Paper No. 2019-01, August 2019) (“A number of external studies have found that the disability incidence rate is tied to economic trends. Our own, still preliminary, research finds that fluctuations in the disability incidence rate are only partly explainable by economic cycles, however. For example, the 3.9 percent unemployment rate in 2018...explains a bit more than a third of the difference between the observed disability incidence rate and the long-run rate consistent with steady-state unemployment. It is not clear yet how much the economic recovery explains the decline in the disability incidence rate since 2010.”).

2009 “Great” recession.^{115 116} As a result, a time-invariant efficient legal rule in each of these areas needs to place more emphasis on performance in recessions than might be expected from a simple analysis of recession frequency.

2. Higher Average Marginal Utility in Recessions

Reducing inefficiency when everyone is poorer is worth more than reducing inefficiency when money is plentiful. As a result, a rule’s performance in recessions deserves disproportionate weight in the formation of the efficient time-invariant legal rule.

Much of economics, including the supply and demand curve analysis presented in Figures 1-3, presumes “diminishing marginal utility”.¹¹⁷ Diminishing marginal utility means that the value of an incremental dollar goes down as people accumulate more income.¹¹⁸ For the poor, an additional dollar goes to meeting a basic necessity. For the rich, by contrast, an additional dollar likely gets saved or goes to a less essential form of consumption. As such, the consumption the dollar buys means less to the rich than to the poor.

Diminishing marginal utility underpins UI. With UI, workers and firms pay a premium in good times to protect consumption in bad times. Even though UI interferes with the incentive to work, it is a worthwhile program because it transfers money from good times to bad.

What UI does for individual workers, legal rules in general should do for the economy at large. Legal rules that increase income in recessions but decrease it in expansions are worth a premium because additional income in recessions is worth more to the average person than the same amount of lost income in expansions. When incomes are lower in recessions,¹¹⁹ marginal utility for the average person is higher—justifying extra emphasis on a rule’s performance in recessions.

¹¹⁵ Historical foreclosures data is fragmented, making complete modern analysis unwieldy. The Great Recession experienced an extreme spike in foreclosures, although data from 1926-1963s show no obvious trend. For Great Recession discussion, see Ingrid Gould Ellen and Samuel Dastrup, *Housing and the Great Recession*, STANFORD CENTER ON POVERTY AND INEQUALITY 3 (2012), Sharada Dharmasankar and Bhash Mazumder, *Have Borrowers Recovered from Foreclosures During the Great Recession?* (Chicago Fed. Letter, No. 370, 2016). For limited historical data, see National Bureau of Economic Research, Nonfarm Real Estate Foreclosures for United States, retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/M09075USM476NNBR>, August 12, 2020.

¹¹⁶ A note on evictions—another obvious area in this line of thought. While it might be expected evictions rise steeply in recessions, it is practically hard to determine. Evictions are extremely poorly tracked at a national level, although the Eviction Labs project has assembled an incomplete database. The Eviction Lab, *National Estimates: Eviction in America* (accessed Aug. 12, 2020), <https://evictionlab.org/map/#/2016?geography=states&bounds=-160.576,11.107,-44.648,55.785&type=er>. Evictions Lab data starts in 2000 and shows little discernable relationship between evictions or eviction filings and recessions over that period. However, the dataset is incomplete and researchers in regional analysis have observed inaccuracies in matching other sources to Evictions Lab data. Taylor Shelton, *Mapping Dispossession: Eviction, Foreclosure and the Multiple Geographies of Housing Instability in Lexington, Kentucky*, 97 GEOFORUM 281, 284 (2018). At this time, it is not possible to tie eviction frequency to recessions nationally, but this could be a result of poor data collection. That said, even assuming a relatively constant rate of evictions, their harm is obviously more deeply felt in recessions than expansions and floods of evictions in downturns, absent public policy interventions, cannot be ruled out. See Sarah Mervosh, *An ‘Avalanche of Evictions’ Could Be Bearing Down on America’s Renters*, N.Y. TIMES (May 30, 2020).

¹¹⁷ For an economic explanation of diminishing marginal utility, see MANKIW, *supra* note 22 at 443.

¹¹⁸ See Fisher, Johnson, Smeeding, and Thompson, *supra* note 16.

¹¹⁹ The early stages of the Covid-19 recession provided an important exception to this general rule. Because of generous increases in programs like unemployment and tax rebates, average US income increased in April 2020. Matthew Yglesias, *Household Income Surged in April Despite the Collapsing Labor Market*, VOX (May 29, 2020).

The disproportionate importance of recessions is further amplified by the unequal distribution of the burdens of recessions. While average incomes are lower in recessions, the burden is distributed unequally. Some workers lose their jobs and experience a prolonged fall in income, health, and well-being, while others maintain their income.¹²⁰ Because those who lose their job in recessions have extremely high marginal utility, a legal rule that performs well in recessions and reduces these unequal income declines is therefore particularly desirable from an efficiency perspective.

This unequal distribution of the burdens of recessions exacerbates preexisting inequality along educational, racial and ethnic lines. As one paper summarized, “the impacts of the Great Recession have been felt most strongly for men, black and Hispanic workers, youth, and low-education workers.”¹²¹ Not only are average incomes lower and the fall distributed unequally, but much of the burden of recessions is concentrated on those least able to bear falls in income at any time. As a result, marginal utility in recessions is much higher than in expansions, by an amount that greatly exceeds the difference in average incomes over the business cycle.

A rule that increases income to already poor people at their most needy times is more efficient than a rule that yields the same average production over the business cycle but prioritizes income in expansions. As a result, a rule’s performance in recessions deserves more weight than the time distribution of recessions and expansions would imply.

3. Aggregate Demand Shortfalls Outside of Recessions

To this point, we have emphasized a highly stylized model of the economy. Either the “restaurant” economy is full and the economy is expanding, in which case aggregate demand is irrelevant, or the restaurant has spare capacity and the economy is in recession, in which case aggregate demand determines output. In reality, aggregate demand may help determine output even though the economy is expanding. As a result, legal rules that increase aggregate demand deserve more weight than the frequency of recessions would suggest.

Suppose that the restaurant economy suffers a recession in which unemployment increases from a long run average of 5% of the population to 20% of the population. In the following year, demand for meals partially recovers. The restaurant rehires some of the laid off workers, and unemployment falls in half to 10%. The restaurant economy is enjoying an expansion, using more of the labor force to produce a greater number of meals than the previous year. Our analysis so far assumes that an expanding economy is one in which rules that enhance aggregate demand are inefficient.

Not so. Even though the restaurant economy has expanded relative to the previous year, aggregate demand continues to limit output. Unemployment, at 10%, lingers above its long run rate of 5%. The restaurant has substantial spare capacity. Legal rules that promote aggregate demand raise output and lower unemployment, even though the economy is expanding relative to the previous year. Until the

Production, however, declined dramatically during the month. FEDERAL RESERVE BOARD OF GOVERNORS, INDUSTRIAL PRODUCTION AND CAPACITY UTILIZATION - G.17 (July 15, 2020), <https://www.federalreserve.gov/releases/g17/current/default.htm>. The U.S. financed the payments with unprecedented levels of borrowing.

¹²⁰ See *Long-Term Unemployment: Causes, Consequences, and Solutions*, Hearing Before the Joint Economic Committee of the Congress of the United States, 111th Cong. 35-47 (2010)(Statement of Lawrence Katz on Long-Term Unemployment in the Great Recession).

¹²¹ Hillary Hoynes, Douglas L. Miller and Jessamyn Schaller, *Who Suffers During Recessions?*, 26 J. OF ECON. PERSP. 27, 34 (2012).

economy returns to production consistent with a 5% unemployment rate, the best legal rule for recessions will be more efficient than the best legal rule in expansions—even though the economy is growing.

One measure of an economy operating at full capacity, with no shortage of aggregate demand, is the “natural rate of unemployment.”¹²² The natural rate of unemployment is not zero. At any time, there will be people “in between” jobs.¹²³ Aside from these workers in transition, however, everyone who wants a job has one. If the government stimulates demand by purchasing meals when the restaurant is already full, for example, then unemployment is unlikely to fall. Instead, prices will rise. There is no way to accommodate the increase in demand without an increase in wages that may induce some reluctant workers to stay in the labor force. When unemployment is above the natural rate, by contrast, increased meal spending by the government raises output by providing jobs for previously unemployed workers. Thus, the natural rate of unemployment provides a rough proxy for an economy operating at or near capacity.¹²⁴

Research by the Federal Reserve Bank of San Francisco indicates that “the natural rate [in the United States] has been remarkably stable, ranging between 4.5 and 5.5%.”¹²⁵ We can therefore measure the economy’s performance relative to capacity by comparing the observed unemployment rate with the natural rate of approximately 5%. If the unemployment rate significantly exceeds 5% (e.g. hits 7.5% or greater), then the economy is producing below capacity, indicating a shortage of aggregate demand. In such environments, legal rules that promote aggregate demand raise efficiency.

Table 2 presents US unemployment rates and estimates of the natural rate of unemployment from 1990 to the present.¹²⁶ From 1990-2007, a period known as the “Great Moderation,” the economy experienced very short recessions and very few periods of prolonged high unemployment.¹²⁷

In this macroeconomic environment, time-invariant legal rules emphasizing optimal performance in expanding economies look defensible (though the efficient rule in recessions deserves some extra weight as described in sections III.B.1 and III.B.2). A tight unemployment insurance eligibility regime, for example, raises output during the prevailing periods of growth and low unemployment. The tight regime’s weaknesses during periods of slack demand are rarely encountered. As a result, strict UI regimes may have been a reasonable proxy for the efficient time-invariant UI rule during the Great Moderation.

Since, 2008, however, periods of deficient aggregate demand have become much more pervasive (Table 2). Between January 2008 and June 2013, the economy was either in recession and/or experiencing unemployment rates over 7.5%—significantly above the natural rate of approximately 5%. Unemployment again soared well above 7.5% in 2020 because of the recession caused by COVID-19 and

¹²² GREGORY MANKIW, *Chapter 7-1: Job Loss, Job Finding, and the Natural Rate of Unemployment*, in *MACROECONOMICS* (10th Ed, 2018).

¹²³ *Id.*

¹²⁴ Because it is a theoretical construct, the natural rate of unemployment can only be estimated. See Douglas Staiger, James H. Stock and Mark W. Watson, *How Precise Are Estimates of the Natural Rate of Unemployment?*, in *REDUCING INFLATION: MOTIVATION AND STRATEGY* 195 (Christina D. Romer and David H. Romer, eds. 1997).

¹²⁵ Regis Barnichon and Christian Matthes, *The Natural Rate of Unemployment over the Past 100 Years* (Fed. Reserve Bank of S.F. Econ. Letters, Aug. 14, 2017).

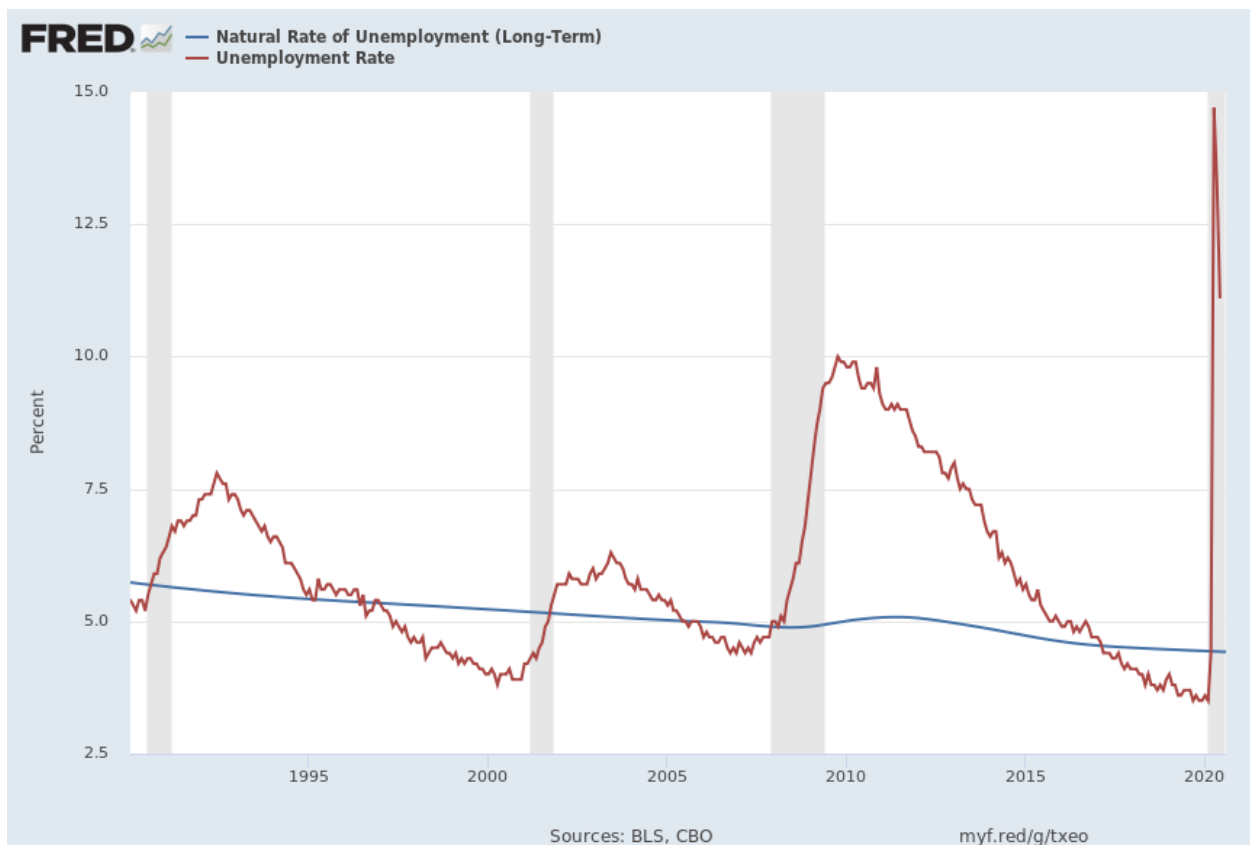
¹²⁶ U.S. Congressional Budget Office, *Natural Rate of Unemployment (Long-Term)*, retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/NROU>, July 29, 2020; U.S. Bureau of Labor Statistics, *Unemployment Rate*, retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/UNRATE>, July 29, 2020.

¹²⁷ Craig S. Hakkio, *The Great Moderation*, FEDERAL RESERVE HISTORY (2013).

looks likely to stay above 7.5% through 2021.¹²⁸ Thus, aggregate demand has constrained output in the U.S. for just under 50% of the time since the beginning of 2008. Rather than an extraordinary case, deficient aggregate demand now looks like a regular occurrence. Indeed, some economists are concerned that we have entered a period of “secular stagnation” characterized by persistently inadequate aggregate demand causing slow growth, high unemployment, and extraordinarily low interest rates.¹²⁹ Secular stagnation can persist for decades, as it has in Japan since the late 1980s.¹³⁰

In this context, legal rules need to change. If aggregate demand is persistently too low, then the demand-depressing features of a tight UI eligibility regime (or any other legal rule that depresses aggregate demand) persistently reduce output and increase the suffering of the jobless. The efficient time-invariant UI eligibility rule is therefore more expansive today than it was during the Great Moderation.

Table 2: Natural v. Actual Rate of Unemployment



¹²⁸ Jeanna Smialek and Alan Rappeport, *Fed Leaves Rates Unchanged and Projects Years of High Unemployment*, N.Y. TIMES (June 10, 2020) (“Fed officials indicated...that they expected the unemployment rate to remain elevated for years, coming in at 5.5 percent in 2022”).

¹²⁹ For a summary, see Lawrence H. Summers, *The Age of Secular Stagnation*, FOREIGN AFFAIRS, March/April 2016, at 2.

¹³⁰ See Kyoji Fukao, Kenta Ikeuchi, Hyeog Ug Kwon, Young Gak Kim, Tatsuji Makino and Miho Takizawa, *Lessons from Japan's Secular Stagnation* (Discussion Paper of the Research Institute of Economy, Trade and Industry, Nov. 2015), <https://www.rieti.go.jp/jp/publications/dp/15e124.pdf>.

Because the economy appears to have entered a prolonged period of secular stagnation with persistently deficient aggregate demand, efficient time-invariant rules need to place greater emphasis on efficiency in recessions. When economic conditions shift, efficient legal rules need to shift accordingly. Indeed, the combined effects of secular stagnation and higher marginal utility in recessions necessitate time-invariant rules that place more weight on efficiency in recession than on efficiency in expansions. The prioritization of performance in recessions should be even more pronounced for legal regimes such as unemployment insurance and bankruptcy that are disproportionately accessed during recessions.

Data and theory thus demand a radical reorientation of law and economics. Time-invariant legal rules that promote aggregate demand in recessions are likely to outperform time-invariant legal rules that perform best when the economy is at capacity. Rather than ignoring macroeconomics and prescribing rules that perform optimally in expansions, law and economics needs to prioritize efficiency in periods of slack aggregate demand. Economic efficiency requires nothing less.

IV. Further Applications

The refined definition of efficiency developed here has broad application. Accounting for macroeconomic as well as microeconomic effects causes the efficient time-invariant legal rule to shift across many areas of law. In this section, we characterize the efficient time-invariant foreclosure law, bankruptcy law, and contract. In each case, we demonstrate how introducing macroeconomic effects shifts the efficient rule.

A. Foreclosure Law

The economic effects of foreclosure rules vary over the business cycle, just as the economic effects of unemployment insurance eligibility rules do. In expansions, legal rules that make it harder for creditors to foreclose on a property have higher “moral hazard” costs. The more difficult the foreclosure, the longer the borrower may enjoy their property rent-free, making the prospect of defaulting on their loan more attractive. Difficult foreclosure laws allow a debtor to retain a property even if another user gives the property a much higher valuation. Indeed, states with higher bars to foreclosure in the period before the 2007-08 financial crisis had more defaults on mortgages than those without, likely a result of the incentives a protracted and difficult foreclosure process create.¹³¹ If a difficult and expensive foreclosure process leads to more defaults, then interest rates on mortgages may rise, the allocation of property may be suboptimal, and the local economy may suffer a loss of potential output.¹³²

However, in a recession, the narrative shifts. The moral hazard losses associated with allowing debtors to hold onto property after they have defaulted decline because the recession makes it less likely that another person has a higher-value use for the property.¹³³ In recessions property values are often in decline, and the wealth of equity-holders in real property (and consequently their consumption) is decreasing.¹³⁴ In this scenario, the macroeconomic value of a stimulative legal rule becomes increasingly salient. The marginal value of protecting home prices by restricting the supply of foreclosed homes increases in a downturn, while the microeconomic costs of additional defaults remain the same or perhaps even decline. Indeed, the stimulative impact of tighter foreclosure restrictions is born out empirically.

¹³¹ Demiroglu, Cem and Dudley, Evan and James, Christopher M., *State Foreclosure Laws and the Incidence of Mortgage Default* 57 J. OF L. AND ECON. 225 (2014).

¹³² *Id.*

¹³³ Even if another user has a higher valuation for the property, the credit market disruptions that often characterize recessions may prevent the other user from obtaining the property.

¹³⁴ See Atif Mian & Amir Sufi, *HOUSE OF DEBT: HOW THEY (AND YOU) CAUSED THE GREAT RECESSION, AND HOW WE CAN PREVENT IT FROM HAPPENING AGAIN* (2004).

States with looser foreclosure rules between 2007 and 2009 (the peak of the housing crisis in the United States) had less declines in housing prices, more new residential construction, and less declines in auto sales.¹³⁵ In other words, their economies performed better.

While the economic effects of foreclosure rules vary cyclically, they are universally time-invariant in statute; meaning they are drafted to remain the same in expansion and recession.¹³⁶ Practically, however, foreclosure rules are not perfectly time-invariant. In recessions, legislatures often enact a temporary softening of foreclosure rules through emergency relief legislation. In response to Covid-19, numerous states altered their regimes to protect homeowners, creating various degrees of foreclosure restrictions and/or moratoria, usually for a few months at most.¹³⁷ In response to depressed housing market conditions in the aftermath of 2008, various states enacted similar foreclosure moratoria and foreclosure reduction laws.¹³⁸ Indeed, this tradition of enacting some form of foreclosure protection was evident as early as the Great Depression.¹³⁹

The Covid-19 moratoriums, rather than tying the duration of the altered legal standard to economic conditions, have generally chosen to sunset the provisions arbitrarily at the end of the summer of 2020. This decision reflects a view that complete moratoria are not sustainable over the long run because creditors will balk at such an important long-run limitation on their rights.

An efficient time-invariant rule, by contrast, imposes more limited restrictions on foreclosures throughout the business cycle. In recessions, these restrictions stimulate the economy and reduce unemployment, as shown by Mian and Sufi. In expansions, the restrictions limit access to credit—but only marginally.¹⁴⁰ On balance, the Mian and Sufi results indicate that foreclosure restrictions are justified throughout the business cycle—they are the efficient time-invariant rule. Such time-invariant restrictions are likely to be more effective, and less anxiety-provoking for borrowers, than reliance on short term foreclosure moratoria. While foreclosure moratoria have a role as a response to extreme economic upheaval, they can only offer temporary respite.

B. Bankruptcy Law

A more robust definition of efficiency can also improve bankruptcy law.

¹³⁵ Atif Mian, Amir Sufi and Francesco Trebbi, *Foreclosures, House Prices, and the Real Economy*, 70 J. OF FIN. 2587 (2015).

¹³⁶ Andra Ghent, *The Historical Origins of America's Mortgage Law*, RESEARCH INSTITUTE FOR HOUSING AMERICA SPECIAL REPORT (2012).

¹³⁷ NATIONAL CONSUMER LAW CENTER, *Covid-19 State Foreclosure Moratoriums and Stays*, accessed July 8, 2020, <https://www.nclc.org/issues/foreclosures-and-mortgages/covid-19-state-foreclosure-moratoriums-and-stays.html>.

¹³⁸ New Jersey is most prominent for a 9-month judicial-engineered moratorium. Recent retrospective analysis of the New Jersey moratorium suggest it was generally successful at achieving a consumer protection goal. J. Michael Collins and Carly Urban, *The Effects of a Foreclosure Moratorium on Loan Repayment Behaviors*, 68 REGIONAL SCI. AND URBAN ECON. 73, 74 (2018). California also passed a series of laws restricting foreclosure, which recent analysis also suggests were a positive force in the state's economy. Stuart Gabriel, Matteo Iacoviello and Chandler Lutz, *A Crisis of Missed Opportunities? Foreclosure Costs and Mortgage Modification During the Great Recession*, REV. OF FIN. STUD. (Forthcoming, 2020), available at <https://www.federalreserve.gov/econres/feds/files/2020053pap.pdf>.

¹³⁹ See, David C. Wheelock, *Changing the Rules: State Mortgage Foreclosure Moratoria During the Great Depression*, 90 FED. RESERVE BANK OF ST. LOUIS REV. 569 (2008); Fred Wright, *The Effect of New Deal Real Estate Residential Finance and Foreclosure Policies Made in Response to the Real Estate Conditions of the Great Depression*, 57 ALA. L. REV. 231, 240 (2005).

¹⁴⁰ Manisha Padi, *Consumer Protection Laws and the Mortgage Market: Evidence from Ohio* (2018), at <https://lawcat.berkeley.edu/record/1128819>.

Efficient bankruptcy law balances two competing interests.¹⁴¹ Discharge of debt in bankruptcy provides borrowers with a fresh start, enabling them to improve their employment prospects, income, and even health.¹⁴² But discharge in bankruptcy promotes moral hazard; some borrowers with legitimate capacity to pay will seek bankruptcy protection as a preferred alternative, raising the cost of credit. A similar balancing applies to rules that make it difficult for firms to reorganize and restructure, and instead force liquidations.¹⁴³ Allowing reorganization enables firms to retrench and increase productivity. At the same time, avoiding liquidation raises the cost of credit by reducing the penalty of debt default to a firm.

Bankruptcy law balances these competing interests. But the efficient balance likely differs over the business cycle. In expansions, even debt-constrained debtors are likely to have access to employment, reducing the social value of a fresh start. Likewise, the assets of corporations that are liquidated are likely to find alternative uses in expansions. As a result, bankruptcy law in expansions needs to pay considerable attention to the risks associated with too much debt discharge.

The calculus changes in recessions. Bankruptcy liquidations cause devastating spillover effects to local economies, raising unemployment and reducing spending.¹⁴⁴ When these effects are exacerbated by the high spending multipliers characteristic of recessions, the costs of liquidation become prohibitive. In recessions, liquidations should be avoided because they are inefficient, reducing employment and output.

One solution to this variation in efficient bankruptcy law is law that varies with the business cycle.¹⁴⁵ As noted above, however, changing law with the business cycle may simply be too complex to manage.

Efficient time-invariant bankruptcy rules offer another solution. Rather than setting bankruptcy rules to optimize the tradeoff between the value of a fresh start and the cost of moral hazard in ordinary economic conditions, bankruptcy discharge and liquidation rules should be more favorable to debtors at all times. Pro-debtor bankruptcy laws decrease efficiency in expansions. But they significantly increase efficiency in downturns. With the stakes in recessions so high, this is a tradeoff worth making.

Bankruptcy rules should place particularly strong emphasis on their effects in recessions relative to expansions. Bankruptcy filings, like unemployment claims and foreclosures, skyrocket in recessions, meaning that bankruptcy rules are applied disproportionately frequently when the economy is struggling.¹⁴⁶

C. Contract Law: Impracticability

Bankruptcy law and foreclosure law have obvious relevance to recessions. But time-invariant legal rules that account for downturns should prevail in many areas of law. Indeed, some otherwise problematic legal doctrines look more defensible when viewed through the lens of a fluctuating business cycle. Consider, for example, the contract law doctrine of impracticability. This doctrine, sometimes known as impossibility, excuses contractual performance when performance is impossible or

¹⁴¹ See, e.g., Kenneth Ayotte, *Bankruptcy and Entrepreneurship: The Value of a Fresh Start*, 23 J. L. ECON & ORG. 161 (2007).

¹⁴² Will Dobbie and Jae Song, *Debt Relief and Debtor Outcomes: Measuring the Effects of Consumer Bankruptcy Protection*, 105 AM. ECON. REV. 1272 (2015).

¹⁴³ See Ayotte, *supra* note 141.

¹⁴⁴ Shai Bernstein, Emanuele Colonnelli, Xavier Giroud and Benjamin Iverson, *Bankruptcy Spillovers*, 133 J. FIN. ECON. 608, 631 (2019).

¹⁴⁵ Zachary Liscow, *Counter-Cyclical Bankruptcy Law: An Efficiency Argument for Employment-Preserving Bankruptcy Rules*, 116 COLUM. L. REV. 1461 (2016).

¹⁴⁶ See *supra* notes 113, 114, 115.

impracticable for the promisor for unexpected reasons. In the seminal case of *Taylor v. Caldwell*, for example, a theater owner was excused from a contract to let the theater when the theater burned down before the rental date.¹⁴⁷

Even when performance is difficult or impossible, the promisor can pay damages. The defendant theater owner in *Taylor* could not reasonably have rented an intact theater to the plaintiff, but it could have paid the plaintiff damages. As a result, impracticability is not an inevitable component of contract law.

From a purely microeconomic perspective, impracticability looks problematic, though not indefensible.¹⁴⁸ Impracticability adds complexity to the law. It raises the prospect of inefficient litigation in otherwise straightforward breach of contract cases. Even if a promisor fails to perform a clear contractual obligation, they can often argue that performance was impractical. In some cases (such as *Taylor*), unexpected difficulties in performance discharge a promisor's obligation.¹⁴⁹ In others, they do not.¹⁵⁰

Law and economics would prefer to shift the analysis from the muddled impracticability doctrine to a focus on risk bearing.¹⁵¹ If the promisor is a better risk bearer of an unforeseen risk than the promisee, then the promisor should bear the risk.¹⁵² In *Taylor*, the court should have asked which party was better able to bear the risk that the theater would be unusable, the theater owner or the plaintiff. That party should bear the risk, independent of performance's feasibility.

In expansions, the "superior" risk bearer standard appears to outperform impracticability. It is likely easier to ask about a party's risk bearing capacity (access to insurance, capital, etc.), then to determine whether performance has become merely difficult vs. truly impossible or impracticable. In *Taylor*, the theater owner might well have had access to fire insurance and therefore be better placed to bear the risk of fire than the plaintiff.¹⁵³ Contract law would be easier to predict without impracticability.

In recessions, by contrast, the superior risk bearer standard loses traction. Recessions are often caused by events for which no insurance is available. Even businesses with business interruption insurance, for example, lacked coverage for the COVID-19 pandemic, as pandemics were excluded from

¹⁴⁷ See *Taylor v. Caldwell*, 122 Eng.Rep. 309 (1863).

¹⁴⁸ See Aaron J. Wright, *Rendered Impracticable: Behavioral Economics and the Impracticability Doctrine*, 26 CARDOZO L. REV. 2183, 2184 (2004) (observing that "applying traditional micro-economic theory, these [law and economics] scholars have questioned whether the impracticability doctrine promotes efficient exchanges by lowering transaction costs associated with bargaining").

¹⁴⁹ See, e.g., *Taylor v. Caldwell*, 122 Eng.Rep. 309 (1863), *City of Vernon v. City of Los Angeles*, 45 Cal.2d 710 (Los Angeles excused from contract to provide sewage services to City of Vernon after change in state administrative approval made the contemplated sewage system unfeasible), *Gregg School Tp., Morgan Cty. v. Hinshaw*, 76 Ind. App. 503 (Ind. App. Ct. 1921) (contract performance excused due to mandatory school closure arising from the epidemic flu).

¹⁵⁰ See, e.g., *Stees v. Leonard*, 20 Minn. 494 (1874), *Matter of Westinghouse Elec. Corp., Etc.*, 517 F. Supp. 440 (E.D. Va. 1981).

¹⁵¹ See Richard A. Posner & Andrew M. Rosenfield, *Impossibility and Related Doctrines in Contract Law: An Economic Analysis*, 6 J. LEGAL STUD. 83 (1977).

¹⁵² *Id.*

¹⁵³ A ruling against the theater owner—contra the impracticability doctrine—would also have made future theater owners more vigilant about fires, reducing moral hazard. See Victor Goldberg, *Impossibility and Other Excuses*, 144 JITE 100, 103 (1988).

most types of coverage.¹⁵⁴ Companies or individuals with higher net worth may be more exposed to COVID-19 losses than those with fewer contracts, making access to capital another poor measure of COVID-19 risk bearing capacity. Searching for the best risk-bearer of COVID-19 (or the Financial Crisis of 2008 or the Euro Crisis of 2012) therefore looks like an exercise in futility.

Impracticability fares better in recessions. COVID-19 made many contracts impossible to perform. The doctrine of impracticability excuses the promisor from performance. If the promisor has made many such promises, then impracticability may be the only thing standing between the promisor and business devastation. If impracticability mitigated widespread business disruption and litigation in the aftermath of COVID-19's arrival,¹⁵⁵ then it enhanced efficiency—at an incredibly fraught time in the U.S. economy.

We can therefore understand impracticability as an efficient time-invariant legal rule. Impracticability may impede efficiency during expansions but provide an invaluable “circuit breaker” during recessions. If contract law must apply a single rule over the course of the business cycle, then impracticability plausibly outperforms (on average) the “superior risk bearer” standard offered by law and economics.

V. Conclusion

Since its inception, law and economics has aimed to characterize the legal rules that maximize efficiency. But it has ignored macroeconomics. During the Great Moderation (late 1980s-2007), assuming away macroeconomics was a defensible strategy. Recessions in developed economies (with the important exception of Japan) were rare, short, and relatively light. Legal scholars interested in economics could justifiably focus on designing legal rules that maximized efficiency in economies operating at full capacity.

The last twelve years have changed this calculus. The Great Recession, its prolonged aftermath, and the unprecedented economic collapse caused by COVID-19 suggest we live in a radically different economic environment. Aggregate demand shortfalls, as measured by unemployment rates well above the natural rate, are now more frequent, and the harm they cause much greater. In addition to these explicitly macroeconomic considerations, microeconomic incentives also change substantially during recessions. As a result, legal rules that perform poorly in recessions, as do many of the rules emphasized by law and economics, cannot be characterized as “efficient” any longer.

How should law and economics, and law more generally, respond to our new economic reality? Countercyclical legal rules offer one possibility.¹⁵⁶ With conventional law and economics prescribing legal rules in expansions and macroeconomic considerations dominating in recessions, countercyclical legal rules can be efficient throughout the business cycle. Many observers, however, are legitimately skeptical of law's ability to effectively shift in tune with the unpredictable business cycle.

This paper has argued that even time-invariant legal rules need to devote considerable attention to performance in recessions. While a time-invariant legal rule cannot be efficient in every phase of the

¹⁵⁴ Mary Williams Walsh, *Businesses Thought They Were Covered for the Pandemic. Insurers Say No*, N.Y. TIMES (Aug. 5, 2020), <https://www.nytimes.com/2020/08/05/business/business-interruption-insurance-pandemic.html>.

¹⁵⁵ See Ian Ayres, *Corona and Contract*, BALKINIZATION (March 23, 2020), <https://balkin.blogspot.com/2020/03/corona-and-contract.html>.

¹⁵⁶ For full development, see LISTOKIN, *supra* note 1.

business cycle, rules that focus on performance in economic expansions are less efficient than compromise rules that balance performance in recessions with performance in expansions. And performance in recessions deserves disproportionate emphasis because marginal utility is higher in recessions and aggregate demand shortages that resemble recessions may be chronic rather than fleeting.

The macroeconomic environment has changed. Law and economics must change with it.