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THE "BACKLASH" OF THE IMPLIED WARRANTY OF HABITABILITY: THEORY VS. ANALYSIS

Introduction

The adoption of the implied warranty of habitability¹ (implied warranty) marked a dramatic departure from the common law land-lord-tenant relationship and sparked an academic melee over the warranty's expected effect.² This melee reflected broader debates over housing laws; in particular, housing laws with paternalistic underpinnings had become, and still remain, a breeding ground for academic debate.³ Law and policy debates over government housing regulations⁴ commonly reflect a number of interrelated but divisible concerns: whether the law will "backlash" and cause harm to the intended beneficiary;⁵ whether the law can achieve the intended result;⁶

^{1.} The implied warranty, in the most basic sense, is a landlord's implied promise to a tenant that the rented premises are and will remain habitable for the duration of the lease period. See, e.g., Edward H. Rabin, The Revolution in Residential Landlord-Tenant Law: Causes and Consequences, 69 CORNELL L. REV. 517, 522 (1984).

^{2.} See, e.g., Rabin, supra note 1, at 521-22, 558-59 (discussing the back-and-forth academic debate over the implied warranty).

^{3.} Judge Posner's concurrence in Chicago Board of Realtors, Inc. v. City of Chicago, 819 F.2d 732, 741–42 (7th Cir. 1987) (Posner, J., concurring), provides an example of the criticism of comprehensive landlord-tenant regulations within the context of the debate against government regulation. See also Lior Jacob Strahilevitz, "Don't Try This at Home": Posner as Political Economist, 74 U. Chi. L. Rev. 1873 (2007) (discussing Judge Posner's concurrence in Chicago Board of Realtors in the context of the debate). Ezra Rosser has discussed the debate in the context of various rural housing codes. See Ezra Rosser, Rural Housing and Code Enforcement: Navigating Between Values and Housing Types, 13 Geo. J. on Poverty L. & Pol'y 33 (2006). This debate remains alive today. See generally Tim Iglesias, Our Pluralist Housing Ethics and the Struggle for Affordability, 42 Wake Forest L. Rev. 511 (2007) (discussing various American "housing ethics" and the manner in which they shape housing policy and law); Stephanie M. Stern, Residential Protectionism and the Legal Mythology of Home, 107 Mich. L. Rev. 1093 (2009) (arguing that regulatory homeownership laws have not been shown to be beneficial to homeowners).

^{4.} As used here, the phrase "government housing regulations" refers broadly to legislative and judicial creations as well as the enforcement of statutes and rules that affect residential housing. While the concerns noted here are not limited to residential housing, or housing generally, they are discussed in that context for the purposes of this Comment.

^{5.} See infra notes 131-55 and accompanying text. Robert Hillman has argued that despite the frequent criticism of new legislation on the basis of a "legal backlash," such backlashes occur infrequently. Robert A. Hillman, *The Rhetoric of Legal Backfire*, 43 B.C. L. Rev. 819, 821 (2002).

^{6.} Stephanie Stern has argued that empirical data does not support the belief that homeowner protection laws play a large role in the intended "psychological" protection of homeowners. See Stern, supra note 3, at 1110–20. It has also been argued that a flawed understanding of rental housing markets has led to regulations that will not increase housing affordability. See John I.

whether the law will create unintended consequences;⁷ and whether the application of the law to advance social housing policies is justified.⁸ Each of these concerns was debated following adoption of the implied warranty of habitability; while some were raised independently, they were most often examined in the aggregate.⁹

Beginning in the early 1970s, legal scholars and economists advanced numerous theoretical formulas to support their vying contentions over what effect the warranty would have on landlords and tenants alike.¹⁰ Judge Richard Posner and other like-minded legal economists argued that the warranty would benefit high-income tenants at the expense of both landlords and low-income tenants.¹¹ In contrast, the "dissenters," led by Bruce Ackerman, contended that tenants as a class would benefit from imposition of the warranty.¹³ A

Gilderbloom & Richard P. Appelbaum, Toward a Sociology of Rent: Are Rental Housing Markets Competitive?, 34 Soc. Probs. 261, 272 (1987).

- 7. One example of this concern is the contention that homeowner protection laws have "encourage[d] overinvestment in residential real estate, disproportionately burden[ed] lower-income households, raise[d] the cost of credit, and frustrate[d] land planning and controlled growth." Stern, *supra* note 3, at 1102.
- 8. Peter Salins has criticized the policy goal of increasing affordability in housing as a "moving target" without defined lines that "can never be eliminated." Peter D. Salins, Toward a Permanent Housing Problem, 85 Pub. Int. 22, 23–25 (1986). While some commentators have argued that redistribution of wealth is better obtained through the tax system rather than through housing laws, others have argued that redistributive legal rules are equally effective and contain greater advantages. Compare Daphna Lewinsohn-Zamir, In Defense of Redistribution Through Private Law, 91 Minn. L. Rev. 326 (2006) (arguing that private redistribution laws are justifiable and in some cases preferable to alternatives such as taxes), with David A. Weisbach, Should Legal Rules Be Used to Redistribute Income?, 70 U. Chi. L. Rev. 439 (2003) (arguing that redistribution of wealth to the poor is best achieved through the tax system).
 - 9. See, e.g., Rabin, supra note 1, at 521-22, 558-59.
 - 10. See infra Part II.E.
- 11. See RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 259-63 (1972) (arguing that code enforcement through habitability laws will lead to abandonment of rental property by landlords and increased rents for poor tenants). See generally Neil K. Komesar, Return to Slumville: A Critique of the Ackerman Analysis of Housing Code Enforcement and the Poor, 82 Yale L.J. 1175 (1973); Charles J. Meyers, The Covenant of Habitability and the American Law Institute, 27 Stan. L. Rev. 879 (1975); Daniel P. Schwallie, Note, The Implied Warranty of Habitability as a Mechanism for Redistributing Income: Good Goal, Bad Policy, 40 Case W. Res. L. Rev. 525 (1989).
 - 12. Rabin calls these "Dissident Theories." Rabin, supra note 1, at 559.
- 13. See generally Bruce Ackerman, More on Slum Housing and Redistribution Policy: A Reply to Professor Komesar, 82 Yale L.J. 1194 (1973) [hereinafter Ackerman, More on Slum Housing]; Bruce Ackerman, Regulating Slum Housing Markets on Behalf of the Poor: Of Housing Codes, Housing Subsidies and Income Redistribution Policy, 80 Yale L.J. 1093 (1971) [hereinafter Ackerman, Regulating Slum Housing]; Richard Craswell, Passing on the Costs of Legal Rules: Efficiency and Distribution in Buyer-Seller Relationships, 43 Stan. L. Rev. 361 (1990); Duncan Kennedy, The Effect of the Warranty of Habitability on Low Income Housing: "Milking" and Class Violence, 15 Fla. St. U. L. Rev. 485 (1987); Richard S. Markovits, The Distributive Impact, Allocative Efficiency, and Overall Desirability of Ideal Housing Codes: Some Theoretical Clarifications, 89 Harv. L. Rev. 1815 (1976).

study led by Werner Hirsch in 1975 provided fuel for the debate by showing a relationship between higher rent rates and habitability laws; however, the study was the first and only of its kind. While the overall conclusions reached by both proponents and opponents varied greatly, all were linked by a single concern: would the implied warranty increase the cost of rent? 15

Despite the passage of forty years and the abatement of the backand-forth nature of the early academic debate, the underlying concern regarding the implied warranty's effect on rental rates remains unsettled. Modern authors continue to argue for or against comparable landlord-tenant legislation in residential and commercial contexts based upon forty-year-old theories. Property textbooks ask students to debate the effects of the implied warranty like an exam hypothetical; however, when the debate ends, students are left to wonder if their arguments have any support in reality. This Comment is intended to provoke contemplation in academics and students alike by analyzing residential rental rates in order to settle a pervasive concern of this forty-year debate.

This Comment analyzes and discusses the effects of the implied warranty in four parts. First, Part II provides the necessary historical overview of the common law landlord-tenant relationship and the changes made to this relationship through judicial and legislative action.¹⁷ Part II then addresses the major arguments and theoretical bases behind the debate over the effects of the implied warranty.¹⁸ Part III uses analyses of historical rent data to examine the relationship between adoption of the implied warranty and rent rates.¹⁹ Next, Part

^{14.} Werner Z. Hirsch et al., Regression Analysis of the Effects of Habitability Laws upon Rent: An Empirical Observation on the Ackerman-Komesar Debate, 63 Calif. L. Rev. 1098 (1975); see also Werner Z. Hirsch, Habitability Laws and the Welfare of Indigent Tenants, 63 Rev. Econ. & Stat. 263 (1981); but see Hillman, supra note 5, at 842 (stating that Hirsch's study is "dated and unreliable because it is based largely on opinion and predictions").

^{15.} See infra Part II.E. The variation in conclusions referenced here is an acknowledgment of the fact that both proponents and critics argued distinct points, emphasized diverging concerns, and utilized different theoretical approaches in arriving at varying conclusions. Compare Ackerman, Regulating Slum Housing, supra note 13, at 1111-12, 1179-81, 1193-96 (determining that rent rates would not increase if landlord abandonment was minimal and tenants decided to "double up" instead of pay increased rents alone), with Kennedy, supra note 13, at 498-99 (determining that rent rates could be depressed due to a combination of slower deterioration of low-rent housing and continued filtering of higher-rent housing to lower-rent levels). One proponent of the warranty went so far as to argue that a rise in rent rates was not a sign of failure; instead, such a rise was the best evidence that the warranty had effectively benefited housing consumers. See Craswell, supra note 13, at 398.

^{16.} See Hillman, supra note 5, at 842; Strahilevitz, supra note 3, at 1876.

^{17.} See infra notes 22-110 and accompanying text.

^{18.} See infra notes 111-58 and accompanying text.

^{19.} See infra notes 159-98 and accompanying text.

IV presents and discusses the results of these analyses.²⁰ Finally, Part V examines the implications of empirical evidence that demonstrates the existence of a relationship between the implied warranty and higher rent rates.²¹

II. BACKGROUND: FROM CAVEAT LESSEE TO CAVEAT LESSOR²²

Until the second half of the twentieth century, landlord-tenant law in the United States was almost entirely derived from the English common law.²³ This perspective, developed to fit the needs of a largely agrarian society, examined leases and the landlord-tenant relationship in a manner distinct from that of the modern law in both England and the United States.²⁴ It was not until the 1960s and 1970s, when the United States became home to a "revolution in residential landlord-tenant law,"²⁵ that courts and legislators reevaluated the 500-year-old landlord-tenant laws that remained the "black letter law" in the United States.²⁶

Although the purpose of this Comment is not to educate the reader on the archaic common law rules governing landlord-tenant relationships, a brief examination of the development of these laws is helpful in understanding the adoption of the implied warranty.²⁷

^{20.} See infra notes 199-214 and accompanying text.

^{21.} See infra notes 215-60 and accompanying text.

^{22.} Caveat lessee, or "renter beware," refers to the common law approach to leases: the renter took the premises as he found them and the landlord had no duty to repair defects on the property. See Rabin, supra note 1, at 521. The opposite rule, referred to here as caveat lessor or "landlord beware," places the burden of repairing rented premises upon the landlord. Id. at 522.

^{23.} As comments to the Uniform Residential Landlord and Tenant Act (URLTA) noted in 1972, "Existing landlord-tenant law in the United States, save as modified by statute or judicial interpretation, is a product of English common law developed within an agricultural society at a time when doctrines of promissory contract were unrecognized." UNIF. RESIDENTIAL LANDLORD & TENANT ACT § 1.102 cmt., 7B U.L.A. 499 (2006) (amended 1974) [hereinafter URLTA].

^{24.} See Rabin, supra note 1, at 519-20.

^{25.} *Id.* ("In the last two decades we have experienced a revolution in residential landlord-tenant law."); *see also* Mary Ann Glendon, *The Transformation of American Landlord-Tenant Law*, 23 B.C. L. Rev. 503, 503 (1982) ("It is generally acknowledged that the 1960's and 1970's saw a revolution of sorts in American landlord-tenant law..." (footnote omitted)).

^{26.} Glendon, supra note 25, at 520.

^{27.} For further examination of the early development of landlord-tenant law, see Hiram H. Lesar, Landlord and Tenant Reform, 35 N.Y.U. L. Rev. 1279, 1279-81 (1961) [hereinafter Lesar, Reform]; Hiram H. Lesar, The Landlord-Tenant Relation in Perspective: From Status to Contract and Back in 900 Years?, 9 U. Kan. L. Rev. 369, 369-72 (1960) [hereinafter Lesar, Perspective]. For thorough explanations of the development of modern landlord-tenant law in the United States, see generally Glendon, supra note 25, at 203; Rabin, supra note 1, at 517.

A. Formation of Landlord-Tenant Laws in the English Common Law

Landlord-tenant laws began to take the form of what is now considered the common law perspective in approximately the fifteenth century.²⁸ At that time, most leases involved the use of agricultural land.²⁹ Development of the common law reflected the nature of these leases, which emphasized rights and obligations consistent with the letting of land intended for agricultural use.³⁰ Consistent with the view that the purpose of a lease was to effect the transfer of land, the common law regarded the lease as a conveyance of an ownership interest in the land from the landlord to the tenant.³¹ The tenant therefore received a possessory estate and all rights and obligations that accompanied ownership of this estate.³² Due to the simplistic nature of these rules, an increase in the use and intended purposes of leases required further development of the rights and obligations that governed the landlord-tenant relationship.³³

In many instances, leases began to provide explicit covenants concerning the rights and obligations of both the landlord and the tenant.³⁴ As leases increased to a level of complexity beyond that of a simple grant of an estate in land, courts were called upon with increasing frequency to further define the contours of the landlord-tenant relationship.³⁵ These courts determined that unless the covenant was illegal, an express covenant of the parties always controlled the lease.³⁶ Where the lease instrument was devoid of covenants, courts

^{28.} See Lesar, Perspective, supra note 27, at 371. The fifteenth century marked the starting point of the "modern" common law rules governing landlord-tenant relationships. See id. Prior to the fifteenth century, leases and the rules governing them were largely distinguishable from their subsequent counterparts. See Lesar, Reform, supra note 27, at 1279.

^{29.} See Glendon, supra note 25, at 506; Lesar, Perspective, supra note 27, at 371.

^{30.} See Lesar, Perspective, supra note 27, at 371; Lesar, Reform, supra note 27, at 1280.

^{31.} See Lesar, Reform, supra note 27, at 1280.

^{32.} Id.

^{33.} See id. at 1281; see also Geoffrey Gilbert, A Treatise on Rents 1-7 (1758); Lesar, Perspective, supra note 27, at 370.

^{34.} Glendon, supra note 25, at 508; Lesar, Perspective, supra note 27, at 372.

^{35.} GILBERT, supra note 33, at 34-35; Glendon, supra note 25, at 508; Lesar, Reform, supra note 27, at 1281. A number of statutes were also enacted to formalize the most basic rules governing leases and the obligations to pay rent. See Glendon, supra note 25, at 505.

^{36.} Lesar, Reform, supra note 27, at 1281; see also H.G. Wood, A Treatise on the Law of Landlord and Tenant 498 (1st ed. 1884). Illegal covenants were those found to be contrary to established law or public policy. Wood, supra, at 498, 952. Illegality of the purposes for which premises were let would also bar a landlord from recovering unpaid rent because the entirety of the lease would be void. Id.

established certain basic implied covenants that governed all leases.³⁷ One such implied covenant required landlords to provide possession and quiet enjoyment of the land to the tenant.³⁸ Another implied covenant required tenants to pay rent on time, make minor repairs, and abstain from committing waste by injuring the land.³⁹ Courts uniformly found that the following covenants were never implied in leases: fitness of the premises for the period of the lease,⁴⁰ suitability of the premises for the intended use,⁴¹ habitability of the premises,⁴² and the duty of the landlord to maintain the premises or make repairs of any kind.⁴³

Common law courts viewed leases as conveyances of land rather than bilateral contracts.⁴⁴ Under this perspective, covenants between the landlord and tenant were considered mutually independent.⁴⁵ While the landlord held some rights in the event of nonpayment of rent,⁴⁶ the tenant lacked corresponding rights in the event of the landlord's breach.⁴⁷ Therefore, the tenant remained liable for payment of rent in the event of the landlord's breach of any covenant of the lease, short of actual eviction.⁴⁸ Furthermore, because the conveyance was

^{37.} These basic implied covenants were those that arose naturally from the theory that a lease was a conveyance of an ownership interest in land. See Wood, supra note 36, at 517; Glendon, supra note 25, at 510-11.

^{38.} GILBERT, supra note 33, at 148; see also Lesar, Perspective, supra note 27, at 371; Glendon, supra note 25, at 510.

^{39.} Glendon, supra note 25, at 510-11; Lesar, Reform, supra note 27, at 1280.

^{40.} See, e.g., Witty v. Matthews, 52 N.Y. 512, 514 (1873) (noting that fitness of the premises for the lease period is only guaranteed by express contract); see also Wood, supra note 36, at 613; Glendon, supra note 25, at 510.

^{41.} See, e.g., Banks v. White, 33 Tenn. (1 Sneed) 613, 614 (1854) (finding that a flood that rendered the property unsuitable for the use intended did not provide a defense for a tenant who abandoned the land and ceased payment of rent); see also Lesar, Reform, supra note 27, at 1280.

^{42.} See, e.g., Banks, 33 Tenn. (1 Sneed) at 614 (noting that the uninhabitable state of a rented house is not a defense against an action for nonpayment of rent); see also Lesar, Perspective, supra note 27, at 373.

^{43.} See, e.g., Libbey v. Tolford, 48 Me. 316, 316 (1861) (noting that a landlord has no obligation to make repairs unless he contracts to do so); see also Wood, supra note 36, at 607; Glendon, supra note 25, at 510-11.

^{44.} Lesar, Reform, supra note 27, at 1284.

^{45.} Wood, supra note 36, at 509; Lesar, Perspective, supra note 27, at 374. The concept of mutually dependent covenants first began under contract law in the eighteenth century; however, courts remained reticent to apply contract principles to leases of land. See Glendon, supra note 25, at 511.

^{46.} Important rights granted to landlords included the right to sue a tenant for unpaid rent and the right to evict the tenant. See GILBERT, supra note 33, at 16–18; Lesar, Perspective, supra note 27, at 371.

^{47.} Glendon, supra note 25, at 511; Lesar, Perspective, supra note 27, at 374.

^{48.} See, e.g., Fowler v. Bott, 6 Mass. (6 Tyng) 63, 63-66 (1809) (holding that a tenant remained liable for rent payments despite the landlord's breach of a covenant to build a chocolate mill); see also Woop, supra note 36, at 612, 793; Glendon, supra note 25, at 511.

of an interest in land, so long as the land remained, the lessee's obligation to pay rent persisted.⁴⁹ Even where the entirety of the leased land became flooded and unusable, the estate persisted, albeit several feet under water, and the tenant remained liable for payment of rent.⁵⁰

B. Application of the English Common Law in American Landlord-Tenant Law

Although the common law rules governing the landlord-tenant relationship were subject to criticism by U.S. courts throughout the eighteenth and nineteenth centuries, they remained relatively unchanged.⁵¹ Attempts to reform the common law through legislation provided some reprieve for tenants, but the common law perspective remained largely unshaken.⁵²

Beginning in the nineteenth century, a number of states adopted housing codes that required landlords to maintain residential housing at a specified minimum standard; however, these codes rarely provided a private remedy for tenants.⁵³ Where the legislation did provide tenants with private remedies,⁵⁴ judicial decisions commonly limited and further restricted the scope of available remedies.⁵⁵ Even when tenants were freed from the obligation to pay rent in the event that their residence was uninhabitable or entirely destroyed, they were required to vacate the premises prior to cessation of rent pay-

^{49.} GILBERT, supra note 33, at 154; WOOD, supra note 36, at 631; Glendon, supra note 25, at 511.

^{50.} See, e.g., Niedelet v. Wales, 16 Mo. 214, 214-15 (1852) (tenant could not defend nonpayment of rent on the basis of flooding of the residence); see also Wood, supra note 36, at 631.

^{51.} See Lesar, Perspective, supra note 27, at 372; Lesar, Reform, supra note 27, at 1289.

^{52.} See Lesar, Reform, supra note 27, at 1286.

^{53.} See id. An 1867 New York statute required that "tenement" housing in New York City meet certain building codes; however, tenants did not have a private right of action to enforce the statute. See Tenement House Act, 1867 N.Y. Laws ch. 908. Prior to the 1960s, several other states adopted statutes similar to that of New York. See, e.g., Conn. Gen. Stat Rev. § 4050 (1949) (current version at Conn. Gen. Stat. Rev. § 47a-51 (2006)); Iowa Code § 413.39–.66 (1939) (repealed 1980).

^{54.} Wood, supra note 36, at 616–18; Glendon, supra note 25, at 516. In 1872, California adopted a statute requiring landlords to maintain residential rental property in "a condition fit for ... occupation." Cal. Civ. Code § 1941 (1872) (amended 1873–74); see also Mont. Rev. Code Ann. § 42-201 (1947); N.D. Rev. Code § 47-1612 (1943); Okla. Stat. Ann. tit. 41, § 31 (1954).

^{55.} See Wood, supra note 36, at 617; Glendon, supra note 25, at 516. Tenants' remedies, when not waived entirely, were typically limited to the repair of defects or complete abandonment of the premises. See, e.g., Arnold v. Krigbaum, 146 P. 423 (Cal. 1915) (refusing to allow a tenant to withhold rent when a landlord failed to maintain the premises); Sieber v. Blanc, 18 P. 260 (Cal. 1888).

ments.⁵⁶ Therefore, the right to withhold rent was contingent not only on the condition of the premises, but also on the tenant's complete evacuation of the premises.⁵⁷

C. Adoption of the Implied Warranty of Habitability

Between the end of World War II and the late 1960s, land-lord-tenant laws became the focus of greater attention from state courts, state legislatures, and the U.S. government. Following swift increases in urbanization, a population explosion, and greater concerns for social welfare, the U.S. government and various state legislatures began emphasizing policies of affordability and habitability in housing.⁵⁸ These policy concerns, combined with both legislation that modified the common law and an increased societal concern for equity in landlord-tenant relationships, led to the revolution in landlord-tenant law.⁵⁹

1. Judicial Adoption of the Implied Warranty of Habitability

Beginning in the late 1950s, a number of jurisdictions began expanding the number and scope of implied obligations placed upon landlords.⁶⁰ Early cases were typically limited to tort liability for injuries suffered by a tenant,⁶¹ or imputation of an implied warranty of habitability in situations involving constructive eviction.⁶² Pines v.

^{56.} Glendon, *supra* note 25, at 517. The requirement that a tenant vacate the premises was based upon the principle that the condition of the premises had to reach the level of "constructive eviction." *See* Wood, *supra* note 36, at 798; Glendon, *supra* note 25, at 513; *see also* Burnstine v. Margulies, 87 A.2d 37, 41 (N.J. Super. Ct. App. Div. 1952).

^{57.} See, e.g., Palumbo v. Olympia Theatres, Inc., 176 N.E. 815, 816 (Mass. 1931) (holding that the tenant's failure to vacate the premises within a reasonable time precluded a claim of constructive eviction); De Witt v. Pierson, 112 Mass. 8, 10 (1873) (holding that the tenant must "yield[] the possession within a reasonable time").

^{58.} For a survey of the housing problems and legislative policies that gave rise to the implied warranty, see *Javins v. First National Realty Corp.*, 428 F.2d 1071 (D.C. Cir. 1970). *See also* Green v. Superior Court of S.F., 517 P.2d 1168, 1173 (Cal. 1974); Rabin, *supra* note 1, at 543-44.

^{59.} See Rabin, supra note 1, at 543-44.

^{60.} See, e.g., Hanna v. Fletcher, 231 F.2d 469, 477 (D.C. Cir. 1956) (permitting a negligence claim against a landlord for failure to maintain the premises despite the absence of an express covenant establishing such a duty).

^{61.} See, e.g., Bartlett v. Taylor, 174 S.W.2d 844, 847-49 (Mo. 1943) (permitting a negligence claim against a landlord for failure to maintain the premises despite the absence of an express covenant establishing such a duty); Daniels v. Brunton, 80 A.2d 547, 549-51 (N.J. 1951) (same); see also Glendon, supra note 25, at 517.

^{62.} See, e.g., Charles E. Burt, Inc. v. Seven Grand Corp., 163 N.E.2d 4, 6-7 (Mass. 1959) (permitting a constructive eviction defense to an action for unpaid rent when the premises were shown to be uninhabitable); Buckner v. Azulai, 59 Cal. Rptr. 806, 807-08 (Cal. App. Dep't Super. Ct. 1967) (same). The constructive eviction defense required that a tenant entirely vacate the premises before ceasing rent payments. See Glendon, supra note 25, at 517. Development of the implied warranty and the corresponding right to withhold rent without vacating the premises

Perssion⁶³ is generally understood to be one of the earliest cases that explicitly invoked the implied warranty.⁶⁴ While Pines was limited to the requirement that a landlord maintain a fully furnished dwelling in a habitable condition,⁶⁵ the language of the case was soon echoed by courts adopting a broad implied warranty of habitability.⁶⁶

In 1969, the Hawaii Supreme Court opened a floodgate with its decision in *Lemle v. Breeden.*⁶⁷ In *Lemle*, the court broke the fetters of common law and held that a warranty of habitability was implied in all residential leases.⁶⁸ Not stopping there, the court held that contract law should govern the lease; therefore, the landlord's breach of the warranty freed the tenant from the obligation to pay rent, regardless of whether the tenant had evacuated the premises.⁶⁹ Within one year, New Jersey and a federal court in the District of Columbia followed suit with *Reste Realty Corp. v. Cooper* and *Javins v. First National Realty Corp.*⁷⁰

was, in part, intended to ameliorate the strict requirements and harsh effects of the constructive eviction doctrine. See Lemle v. Breeden, 462 P.2d 470, 475 (Haw. 1969).

- 64. See Michael Madison, The Real Properties of Contract Law, 82 B.U. L. Rev. 405, 413 (2002); Rabin, supra note 1, at 552.
 - 65. Pines, 111 N.W.2d at 412-13.
- 66. See, e.g., Green v. Superior Court of S.F., 517 P.2d 1168, 1175 (Cal. 1974); Bos. Hous. Auth. v. Hemingway, 293 N.E.2d 831, 843 (Mass. 1973); Reste Realty Corp. v. Cooper, 251 A.2d 268, 273 (N.J. 1969).
- 67. Lemle v. Breeden, 462 P.2d 470 (Haw. 1969). The *Lemle* court adopted the implied warranty of habitability and rejected any requirement that a tenant vacate the premises to recover. *Id.* at 475. Although the landlord in *Lemle* had not violated any building codes, the court determined that a rat infestation constituted a violation of the implied warranty. *Id.* at 476. This decision emphasized the role of habitability, as opposed to code violations, in determining whether a breach of the implied warranty had occurred. *Id.*
- 68. *Id.* at 474. The *Lemle* court reasoned that the doctrine of caveat lessee was no longer sound in a modern urban society where tenants bargained for and expected a home for immediate occupation. *Id.* at 473. Therefore, adoption of an implied warranty gave recognition to the modern realities of leases and landlord-tenant relationships. *Id.* at 474.
 - 69. Id. at 475-76.
- 70. Javins v. First Nat'l Realty Corp., 428 F.2d 1071, 1072 (D.C. Cir. 1970); Reste Realty Corp., 251 A.2d at 276-77. Although Lemle was the first case to fully adopt the implied warranty of habitability, Javins is widely considered the seminal case on the issue. See ROBERT S. SCHOSHINSKI, AMERICAN LAW OF LANDLORD AND TENANT 124 (1980); Glendon, supra note 25, at 521, 525; Rabin, supra note 1, at 522. In Javins, the court held that a warranty of habitability was implied in all residential leases. 428 F.2d at 1072-73. The implied warranty was measured by local housing codes, and any violation of these codes constituted a breach of the warranty. Id. Rabin criticized the use of Javins by courts adopting "a true implied warranty" because the court in Javins dealt with a code-imposed duty. Rabin, supra note 1, at 525. He argued that Lemle,

^{63.} Pines v. Perssion, 111 N.W.2d 409 (Wis. 1961). In *Pines*, the court determined that the landlord had breached an implied warranty of habitability by renting a "filthy" house that violated numerous building codes. *Id.* at 411, 413. The court reached this determination by adopting an exception to the general rule of caveat emptor: a warranty of habitability was implied in the lease of a furnished house. *Id.* at 412.

Although a few courts expressly declined to imply a warranty of habitability into residential leases,⁷¹ the majority of courts that considered the issue over the next decade adopted the rationales and holdings of *Lemle*, *Reste*, and *Javins*.⁷² In doing so, these courts recognized the increase in federal and state legislation that emphasized a desire to provide adequate housing for all tenants.⁷³ Because of the ignorance of the modern tenant with regard to home repairs and the increasing complexity of modern housing, courts rejected the expectation that a tenant would understand defects prior to signing a lease or be able to repair defects upon discovery.⁷⁴ According to these courts' decisions, further support for adoption of the implied warranty was provided by the scarcity of adequate housing, unequal bargaining power in lease creation, and the expectation of all tenants that their leased housing would be habitable.⁷⁵

In rejecting the strict view of a lease as a conveyance, courts emphasized that the modern lease was no longer a simple conveyance of land.⁷⁶ Instead, tenants were leasing residential property, commonly a single apartment in a large complex, for the sole purpose of obtaining

dealing with a breach of the warranty in luxury housing, is the best early example of the true implied warranty. See id.

^{71.} See Blackwell v. Del Bosco, 558 P.2d 563, 565 (Colo. 1976) ("We have concluded that, however desirable the adoption of the rule of implied warranty of habitability might be, the resolution of this issue is more properly the function of the General Assembly."); Posnanski v. Hood, 174 N.W.2d 528, 533 (Wis. 1970) ("[T]he defendant does not have an affirmative defense based upon alleged violations of the Milwaukee Housing Code").

^{72.} See, e.g., Green v. Superior Court of S.F., 517 P.2d 1168, 1169 (Cal. 1974); Jack Spring, Inc. v. Little, 280 N.E.2d 208 (Ill. 1972); Steele v. Latimer, 521 P.2d 304 (Kan. 1974); Bos. Hous. Auth. v. Hemingway, 293 N.E.2d 831 (Mass. 1973); Rome v. Walker, 196 N.W.2d 850 (Mich. 1972); Kamarath v. Bennett, 568 S.W.2d 658 (Tex. 1978); see also Schoshinski, supra note 70, at 126.

^{73.} See, e.g., Javins, 428 F.2d at 1081 n.57 ("The housing and sanitary codes, especially in light of Congress' explicit direction for their enactment, indicate a strong and pervasive congressional concern to secure for the city's slum dwellers decent, or at least safe and sanitary, places to live." (quoting Edwards v. Habib, 397 F.2d 697, 700 (D.C. Cir. 1968))); Green, 517 P.2d at 1175 (noting California's legislative attempts to increase adequacy of housing); see also Rabin, supra note 1, at 543

^{74.} See, e.g., Javins, 428 F.2d at 1078-79; Green, 517 P.2d at 1173; Lemle, 462 P.2d at 474; Reste Realty Corp., 251 A.2d at 272. As the court in Green stated,

[[]T]he increasing complexity of modern apartment buildings not only renders them much more difficult and expensive to repair than the living quarters of earlier days, but also makes adequate inspection of the premises by a prospective tenant a virtual impossibility; complex heating, electrical and plumbing systems are hidden from view, and the landlord, who has had experience with the building, is certainly in a much better position to discover and to cure dilapidations in the premises.

⁵¹⁷ P.2d at 1173.

^{75.} See, e.g., Javins, 428 F.2d at 1079; Green, 517 P.2d at 1173-75.

^{76.} See Green, 517 P.2d at 1171-72; Lemle, 462 P.2d at 473.

shelter.⁷⁷ Construction of the lease as a conveyance in land was incompatible with the actual use of the modern lease; instead, leases were best understood as bilateral contracts.⁷⁸ Therefore, following the *Lemle* example, courts held that tenants' remedies were available upon a breach by the landlord, regardless of whether the tenant had vacated the premises.⁷⁹

2. Legislative Adoption of the Implied Warranty of Habitability

Despite several early attempts by state legislatures to increase tenant rights and decrease the amount of substandard housing,⁸⁰ there existed a prevailing perception that these statutes were ineffective.⁸¹ Following the increase in judicial adoption of the implied warranty and the creation of the Uniform Residential Landlord and Tenant Act (URLTA),⁸² many states began the process of enacting comprehensive landlord–tenant legislation.⁸³

The URLTA, established in 1972, represented the first major attempt to create uniform landlord-tenant legislation that fundamentally differed from the common law.⁸⁴ Recognizing the "warranty of habitability doctrine," the URLTA enumerated a number of obligations to be implied upon all residential landlords.⁸⁵ These obligations required, in part, that all residential landlords

- (1) comply with the requirements of applicable building and housing codes materially affecting health and safety;
- (2) make all repairs and do whatever is necessary to put and keep the premises in a fit and habitable condition;
- (3) keep all common areas of the premises in a clean and safe condition;

^{77.} See, e.g., Javins, 428 F.2d at 1078 ("Today's urban tenants, the vast majority of whom live in multiple dwelling houses, are interested, not in the land, but solely in 'a house suitable for occupation.'"); Green, 517 P.2d at 1172.

^{78.} See, e.g., Javins, 428 F.2d at 1075, 1079; Green, 517 P.2d at 1172-73, 1180-81; Lemle, 462 P.2d at 473; Reste Realty Corp., 251 A.2d at 272, 276.

^{79.} See, e.g., Javins, 428 F.2d at 1083 n.67; Green, 517 P.2d at 1181; Lemle, 462 P.2d at 475-76; see also Schoshinski, supra note 70, at 136-37.

^{80.} See, e.g., Conn. Gen. Stat. Rev. § 4050 (1949) (current version at Conn. Gen. Stat. Rev. § 47a-51 (2006)); Iowa Code § 413.39-.66 (1939) (repealed 1980).

^{81.} See Rabin, supra note 1, at 546.

^{82.} Unif. Residential Landlord and Tenant Act, § 1.102 cmt., 7B U.L.A. 499 (2006) (amended 1974).

^{83.} See Schoshinski, supra note 70, at 150-51; Glendon, supra note 25, at 523; Rabin, supra note 1, at 527.

^{84.} The only prior attempt to accomplish this feat, the American Law Institute's Model Residential Landlord and Tenant Code, was converted into the URLTA in 1972. See Glendon, supranote 25, at 523 n.134.

^{85.} For a full list of the obligations implied upon residential landlords, see URLTA § 2.104, 7B U.L.A. at 326.

(4) maintain in good and safe working order and condition all electrical, plumbing, sanitary, heating, ventilating, air-conditioning, and other facilities and appliances, including elevators, supplied or required to be supplied by him 86

Furthermore, landlords were required to maintain certain basic utilities.⁸⁷ In the event that a landlord breached a duty, the URLTA provided the tenant with a number of remedies that reached far beyond the scope of those traditionally available.⁸⁸

Despite concerns that the URLTA was "decidedly pro-tenant legislation," 89 it became the foundation for the flood of comprehensive legislative reforms that followed. 90 By 1984, more than forty states had adopted the implied warranty by statute. 91 Of these, roughly one-half were modeled on the URLTA. 92 Where the URLTA was not adopted, states adapted existing code requirements and added new statutory remedies for tenants, effectively allowing tenants to refuse to make rent payments or defend nonpayment of rent on the basis of code violations. 93 By the mid-1980s, therefore, a large majority of states had increased tenants' rights, imputing upon all residential landlords an obligation to maintain their premises in a habitable state. 94

D. Current Status of the Implied Warranty of Habitability

Following the flood of legislative adoptions of the implied warranty before 1984, states that had not revised their legislation remained slow to do so. Today, however, forty-nine states have adopted some form of the implied warranty and corresponding tenants' rights.⁹⁵ The only

^{86.} Id.

^{87.} Id.

^{88.} See URLTA § 4.101, 7B U.L.A. at 375 (allowing tenant to terminate the lease agreement), § 4.103 (allowing tenant to make minor repairs and deduct the cost from future rent payments), § 4.104 (allowing tenant to recover damages for landlord's failure to provide essential services), § 4.105 (allowing tenant to claim landlord's noncompliance as a defense to an action based on nonpayment of rent); see also Schoshinski, supra note 70, at 154–55.

^{89.} Samuel Jan Brakel et al., *URLTA in Operation: The Oregon Experience*, 1980 Am. B. FOUND. RES. J. 565, 567 ("Though it also spells out in substantial detail the landlord's rights and remedies, the act—in comparison to what was before—is decidedly pro-tenant legislation.").

^{90.} See Schoshinski, supra note 70, at 150-52; Glendon, supra note 25, at 523; Rabin, supra note 1, at 527.

^{91.} Schoshinski, supra note 70, at 150; Rabin, supra note 1, at 527.

^{92.} See Schoshinski, supra note 70, at 152; Glendon, supra note 25, at 523.

^{93.} See Glendon, supra note 25, at 523.

^{94.} See Schoshinski, supra note 70, at 150 (listing states); Rabin, supra note 1, at 527.

^{95.} See Ala. Code § 35-9A-204 (2009); Alaska Stat. § 34.03.100, .106 (2009); Ariz. Rev. Stat. Ann. § 33-1324, -1361 (2008); Cal. Civ. Code §§ 1941, 1941.1, 1942 (West 2008); Colo. Rev. Stat. § 38-12-503 (2008); Conn. Gen. Stat. § 47a-7 (2008); Del. Code Ann. tit. 25, § 5305 (2009); Fla. Stat. Ann. §§ 83.51, 83.56 (West 2009); Ga. Code Ann. § 44-7-13 (2009); Haw. Rev. Stat. § 521-42, 521-61 to 66 (2008); Idaho Code Ann. § 6-320 (2008); Ind. Code

state not to adopt the implied warranty is Arkansas, where state law requires that tenants take affirmative steps to maintain residential premises at standards set by housing codes.⁹⁶

Although landlords' obligations and tenants' rights vary by state, they remain largely the same as those enumerated under the URLTA. The principal requirement of the modern implied warranty is that the premises remain in a "habitable state." As this is typically measured by reference to code violations, the general effect of the implied warranty in all states is to provide tenants with statutory rights in the event of a landlord's noncompliance with local housing codes. Beyond the requirement that the premises remain habitable, a landlord's obligations are limited in some states and broad in others. Typically, tenants can defend their nonpayment of rent on the basis of a

Ann. § 32-31-8-5 (West 2009); IOWA CODE Ann. § 562A.12 to .16 (West 2008); KAN. STAT. Ann. § 58-2553 (2008); Ky. Rev. Stat. Ann. §§ 383.595, 383.625, 383.635 to .645 (West 2009); La. REV. STAT. ANN. § 9:3221 (2008); ME. REV. STAT. ANN. tit. 14, § 6021 (2008); MD. CODE ANN., REAL PROP. § 8-211 (LexisNexis 2008); Mass. Gen. Laws Ann. ch. 239, § 8A (2009); MICH. COMP. LAWS § 554.139 (2008); MINN. STAT. ANN. § 504B.161 (West 2008); MISS. CODE ANN. § 89-8-23 (2008); Mo. Rev. Stat. Ann. § 441.234 (West 2009); Mont. Code Ann. § 70-24-303 (2007); Neb. Rev. Stat. §§ 76-1419, 76-1425 (2009); Nev. Rev. Stat. § 118A.290 (2009); N.H. Rev. Stat. Ann. §§ 540:13-d, 48-A:14 (2008); N.J. Stat. § 2A:42-96 (West 2009); N.M. Stat. § 47-8-1 to -51 (2008); N.Y. REAL PROP. LAW § 235-b (McKinney 2009); N.C. GEN. STAT. § 42-42 (2008); N.D. CENT. CODE § 47-16-13.1 (2009); OHIO REV. CODE ANN. § 5321.04, .07 (2009); OKLA. STAT. ANN. tit. 41, § 108 (2009); OR. REV. STAT. §§ 90.320, 90.360-.375 (2007); 35 PA. Cons. Ann. § 1700-1 (West 2008); R.I. Gen. Laws § 34-18-16 (2009); S.C. Code Ann. § 27-40-440 (2008); S.D. Codified Laws § 43-32-8 (2009); Tenn. Code Ann. § 66-28-304 (2009); Tex. Prop. Code Ann. § 92.052 (Vernon 2010); Utah Code Ann. § 57-22-3 (2008); Vt. Stat. Ann. tit. 9, §§ 4457-4458 (2009); VA. CODE ANN. § 55-248.13, .25 (2010); WASH. REV. CODE ANN. § 59.18.060 (West 2010); W. VA. CODE § 37-6-30 (2008); Wis. Stat. Ann. § 704.07 (West 2009); Wyo. Stat. Ann. § 1-21-1202 (2009). See also Jack Spring, Inc. v. Little, 280 N.E.2d 208, 213-17 (1972) (recognizing an implied warranty of habitability in Illinois common law).

96. Ark. Code Ann. § 18-17-601 (Supp. 2009). The Arkansas code requires that tenants "[c]omply with all obligations primarily imposed upon tenants by applicable provisions of building and housing codes materially affecting health and safety." § 18-17-601(1).

97. See, e.g., IND. CODE § 32-31-8-5 (requiring that residential landlords "[d]eliver the rental premises . . . in a safe, clean, and habitable condition"); WASH. REV. CODE § 59.18.060 ("The landlord will at all times during the tenancy keep the premises fit for human habitation").

- 98. The URLTA explicitly requires compliance "with the requirements of applicable building and housing codes materially affecting health and safety." UNIF. RESIDENTIAL LANDLORD AND TENANT ACT, § 2.104(a)(1), 7B U.L.A. 326 (2006) (amended 1974).
- 99. See, e.g., N.D. Cent. Code § 47-16-13.1(1)(a) (landlords must "[c]omply with the requirements of applicable building and housing codes materially affecting health and safety"); see also Javins v. First Nat'l Realty Corp., 428 F.2d 1071, 1072-73 (D.C. Cir. 1970) (using housing codes as the standard for determining whether there has been a breach of the implied warranty).
- 100. Some states require only basic maintenance to the extent necessary to ensure health and safety. See, e.g., Colo. Rev. Stat. § 38-12-503(2)(b). Other states require more involved maintenance and provision of utilities such as air conditioning. See, e.g., Ala. Code § 35-9A-204(a)(4) ("A landlord shall . . . maintain in good and safe working order and condition all electrical, plumbing, sanitary, heating, ventilating, air-conditioning, and other facilities and appliances, including elevators, supplied or required to be supplied by the landlord").

landlord's breach and can also deduct the cost of minor repairs from rent.¹⁰¹ The scope and cost of permissible repairs, however, varies greatly between states.¹⁰²

For the purposes of this Comment, the one relevant variation in state laws is the tenant's ability to waive the implied warranty. Today, there are three general approaches to waiver; states have adopted these approaches in roughly even numbers. 103 The first approach permits a limited waiver of the warranty: the tenant may waive the landlord's duty to repair except with regard to repairs that are necessary to cure code violations or maintain the premises in a habitable state. 104 The second approach permits a full waiver; however, the waiver must generally be express, written, and supported by consideration. 105 The final approach bans all waivers of the warranty. 106

Through judicial and legislative adoption, the implied warranty has replaced the common law doctrine of caveat lessee in the majority of residential leases. This trend did not go unnoticed in the field of legal academia; indeed, the implied warranty has received a great deal of academic attention over the past forty years. Today, academic literature regarding the implied warranty commonly focuses on expansion of the doctrine into commercial leases and other residential dwellings. Although the times and circumstances have changed since *Lemle* and *Javins*, the underlying arguments remain largely the same. 110

^{101.} See, e.g., Mass. Gen. Laws ch. 239, § 8A.

^{102.} Compare id. (tenant may deduct four months' rent), with Mo. Rev. Stat. § 441.234 (tenant may deduct the greater of \$300 or one-half month's rent). These variations, though important for practitioners, are less important for the purposes of this Comment than is the recognition of the widespread acceptance of basic obligations and rights in the modern land-lord-tenant statutory schemes.

^{103.} Edward H. Rabin et al., Fundamentals of Modern Property Law 80 (6th ed. 2011).

^{104.} See, e.g., Conn. Gen. Stat. \$47a-7(c)-(d) (2008); Haw. Rev. Stat. \$521-42(b)(1)-(3) (2008); see also Rabin et al., supra note 103, at 80.

^{105.} See, e.g., Fla. Stat. § 83.51(1)(b) (2009); Miss. Code Ann. § 89-8-23(3) (2008); Wyo. Stat. Ann. § 1-21-1202(d) (2008); see also Rabin et al., supra note 103, at 80.

^{106.} See, e.g., Colo. Rev. Stat. § 38-12-503(5) (2008); Mass. Gen. Laws ch. 111, § 127L (2009); Wis. Stat. § 704.07(1) (2008); see also Rabin et al., supra note 103, at 80.

^{107.} See supra note 95 and accompanying text.

^{108.} See supra notes 2-3, 8-13 and accompanying text.

^{109.} See, e.g., Daniel B. Bogart, Good Faith and Fair Dealing in Commercial Leasing: The Right Doctrine in the Wrong Transaction, 41 J. Marshall L. Rev. 275 (2008); Christopher S. Brennan, The Next Step in the Evolution of the Implied Warranty of Habitability: Applying the Warranty to Condominiums, 67 FORDHAM L. Rev. 3041 (1999).

^{110.} See, e.g., Brennan, supra note 109, at 3064-69 (arguing for the extension of the implied warranty to condominiums).

E. Academic Reactions to the Implied Warranty of Habitability

Prior to the wave of judicial decisions and statute enactments that implied a warranty of habitability into residential leases, most academicians championed adoption of the implied warranty and provided the literature on which many courts relied in their decisions. ¹¹¹ Indeed, major criticisms of the implied warranty did not emerge from the legal economists until several years after *Lemle*. ¹¹² Using variations on the basic concept of supply and demand, both the champions and the critics predicted the results they expected would follow the strict housing code enforcement that arose as a result of the adoption of the implied warranty.

1. Champions of the Cause

Bruce Ackerman is generally regarded as a leader among those academicians who argued for code enforcement on an economic basis.¹¹³ In an attempt to allay the fears of increased rents that were delaying widespread acceptance of strict code enforcement, Ackerman devised an abstract analysis of the effects of these laws on slum housing.¹¹⁴ Under Ackerman's hypothetical situation, comprehensive code enforcement would increase overall housing quality but would not decrease the available housing stock.¹¹⁵ Therefore, residents would not engage in competition for housing and the only rent increases would be due to landlords' attempts to pass on increased costs.¹¹⁶ Furthermore, Ackerman argued that rents would remain stagnant if lower income tenants did not sufficiently value the code-required improvements or did not have the means to pay increased rents.¹¹⁷ In this situation, he believed that tenants would simply "pair up and

^{111.} See, e.g., Myron Moskovitz, Rent Withholding and the Implied Warranty of Habitability—Some New Breakthroughs, 4 Clearinghouse Rev. 49 (1970); Robert S. Schoshinski, Remedies of the Indigent Tenant: Proposal for Change, 54 Geo. L.J. 519 (1966); Frank F. Skillern, Implied Warranties in Leases: The Need for Change, 44 Denv. L.J. 387 (1967).

^{112.} See Posner, supra note 11, at 259-63; Meyers, supra note 11, at 889-90, 893.

^{113.} See Kennedy, supra note 13, at 498; Rabin, supra note 1, at 559.

^{114.} See Ackerman, Regulating Slum Housing, supra note 13, at 1095.

^{115.} Id. at 1104–05. In this scenario, Ackerman assumed that although most landlords would earn a low return rate on rental units, they would not abandon their rental property. Id. at 1103–04. This hypothetical model excluded any truly poverty-stricken or exploitative landlords. Id. Under this model, Ackerman reasoned that abandonment would be irrational for the average landlord despite receipt of a low return on his original investment. Id. This assumption was one of the primary bases for criticisms of Ackerman's model. See, e.g., Komesar, supra note 11, at 1187. Ackerman also examined hypothetical models where abandonment did occur. See Ackerman, Regulating Slum Housing, supra note 13, at 1111–12. Because these models examine variables outside of the scope of this Comment, they are not discussed here.

^{116.} See id. at 1105.

^{117.} Id. at 1105-07.

share apartments."¹¹⁸ Therefore, Ackerman concluded, under this analysis of the hypothetical "average slum," code enforcement could feasibly have a negligible effect on rent.¹¹⁹

Writing seventeen years after Ackerman, Duncan Kennedy posited an even more extreme hypothesis: an implied warranty of habitability could depress rent rates.¹²⁰ First discussing landlord "milking" of housing, 121 Kennedy argued that code enforcement could extend the average life of housing by decreasing the rate at which older buildings were permitted to deteriorate.¹²² Although abandonment would still occur when the cost of repair exceeded the amount tenants were willing to pay for rent, prevention of premature milking could slow the rate of abandonment.¹²³ Therefore, Kennedy argued, it was possible that the quantity of low-income housing would not decrease at all; as a result, "bidding wars" would not lead to increased rent rates. 124 Furthermore, as housing continued to "filter" down from high-rent status to low-rent status, 125 it was possible that the quantity of low-rent housing would increase, with the result of actually depressing rent rates for all rental housing.¹²⁶ Although Kennedy was unwilling to argue that a depression of rent would in fact occur, he concluded that it was an entirely plausible result of strict code enforcement. 127

Ackerman and Kennedy were not alone in positing that the implied warranty might not lead to increased rental rates.¹²⁸ They were also not alone in admitting that given certain circumstances outside of their analysis, rent rates could rise.¹²⁹ Without empirical data to sup-

^{118.} Id. at 1105-06.

^{119.} Id. at 1105, 1108.

^{120.} Kennedy, supra note 13, at 500, 506.

^{121. &}quot;[M]ilking [is] the decision to reduce maintenance below the level necessary to keep a building in existence as a residential unit. . . . [T]he milking landlord treats his property as a wasting rather than a renewable asset." *Id.* at 489.

^{122.} See id. at 500, 505.

^{123.} Id. at 502-03.

^{124.} Id. at 500, 505.

^{125. &}quot;The filtering process involves steady decline in the value of existing housing, as new housing is built and lower income people move upward through the neighborhood chain." *Id.* at 487. "As higher income people build new housing for themselves in the suburbs, lower income people 'filter up' through the existing stock, so that today's poor often live in housing built for an earlier middle class." *Id.* at 486.

^{126.} See id. at 500, 505. High-quality low-rent housing could require medium-rent landlords to ask for lower rents or risk the loss of medium-income tenants to low-rent housing. Id. at 504.

^{127.} Id. at 506. Although Kennedy found it "perfectly possible" that rents would be depressed, he concluded that "[m]icroeconomic theory at this level of abstraction cannot tell us what to expect." Id.

^{128.} See generally Craswell, supra note 13, at 361; Markovits, supra note 13, at 1815.

^{129.} See Craswell, supra note 13, at 362.

port their hypotheses, these proponents of code enforcement left their critics with ample ground for continued debate. 130

Criticism and Concern over the Potential "Backlash"

Writing in response to the American Law Institute's acceptance of the implied warranty, 131 Charles Meyers contended that the warranty would result in a shortage of low-income housing and increase in average rental rates.¹³² Meyers argued that in many cases, an increase in code enforcement would make the cost of repairing low-income housing excessive relative to potential profits.¹³³ Therefore, landlords would abandon the housing, decreasing the available housing stock.¹³⁴ Where housing could be repaired at a reasonable cost, rent rates would increase in markets conducive to such increases.¹³⁵ A rent hike would displace lower income tenants, thereby increasing the demand for low-rent housing. 136 Where it was either not necessary or not feasible to raise rent following repairs, the housing would turn a lower profit and would be retired more quickly.¹³⁷ In all situations, Meyers argued, the inevitable combined result was a decrease in the supply of low-rent housing and an increase in the demand for it.138

Judge Richard Posner's critique of the implied warranty was similar to that of Charles Meyers; however, Posner placed greater emphasis on the role of supply and demand in concluding that the implied warranty would harm low-income tenants.¹³⁹ In accord with Meyers, Posner argued that the small profit margin in low-income housing would lead to higher rates of landlord abandonment under strict code enforcement.¹⁴⁰ Posner predicted that abandonment would necessarily lead to a smaller supply of low-income housing.¹⁴¹ The effects of supply and demand would then become a force that drove up housing prices, even if the landlord was not incurring substantial costs to re-

^{130.} See Hillman, supra note 5, at 842.

^{131.} Meyers was specifically responding to the American Law Institute's tentative draft for the Restatement (Second) of Property. Meyers, supra note 11, at 897.

^{132.} Id. at 889-90, 903.

^{133.} Id. at 889.

^{134.} Id. at 892. Meyers utilized prior examinations of landlord abandonment rates to support this argument. Id. at 893-97.

^{135.} Id. at 889-90.

^{136.} See id. at 893.

^{137.} Id. at 889-91.

^{138.} Id. at 893.

^{139.} See Posner, supra note 11, at 259-63.

^{140.} Id. at 260. Posner also noted that landlords who could upgrade from low-income housing to middle-income housing for a nominal extra cost might do so, further depleting the availability of low-rent housing. 1d.

^{141.} Id.

pair the housing.¹⁴² Low-rent housing, generally in better condition due to code enforcement, would become a highly sought-after commodity.¹⁴³ Under this model, a simultaneous decrease in the housing supply and increase in the housing demand would result in bidding wars.¹⁴⁴ Tenants with higher incomes could receive better housing at lower rates, and lower income tenants would be required to pay higher rent rates in order to competitively "bid" on available housing.¹⁴⁵ The inevitable result, Posner argued, would be to raise the average rental rates, thereby harming low-income tenants.¹⁴⁶

A 1975 study led by Werner Hirsch utilized regression analyses to examine the relationship between specific habitability laws and rent rates.¹⁴⁷ The implied warranty was not examined; however, repair and deduct laws,148 retaliatory eviction laws,149 and receivership laws150 were used as independent variables that represented habitability laws generally.¹⁵¹ Although all of the habitability laws had a positive relationship with higher rent, only receivership had a statistically significant relationship.¹⁵² Contrary to Ackerman's arguments regarding code enforcement, the authors found that the existence of receivership laws resulted, on average, in 12% higher rental rates.¹⁵³ It was posited that the lack of a significant relationship between rent and the other laws was due to either non-use of these remedies or absorption of increased costs by select groups of tenants.¹⁵⁴ Even without regard for those variables, however, the authors concluded that the increased costs to landlords brought about by habitability laws were, to a degree, passed on to tenants. 155

^{142.} Id. at 262.

^{143.} See id.

^{144.} See id.

^{145.} Id.

^{146.} Id.

^{147.} Hirsch et al., supra note 14, at 1098. In this study, the majority of the rental data was taken from 1972. Id. at 1128.

^{148.} Repair and deduct laws permit tenants to repair material defects in their housing; the cost of these repairs can then be deducted from subsequent rent payments. *Id.* at 1104.

^{149.} Retaliatory eviction laws provide tenants with a cause of action when they are evicted by a landlord due to the assertion of statutory rights or the reporting of code violations. *Id.* at 1113.

^{150.} Receivership laws enable court-appointed receivers to take control of leased properties and then correct serious code violations. *Id.* at 1111.

^{151.} Id. at 1128.

^{152.} Id. at 1129.

^{153.} Id. at 1130. The average rent difference between states with receivership laws and those without was \$125 per year. Id. at 1129.

^{154.} Id. at 1130-32.

^{155.} See id. at 1140.

F. A Need for Further Examination

In the past decade and a half, few authors have undertaken efforts to examine, even on a theoretical basis, the debate over the implied warranty. While articles mentioning the debate or calling for further expansion of tenants' remedies are not uncommon, authors have widely avoided entering the debate over economic effects. Empirical studies of the implied warranty have focused on other issues, such as the efficacy of these laws when tenants seek remedies. While theoretical assumptions and an early regression analysis sufficiently framed the debate for a number of years, it seems that ample time has passed to warrant, if not necessitate, further empirical study.

III. Analysis

This Comment presents the results of four distinct analyses intended to provide, at a minimum, some level of empirical evidence regarding the effects of the implied warranty. These analyses used data that spanned the thirty-three-year period from 1974 to 2007 in order to examine the relationship between the implied warranty and rent rates. Although the findings were not as overwhelming as critics of the implied warranty expected, the results did indicate that the implied warranty raised rent rates.¹⁵⁹

Four separate analyses were conducted on the data after the completion of data preparation. The first, an annual regression analysis, examined the relationship between the implied warranty and rent rates on an annual basis.¹⁶⁰ The second, a regression analysis of the impact of an ability to waive the warranty, examined the relationship between waiver and rent rates.¹⁶¹ The third, a regression analysis of changes over time, examined the relationship between the implied warranty and the increase in rent rates over a period of years.¹⁶² The

^{156.} See Hillman, supra note 5, at 842; Strahilevitz, supra note 3, at 1876.

^{157.} See, e.g., David I. Blower, Comment, Colorado HB 1061 and Advocating for the End of Caveat Emptor in Residential Leases, 78 U. Colo. L. Rev. 957 (2007); Stephen J. Maddex, Note, Propst v. McNeill: Arkansas Landlord-Tenant Law, A Time for Change, 51 Ark. L. Rev. 575 (1998); Krista L. Noonan & Frederick M. Preator, Comment, Implied Warranty of Habitability: It Is Time to Bury the Beast Known as Caveat Emptor, 33 Land & Water L. Rev. 329 (1998).

^{158.} See, e.g., Gary Blasi, How Much Access? How Much Justice?, 73 FORDHAM L. REV. 865 (2004).

^{159.} See infra Part IV.A.1.

^{160.} See infra Part III.B.1.a.

^{161.} See infra Part III.B.1.b.

^{162.} See infra Part III.B.1.c.

fourth, an analysis of housing conditions, examined the relationship between the implied warranty and negative housing conditions.¹⁶³

A. Data and Variables Used

A majority of the data used in the analyses came from surveys conducted by the American Housing Survey (AHS).¹⁶⁴ These annual surveys collect information about American households through responses to various questions intended to examine household demographics, housing quality, and neighborhood conditions. Most of the data in this analysis was transcribed directly from original AHS data sets. Several additional variables used values computed from AHS data.¹⁶⁵ All other data used in the analyses came from the author's research.¹⁶⁶ Figure 1 contains a full list of the variables used and their respective sources.

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Figure 1	I · Vadia	RIESI)	ESCRIPTIONS	AND	OURCES

Variable	Abbreviation	Source	Used In ¹⁶⁷
Percentage Change in State's Bottom Quartile Rent Rate	%25RENT	Computed from AHS Data	Analysis 3
Percentage Change in State's Median Property Tax	%AMTTX	Computed from AHS Data	Analysis 3
Percentage Change in State's Median Income	%MDINC	Computed from AHS Data	Analysis 3
Percentage Change in State's Median Rent Rate	%MDRENT	Computed from AHS Data	Analysis 3
Percentage Change in State's Median Renter Income	%MDRINC	Computed from AHS Data	Analysis 3
Percentage Change in State's Median Property Value	%VALUE	Computed from AHS Data	Analysis 3
Abandoned Buildings Near Dwelling	ABAND	AHS Data	Analysis 1, 2
Central Air Conditioning Unit	AIR	AHS Data	Analysis 1, 2, 4

^{163.} See infra Part III.B.2.

^{164.} AHS data from 1997 to 2009 is available electronically through the U.S. Census Bureau and the Department of Housing and Urban Development. See American Housing Survey, U.S. Census Bureau, www.census.gov/hhes/www/housing/ahs/ahs.html (last visited Mar. 9, 2011); Data Sets, HUD User, www.huduser.org/DATASETS/ahs.html (last visited Mar. 9, 2011). Data from 1974 through 2004 can be purchased in DVD format through the Department of Housing and Urban Development. See AHS Data Available on CD-ROM, HUD User, http://www.huduser.org/DATASETS/ahs/ahs_cd.html (last visited Mar. 9, 2011).

^{165.} See infra Part III.A.1.

^{166.} See id.

^{167. &}quot;Analysis 1" refers to the annual implied warranty analysis. "Analysis 2" refers to the annual waiver analysis. "Analysis 3" refers to the analysis of changes over time. "Analysis 4" refers to the housing-conditions analysis.

Median State Mortgage Value	AMTMORT	Computed from AHS Data	Analysis 1,
Median State Property Tax	AMTTX	Computed from AHS Data	Analysis 1,
Number of Bathrooms	BATHS	Computed from AHS Data	Analysis 1,
Number of Bedrooms	BDRMS	AHS Data	Analysis 1,
Existence of a Cellar	CELLAR	AHS Data	Analysis 1, 2
Open Cracks Wider Than a Dime	CRACKS	AHS Data	Analysis 1, 2, 4
Total Number of Negative Housing Conditions	DEFECTS	Computed from AHS Data	Analysis 4
Building Has an Elevator	ELEV	AHS Data	Analysis 1,
Dwelling Has a Garage	GARAGE	AHS Data	Analysis 1,
Holes in Dwelling Walls	HOLES	AHS Data	Analysis 1, 2, 4
Household Income	INC	AHS Data	Analysis 1, 2
Existence/Nonuse of the Implied Warranty	IWH	Author's Research	Analysis 1, 3, 4
State Median Income	MDINC	Computed from AHS Data	Analysis 1,
State Median Income of Renters	MDRINC	Computed from AHS Data	Analysis 1, 2
Cracks in Wall Plaster	PLASTER	AHS Data	Analysis 1, 2, 4
Ratio of Rent to Income	R/INC	AHS Data	Analysis 1,
Rats in Dwelling	RATS	AHS Data	Analysis 1, 2, 4
Monthly Rent	RENT	AHS Data ¹⁶⁸	Analysis 1,
Leaks in Roof	RLEAK	AHS Data	Analysis 1, 2, 4
Existence of Shops Near Dwelling	SHOPS	AHS Data	Analysis 1,
State	STATE	AHS Data	All Analyses
Median State Property Value	VALUE	Computed from AHS Data	Analysis 1,
Legality of Waiver of the IWH	WAIVER	Author's Research	Analysis 2,

^{168.} Most values for the monthly-rent variable were transcribed directly from AHS data. Where rent rates in the AHS data referred to periods longer or shorter than one month, the rate was computed to match its monthly equivalent.

1. Variables

The variables used in the analyses collectively represented several categories related to economics, dwelling characteristics, dwelling conditions, and neighborhood conditions. Because AHS Surveys did not include the same variables in every annual survey, the variables included in each analysis necessarily varied slightly over the years examined. Despite these changes, the categories to which the variables related did remain constant. Economic variables included monthly rent, renters' incomes, median incomes, and other costs related to housing. Housing-characteristics variables measured dwellings' physical qualities such as the number of rooms and the existence of an elevator. Housing-conditions variables measured the existence of negative housing conditions such as holes in the walls. The selection of specific variables depended upon the analysis. The

2. Data Used

The AHS surveys employed in this study provided household data collected on an annual basis; however, the surveys were not conducted in all fifty states each year and examined different variables over the course of the years examined. Pecause some of the AHS surveys lacked representative samples of states that used the implied warranty and those that did not, only those years with representative samples of both were examined. The years examined for each analysis are discussed in the description of that analysis.

Only two variables required data outside of that provided by the AHS surveys: the implied warranty variable and the waiver variable. For these variables, it was necessary to determine the year that each of the examined states adopted the implied warranty and whether the implied warranty was subject to waiver in that state. These pieces of

^{169.} Economic variables included renter's income, median state income, median state property value, and monthly rent rate, among others. Dwelling-characteristics variables included number of rooms, number of bedrooms, number of bathrooms, and existence of a cellar, among others. Dwelling-condition variables included holes in the walls, peeling paint, rats in the dwelling, and leaks in the roof, among others.

^{170.} Early AHS surveys included fewer variables than those conducted after the mid-1980s. Furthermore, several preexisting variables were modified in later surveys to measure conditions or responses in a slightly different manner.

^{171.} The rationales for choosing specific variables for each analysis are discussed in the descriptions of the individual analyses.

^{172.} See DVD: American Housing Survey (AHS) Metropolitan Microdata Files 1974-1983 and 1984-2004 (U.S. Dep't of Housing and Urban Dev. 2006) (on file with author). For a full list of AHS survey locations and years that each location was surveyed, see *Dates of American Housing Survey Metropolitan Areas*, U.S. CENSUS BUREAU, www.census.gov/hhes/www/housing/ahs/metrodates.html (last visited Mar. 11, 2011).

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data, obtained through legislative history and case law, are displayed in Figure 2.

FIGURE 2: STATE ADOPTION DATES AND WAIVER¹⁷³

State	IWH Adoption	Waiver
Alabama	2007	Yes
Arizona	1974	Yes
Arkansas	N/A	N/A
California	1974	No
Colorado	2008	No
Connecticut	1974	Yes
District of Columbia	1970	No
Florida	1981	Yes
Georgia	1989	Yes
Illinois	1972	Yes
Indiana	1980	No
Kansas	1974	No
Kentucky	1984	Yes
Louisiana	1974	Yes
Massachusetts	1973	No
Maryland	1980	No
Michigan	1968	No
Minnesota	1971	No

173. See Ala. Code § 35-9A-204 (2009) (effective June 1, 2007); Ariz. Rev. Stat. Ann. § 33-1324, -1325 (2007) (effective Aug. 8, 1974); Colo. Rev. Stat. § 38-12-503 (2007) (effective Sept. 1, 2008); CONN. GEN. STAT. § 47a-7 (2006) (effective Jan. 1, 1977); FLA. STAT. ANN. § 83.51, .56 (2004) (effective 1981); Ky. Rev. Stat. Ann. §§ 383.595, 383.625, 383.635 to .645 (LexisNexis 2002) (effective July 13, 1984); La. Rev. Stat. Ann. § 9:3221 (2009) (effective 1974); Md. Code Ann., Real Prop. § 8-211 (LexisNexis 2010) (effective 1980); Mich. Comp. Laws § 554.139 (2005) (effective Oct. 1, 1968); MINN. STAT. § 504.1B.161 (2002) (effective 1999); Miss. Code Ann. § 89-8-23 (1999) (effective July 1, 1991); N.Y. Real Prop. Law § 235-b (McKinney 2006) (effective 1975); OHIO REV. CODE ANN. § 5321.04, .07 (West 2004) (effective 1974); OKLA. STAT. ANN. tit. 41, §§ 118-121 (1999) (effective 2001); OR. REV. STAT. § 90.320 (2007) (effective 1989); Tenn. Code Ann. § 66-28-304 (2004) (effective July 1, 1975); Va. Code Ann. § 55-248.13, .25 (2007) (effective July 1, 1974); Wash. Rev. Code § 59.18.060 (2004) (effective July 16, 1973); Wis. Stat. § 704.07 (2001) (effective 1970); Javins v. First Nat'l Realty Corp., 428 F.2d 1071 (D.C. Cir. 1970); Green v. Superior Court of S.F., 517 P.2d 1168 (Cal. 1974); Thompson v. Crownover, 381 S.E.2d 283 (Ga. 1989); Jack Spring, Inc. v. Little, 280 N.E.2d 208 (Ill. 1972); Breezewood Mgmt. Co. v. Maltbie, 411 N.E.2d 670 (Ind. Ct. App. 1980); Steele v. Latimer, 521 P.2d 304 (Kan. 1974); Bos. Hous. Auth. v. Hemingway, 293 N.E.2d 831 (Mass. 1973); King v. Moorehead, 495 S.W.2d 65 (Mo. Ct. App. 1973); Pugh v. Holmes, 405 A.2d 897 (Pa. 1979).

Missouri	1973	No
Mississippi	1991	Yes
New Jersey	1969	Yes
New York	1975	No
Ohio	1974	No
Oklahoma	2001	Yes
Oregon	1973	Yes
Pennsylvania	1978	No
Tennessee	1975	Yes
Texas	1978	Yes
Utah	1991	Yes
Virginia	1974	Yes
Washington	1973	No
Wisconsin	1970	No

After formatting and analysis, the data sets resembled Figure 3.¹⁷⁴ Each line represented a case or individual dwelling unit. The first column represented the dwelling number; all of the following columns represented the specific variables included in the analysis. Numeric values assigned to the variables indicated the value of a specific response. Economic variables, such as monthly rent rate and annual household income, were measured with values that represented dollar amounts. Yes-or-no survey responses, such as the roof-leaks variable, were measured as "dummy variables" with a 1 (yes) or 0 (no) value. When the AHS data assigned multiple values to a yes-or-no survey response, such as 9 for "no answer," the value was removed

^{174.} Data preparation primarily encompassed the conversion of AHS data from ASCII format to a standard spreadsheet format. Other elements of data preparation included conversion of variable values into a standardized format, deletion of irrelevant variables, and computation of variables derived from AHS data. SPSS Statistics 18 was used for all advanced statistical analyses. For further information about SPSS, see IBM SPSS STATISTICS, http://www.spss.com/statistics (last visited Mar. 9, 2011).

^{175.} The term "dummy variables" refers to variables that were originally measured in a categorical format. For example, variables measuring the existence or nonexistence of the implied warranty of habitability are categorical in nature; therefore, it was necessary to convert these variables into a numeric format for use in the regression analysis. The conversion process is referred to as creating a dummy variable, whereby a "yes" response to a variable becomes a 1 in the dataset and a "no" response becomes a 0. Both the implied warranty variable (IWH) and the waiver variable (WAIVER) were measured as dummy variables; the existence of the implied warranty gave IWH a value of 1 and the ability to waive the implied warranty gave WAIVER a value of 1.

^{176.} In many instances, dummy variables were recoded from the values assigned by AHS to standardized 1 and 0 values.

and not included in the analysis. When a yes-or-no survey response included values indicating the degree of a problem, such as 3 for "roof leaked for more than four months," the values were consolidated into the corresponding yes-or-no value.

	STATE	RENT	INC	RLEAK
Dwelling 1	9	200	10900	0
Dwelling 2	5	800	40500	0
Dwelling 3	23	225	15000	1
Dwelling 4	49	400	21980	0
Dwelling 5	49	300	12000	0
Dwelling 6	23	325	13500	0
Dwelling 7	37	225	16250	0
Dwelling 8	43	190	9000	1
Dwelling 9	5	550	19000	1
Dwelling 10	9	275	15000	0

FIGURE 3: EXAMPLE DATA SET

B. Method

Three of the analyses conducted for this Comment utilized linear regression. Although an in-depth discussion of linear regression is well beyond the scope of this Comment, a basic understanding is helpful in order to follow the methods used in the analyses.

1. Regression Analyses of Rent Rates

Linear regression, in the most basic sense, estimates the probable value of a dependent variable based upon the value of one or more independent variables.¹⁷⁷ In estimating the probable value of a dependent variable, the linear regression model determines the extent to which each given independent variable affects the value of the dependent variable.¹⁷⁸ It is these determinations of the relationship between the independent and dependent variables that formed the focus of this Comment's analysis. In particular, these analyses focused on determining whether a relationship existed between the dependent variable representing monthly rent rates and specific independent variables representing the implied warranty. Figure 4 provides a basic

^{177.} See, e.g., Hirsch et al., supra note 14, at 1125-26 (explaining the basic function of regression analyses).

^{178.} Id. at 1126.

visual representation of a regression analysis using monthly rent rates as the dependent variable.

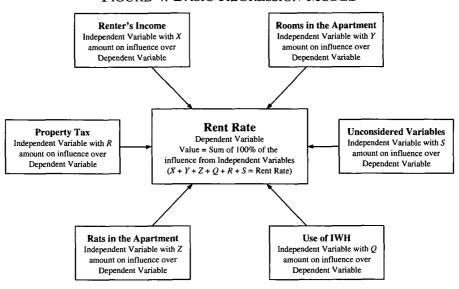


FIGURE 4: BASIC REGRESSION MODEL

a. Regression Analysis 1: Annual Implied Warranty Analysis

The annual implied warranty analysis examined the relationship between the implied warranty and rent rates. This analysis broadly followed the example set by Werner Hirsch and his co-authors; however, this analysis exceeded the scope of Hirsch's study with regard to the time span, number of years examined, and number of individual cases included. The expectation that rent rates rose or fell due to the influence of various independent factors led Hirsch to use a regression analysis in his study. For the same reason, linear regression was used for this analysis. As with Hirsch's study, the intent behind this analysis was to determine the extent to which various independent

^{179.} Hirsch examined data from a one-year time period with 182 respondents. *Id.* at 1127–28. By contrast, this Comment's analysis examines data from 11 years spanning a 33 year period and covering approximately 450,000 respondents.

^{180.} See id. at 1125-26. Hirsch illustrated the expected relationship with the following equation:

RENT = $B_0 + B_1$ (number of rooms) + B_2 (distance to center of the Standard Metropolitan Statistical Area (S.M.S.A.)) + B_3 (structure type) + B_4 (repair status) + B_5 (household's average income) + B_6 (lot value) + B_7 (depreciation) + B_8 (S.M.S.A. income) + B_9 (construction cost) + B_{10} (repair and deduct laws) + B_{11} (rent withholding and retaliatory eviction laws) + B_{12} (receivership laws).

variables, particularly the implied warranty, could be considered predictors of higher or lower rent rates.¹⁸¹

From the thirty-three year span of available data, eleven years were chosen as the most representative samples. These years are listed in Figure 5. Every state included in the AHS data for a selected year remained in the analysis of that year. However, in several instances, pieces of data were removed from the sample because the state designation was neither provided nor discernable from the available information. 183

During each of the eleven years examined, the annual implied warranty analysis measured the relationship between selected variables and the monthly rent paid by individual households. Each year's analysis included between 13,000 and 30,000 individual renter-occupied households. On average, eighteen independent variables were selected for each year's analysis; each variable was selected based upon the expectation that a relationship existed between the variable and monthly rent rates. Although all of the annual implied warranty analyses included several dependent variables, other variables were only included in the analyses for specific years. Figure 5 provides a list of the variables included in each annual analysis.

b. Regression Analysis 2: Annual Waiver Analysis

The annual waiver analysis examined the relationship between the ability to waive the implied warranty and rent rates. With the exception of two variable modifications, the preparation and method of this analysis mirrored that of the annual implied warranty analysis. The slight modifications to the annual implied warranty analysis made it possible for the annual waiver analysis to examine contentions that a non-waivable implied warranty would cause a greater increase in rent rates.¹⁸⁵

^{181.} Id.

^{182.} These eleven years satisfied two criteria. First, each year included a ratio of states using the implied warranty to states not using the implied warranty that most closely resembled the same ratio among all fifty states. Second, each year included sufficient sample sizes and high response rates for the relevant variables. Additionally, because of the high adoption rates of the implied warranty between 1974 and 1980, five of the eleven years examined came from that time span.

^{183.} The AHS data coded several states as "9999." In some cases, it was possible to determine the state's identity through reference to metropolitan codes or county codes. Where this determination could not be made, the data was removed from the analysis.

^{184.} The variables chosen, and listed in Figure 1, are similar in nature to those chosen by Hirsch. See Hirsch et al., supra note 14, at 1128.

^{185.} See, e.g., RABIN ET AL., supra note 103, at 80.

Figure 5: Years, States, and Variables

Year	States	Variables
1974	Arkansas, Arizona, California, District of Columbia, Florida, Kansas, Massachusetts, Maryland, Michigan, Minnesota, Mississippi, New Jersey, New York, Pennsylvania, Tennessee, Texas, Utah, Virginia, Washington, Wisconsin	AIR, AMTTX, BATHS, BDRMS, CRACKS, ELEV, HOLES, INC, IWH, MDINC, MDRINC, RATS, RENT, R/ INC, RLEAK, STATE, SHOPS, VALUE
1975	California, Connecticut, Georgia, Illinois, Indiana, Kansas, Kentucky, Louisiana, Massachusetts, Missouri, New Jersey, New York, Ohio, Oregon, Pennsylvania, Texas, Virginia, Washington, Wisconsin	AIR, AMTTX, BATHS, BDRMS, CRACKS, ELEV, HOLES, INC, IWH, MDINC, MDRINC, PAINT, RATS, RENT, R/INC, RLEAK, STATE, SHOPS, VALUE
1977	Arkansas, Arizona, Colorado, District of Columbia, Florida, Kansas, Massachusetts, Maryland, Michigan, Minnesota, Mississippi, New Jersey, New York, Pennsylvania, Tennessee, Texas, Utah, Virginia, Washington, Wisconsin	AIR, AMTTX, BATHS, BDRMS, CRACKS, ELEV, HOLES, INC, IWH, MDINC, MDRINC, PLASTER, RATS, R/INC, RENT, RLEAK, STATE, SHOPS, VALUE
1978	California, Colorado, Connecticut, Georgia, Indiana, Kansas, Kentucky, Louisiana, Massachusetts, Missouri, New Jersey, New York, Ohio, Pennsylvania, Texas, Virginia	AIR, AMTTX, BATHS, BDRMS, CRACKS, ELEV, HOLES, INC, IWH, MDINC, MDRINC, RATS, RENT, R/ INC, RLEAK, SHOPS, STATE, VALUE
1980	Alabama, Arkansas, California, Illinois, Indiana, Kentucky, Massachusetts, Michigan, Missouri, Mississippi, New Jersey, New York, Oklahoma, Pennsylvania, Tennessee, Utah	AIR, AMTTX, BATHS, BDRMS, CRACKS, ELEV, HOLES, INC, IWH, MDINC, MDRINC, PLASTER, RATS, RENT, R/INC, RLEAK, STATE, VALUE
1984	Alabama, Arkansas, California, Indiana, Massachusetts, Mississippi, New York, Ohio, Oklahoma, Pennsylvania, Tennessee, Utah, Virginia, Wisconsin	ABAND, AIR, AMTTX, BATHS, BDRMS, CELLAR, CRACKS, GARAGE, HOLES, INC, IWH, MDINC, MDRINC, PAINT, RATS, RENT, R/INC, RLEAK, STATE, SHOPS, VALUE
1988	Alabama, California, Indiana, Massachusetts, Mississippi, New York, Ohio, Oklahoma, Tennessee, Utah, Virginia, Wisconsin	ABAND, AIR, AMTTX, AMMORT, BATHS, BDRMS, CELLAR, CRACKS, GARAGE, HOLES, INC, IWH, MDINC, MDRINC, PAINT, RATS, RENT, R/INC, RLEAK, STATE, VALUE
1992	Alabama, Arkansas, Indiana, Massachusetts, Ohio, Oklahoma, Tennessee, Utah, Virginia	ABAND, AIR, AMTTX, AMMORT, BATHS, BDRMS, CELLAR, CRACKS, GARAGE, HOLES, INC, IWH, MDINC, MDRINC, PAINT, RATS, RENT, R/INC, RLEAK, STATE, VALUE
1996	Arkansas, California, Connecticut, Georgia, Mississippi, Ohio, Oklahoma, Tennessee, Texas, Washington	ABAND, AIR, AMTTX, AMMORT, BATHS, BDRMS, CELLAR, CRACKS, GARAGE, HOLES, INC, IWH, MDINC, MDRINC, PAINT, RATS, RENT, R/INC, RLEAK, STATE, VALUE
2004	Arkansas, California, Colorado, Connecticut, Georgia, Illinois, Indiana, Louisiana, Missouri, Mississippi, Ohio, Oklahoma, Pennsylvania, Tennessee, Texas, Washington	AIR, AMTTX, AMMORT, BATHS, BDRMS, CRACKS, GARAGE, HOLES, INC, IWH, MDINC, MDRINC, PAINT, RATS, RENT, R/ INC, RLEAK, STATE, VALUE

The variables and years studied were identical to those in the annual implied warranty analysis; only the state and implied warranty variables changed for the annual waiver analysis. The removal of states that did not use the implied warranty in the year examined limited the scope of the state variable. The waiver variable replaced the implied warranty variable in the analysis and indicated whether the implied warranty was waivable or non-waivable in a given state.

c. Regression Analysis 3: Analysis of Changes over Time

The analysis of changes over time examined the relationship between the existence of the implied warranty and percentage increases in rent rates over time. As with both annual analyses, rent rates were expected to change due to the influence of various independent factors; therefore, this analysis also employed a linear regression model. This analysis arose out of arguments that the implied warranty would cause rent increases over time due to higher maintenance costs and decreased housing stock.¹⁸⁶ The intent was to determine whether existence of the implied warranty was significantly related to higher increases in rent rates over time.

In order to maintain consistency between the locations examined and the existence or nonexistence of the implied warranty, this analysis only included five time periods. These periods included 1974 to 1977, 1980 to 1984, 1984 to 1992, 1992 to 1996, and 1996 to 2004. As a result of changes in survey locations and adoption of the implied warranty during a given time period, the specific states that were examined varied by time period. Figure 6 contains a list of the locations examined over each period of time.

Rent rate changes were computed by state and divided into two measures of change: percentage change in the median rent rate and percentage change in the bottom-quartile rent rate. The independent variables consisted of the implied warranty and various economic variables. All economic variables were calculated in the same manner as percentage change in rent rates; each variable represented the percentage change in a specific economic indicator, such as a state's me-

^{186.} See, e.g., Meyers, supra note 11, at 889-93.

^{187.} The five time periods chosen included the largest number of states that met two conditions. First, the state had not changed its status with regard to existence/nonexistence of the implied warranty. Second, the AHS data included the state in both the first and last year of the time span.

^{188.} See Figure 1, supra Part III.A.

Time Span	States Examined
1974–1977	Arkansas, District of Columbia, Florida, Maryland, Massachusetts, Michigan, Minnesota, New Jersey, New York, Pennsylvania, Tennessee, Texas, Utah, Virginia, Washington
1980–1984	Alabama, Arkansas, California, Indiana, Massachusetts, New York, Ohio, Oklahoma, Utah, Virginia, Wisconsin
1984–1992	Alabama, Arkansas, Indiana, Massachusetts, Ohio, Utah, Virginia
1992–1996	Arkansas, Indiana, Ohio, Utah
1996–2004	Arkansas, California, Connecticut, Georgia, Illinois, Indiana, Missouri, Ohio, Oklahoma, Washington

FIGURE 6: TIME SPANS AND STATES EXAMINED

dian income.¹⁸⁹ The selection of the economic variables was based upon their expected effect on rent rates; each analysis of changes over time included the same economic variables.

2. Housing-Conditions Analysis

The housing-conditions analysis examined the relationship between the implied warranty and housing conditions. Although important to the overall debate regarding the implied warranty, housing conditions are not the central focus of this Comment. As a result, this analysis was limited in both scope and depth. Instead of looking for a statistically significant relationship, this analysis focused on discerning whether or not the evidence of a relationship between the implied warranty and housing conditions warranted further examination.

The housing-conditions analysis retained eight of the eleven years used for both annual analyses.¹⁹⁰ Variables used for this analysis included those that pertained to housing conditions¹⁹¹ as well as the implied warranty variable, the waiver variable, and the state variable. An additional variable measuring the cumulative dwelling defects was created for this analysis. The cumulative dwelling-defects variable (DEFECTS) represented the total number of negative housing condi-

^{189.} For example, if a state's median income was \$10,000 in 1974 and \$15,000 in 1977, the percentage change would be calculated as follows: (\$15,000 - \$10,000)/\$10,000 = 0.5 or a 50% increase.

^{190.} These eight years had the highest response rates for housing-conditions variables.

^{191.} For a full list of housing-conditions variables used, see Figure 1, supra Part III.A.

tions present in a dwelling.¹⁹² The value of this variable increased by one for each housing-conditions variable that reflected a negative condition.¹⁹³

Although a regression analysis would have yielded more precise results, a basic percentile-comparison model¹⁹⁴ provided sufficient results to determine whether further consideration of housing conditions is warranted. The analysis included two variations; both variations compared the percentage of negative housing conditions per dwelling across two different types of locations. In the first variation, locations that recognized the implied warranty were compared with locations that did not recognize the implied warranty. In the second variation, locations that permitted waiver of the implied warranty were compared with locations that did not permit waiver.

C. Interpreting the Outputs of Regression Analyses

Before examining the results, it is helpful to understand several of the determinations made by the regression model. For the purposes of this Comment's analyses, three determinations are relevant: the coefficient of determination (R2), the regression coefficient (B), and the p-value.

The coefficient of determination (R2) represents the amount of variance in the dependent variable that is "explained" regression analysis. Therefore, as illustrated in Figure 7, if an analysis has an R2-value of .500, the analysis can be said to account for 50% of variations resulting in different values of the dependent variable. The significance of the R2-value relates to each analysis as a whole; the larger the R2, the more effective the analysis is at predicting the value of a dependent variable.

The regression coefficient (B) demonstrates the effect of a given independent variable on the dependent variable. Because the implied warranty and waiver variables were both coded as dummy variables, the B-value for these variables represented the average change in the monthly rent when the dummy variable's response was affirma-

^{192.} This cumulative number only included negative housing conditions examined by the analysis. It remains possible that a number of negative housing conditions not included in this analysis or measured by AHS surveys existed in any of the dwellings examined.

^{193.} If any of the housing conditions for a specific dwelling lacked a value, for example, had no response, DEFECTS was not calculated for the dwelling.

^{194.} This basic model compares the percentage of cases with a specific attribute across multiple groups or conditions.

^{195.} See N.J.D. Nagelkerke, A Note on a General Definition of the Coefficient of Determination, 78 BIOMETRIKA 691, 691-92 (1991).

^{196.} See Hirsch et al., supra note 14, at 1128-29.

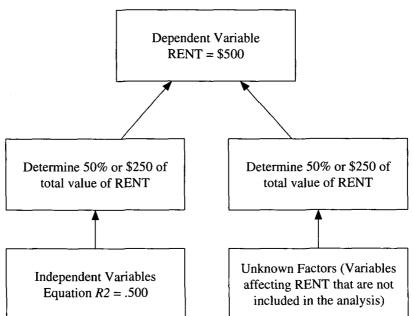


FIGURE 7: UNDERSTANDING R2-VALUES

tive (1). A positive B-value signified an increase in monthly rent given an affirmative response to the implied warranty variable. Conversely, a negative B-value signified a decrease in monthly rent given an affirmative response to the implied warranty variable. These possibilities are illustrated in Figure 8.

The *p*-value demonstrates whether the results for an entire analysis or a specific variable are statistically significant.¹⁹⁷ For this analysis, a *p*-value of less than .01 was considered significant.¹⁹⁸ Therefore, a *p*-value greater than .01 for a specific variable showed that the variable's effect on the dependent variable was not statistically significant. A *p*-value greater than .01 for the entire analysis showed that the analysis, as a whole, was not statistically significant.

Regression analysis outputs are not limited to the R2, B, and p-value; however, other outputs are not necessary to understand this

^{197.} A p-value represents the probability that the results are the product of chance. See Mark J. Schervish, P Values: What They Are and What They Are Not, 50 Am. STATISTICIAN 203, 203 (1996). A p-value may be considered statistically significant at the 95% level if the value is less than .05, or it may be considered significant at the 99% level if the value is less than .01. Id.

^{198.} Hirsch determined that his findings were statistically significant at the .05 or 95% level. See Hirsch et al., supra note 14, at 1129 n.94. However, because of the large scale of this analysis and the corresponding increased potential for confounding factors, the more stringent significance level of .01 or 99% was chosen for this Comment.

Possibility A - IWH Not Used All independent variables IWH has a B of 50 Predicted Rent = \$500 remain constant IWH is not used (value of 0) Predicted Rent = \$500 Possibility B - Positive B-Value All independent variables IWH has a B of 50 remain constant Predicted Rent = \$550 IWH is used (value of 1) Predicted Rent = \$500 Possibility C - Negative B-Value All independent variables IWH has a B of -50 Predicted Rent = \$450 remain constant IWH is used (value of 1)

FIGURE 8: DEMONSTRATION OF B COEFFICIENT

Comment's analyses. Therefore, only the R2, B, and p-value will be discussed in the results section below.

Predicted Rent = \$500

IV. RESULTS AND DISCUSSION

Both of the annual regression analyses obtained statistically significant results. The regression analysis of changes over time, however, did not provide statistically significant results. In the housing-conditions analysis, the results showed the possibility of a relationship between the implied warranty, waiver, and housing conditions. The results are presented below in Part IV.A–D and are discussed in Part IV.E.

A. Regression Analysis 1: Annual Implied Warranty Analysis

The results from the annual implied warranty analysis are compiled in Figure 9. Figure 9 includes a list of each year examined, the R2-value for the regression analysis, and the relevant results for the implied warranty variable. Although some of the years did not yield statistically significant results for the implied warranty variable, all are included in Figure 9.

B. Regression Analysis 2: Annual Waiver Analysis

The results from the annual waiver analysis are compiled in Figure 10. Only four of the eleven years examined are included in the results; the other seven years did not show any relationship between the waiver variable and monthly rent. Of the four years that showed a

Year	R2	IWH B	IWH p-value	Analysis p-value
1974	0.617	21.496	.000	.000
1975	0.583	-5.306	.199	.000
1977	0.667	13.098	.000	.000
1980	0.628	18.411	.000	.000
1984	0.546	-3.459	.721	.000
1988	0.695	97.670	.000	.000
1992	0.565	28.490	.289	.000
1996	0.661	9.877	.042	.000
2004	0.533	35.004	.000	.000

FIGURE 9: RESULTS FROM ANNUAL IMPLIED WARRANTY ANALYSIS

FIGURE 10: RELEVANT RESULTS FROM ANNUAL WAIVER ANALYSIS

Year	R2	WAIVER B	WAIVER sig.	Analysis Sig.
1974	0.648	-34.648	.000	.000
1975	0.574	-7.869	.026	.000
1996	0.543	-14.732	.067	.000
2004	0.634	-36.445	.000	.000

relationship between the form of warranty used and rent rates, only 1974 and 2004 were statistically significant.

C. Regression Analysis 3: Analysis of Changes over Time

The analysis of changes over time did not produce statistically significant results. Each analysis showed a slight positive relationship between existence of the implied warranty and percentage increases in both bottom quartile and median rent rates. However, in all of the analyses, the relationship between the implied warranty and percentage increases in rent failed to reach a level of statistical significance at the either .01 or .05 level. Additionally, the analyses as a whole were not significant predictors of percentage increases in rent; over the five time spans examined, the *R2*-values never exceeded .350.

D. Housing-Conditions Analysis

The results from the housing-conditions analysis are compiled in Figures 11 and 12. Figure 11 contains results from the comparison of housing conditions between locations that recognized the implied war-

ranty (warranty locations) and locations that did not recognize the implied warranty (no-warranty locations). Figure 12 contains the results from the comparison of housing conditions between locations that permitted waiver of the implied warranty (waiver locations) and locations that did not permit waiver (no-waiver locations).

Figure 11: Housing Conditions & Warranty/ No-Warranty Locations

YEAR	RLEAK	CRACKS	HOLES	RATS	PLASTER	PAINT	DEFECTS
1974	21%	-3%	1%	0%	X	X	-32%
1975	11%	-2%	-3%	-4%	X	-4%	-2%
1977	9%	2%	1%	7%	-3%	X	33%
1980	0%	-1%	2%	0%	-1%	X	-1%
1984	-13%	-5%	-2%	-6%	X	-4%	-64%
1988	-16%	-6%	-4%	-9%	X	-6%	-42%
1992	-29%	-10%	-7%	-13%	X	-11%	-4 6%
1996	-19%	-7%	4%	-1%	X	-5%	<u>-62%</u>

Figure 12: Housing Conditions & Waiver/ No-Waiver Locations

YEAR	RLEAK	CRACKS	HOLES	RATS	PLASTER	PAINT	DEFECTS
1974	-15%	-1%	-3%	-1%	X	X	-36%
1975	14%	1%	0%	-1%	X	-2%	12%
1977	0%	3%	2%	-12%	1%	X	29%
1980	4%	3%	1%	-9%	0%	X	29%
1984	9%	2%	0%	0%	X	-1%	-8%
1988	7%	-3%	-1%	0%	X	0%	8%
1992	0%	1%	0%	-2%	Х	0%	0%
1996	1%	0%	1%	1%	X	0%	5%

Figures 11 and 12 both display the results in the same manner. Variables not used in a specific year are noted with an "X." For all variables other than cumulative dwelling defects, Figures 11 and 12 list the difference in the percentage of dwellings with a specific defect across the two conditions. The difference was established by subtracting the percentage of dwellings with a defect in the second condition (no-warranty locations or no-waiver locations) from the percentage of dwellings with a defect in the first condition (warranty locations or waiver locations). Therefore, in Figure 11, the value of the roof leaks variable (RLEAK) for 1974 shows that 21% more dwellings in warranty

locations (warranty dwellings) had roof leaks when compared with dwellings in no-warranty locations (no-warranty dwellings). By contrast, in Figure 12, the value of the roof leaks variable for 1974 shows that 15% fewer dwellings in waiver locations (waiver dwellings) had roof leaks when compared with dwellings in no-waiver locations (no-waiver dwellings).

The value of the cumulative dwelling-defects variable (DEFECTS) in both Figure 11 and Figure 12 represents the percentage difference in the average number of cumulative defects per dwelling across the two conditions. In Figure 11, the value of the cumulative dwelling defects variable for 1974 shows that, on average, warranty dwellings had 32% fewer cumulative defects. In Figure 12, the value of the cumulative dwelling-defects variable in 1975 shows that, on average, waiver dwellings had 12% more cumulative defects.

E. Discussion of the Results

As noted above, not every analysis yielded significant results; however, the results that are significant shed light on the long-standing debate over the effects of the implied warranty. The annual-regression analysis shows that a statistically significant relationship exists between the implied warranty and rent rates. Furthermore, the ability to waive the implied warranty may affect the amount of rent a tenant pays. Finally, the housing-conditions analysis demonstrates that further inquiry into the effects of the implied warranty on housing conditions is warranted.

1. Regression Analysis 1: Annual Implied Warranty Analysis

Figure 9 illustrates that the existence of the implied warranty can be equated with higher rent rates in almost every year examined. While the implications of these results are not black and white, the results from this analysis provide the best evidence of the effects of the implied warranty and provide more significant results than any of the other analyses.

Each annual implied warranty regression analysis was significant as a predictor of the rent rate variable's value. The lowest R2-value was .533, the highest was .657, and the majority rose above .600. Therefore, the majority of these analyses matched the strength of Hirsch's analysis; indeed, some exceeded the predictive power of his analysis.²⁰⁰ Additionally, the p-value for each annual analysis equaled .000;

^{199.} See Figure 9, supra Part IV.A.

^{200.} Hirsch's analysis had an R2 value of .63. Hirsch et al., supra note 14, at 1129.

therefore, all of the analyses were statistically significant. The strength of these analyses as a whole lends support to the individual results of each analysis.²⁰¹

Seven of the eleven years examined showed a statistically significant relationship between the implied warranty and rent rates. In each of these seven years, the relationship between the implied warranty and rent rates was positive; therefore, the presence of the implied warranty related to higher rent rates. Although two years showed a negative relationship between existence of the implied warranty and rent rates, the results were not statistically significant. Therefore, every year that yielded statistically significant results showed that the existence of the implied warranty related to higher monthly rent payments.

The extent of rent rate increases that can be related to existence of the implied warranty varied over the years examined. The average Bvalue for the seven statistically significant years was 26. The highest B-value equaled 97.67 and the lowest equaled 13.10. This means that existence of the implied warranty, in an "average" year, equated to rent payments of \$26.00 more per month. However, it is necessary to note that these findings do not prove the existence of a cause-andeffect relationship.²⁰² First, it can only be said that the existence of the implied warranty increased rent \$26.00 for the "average dwelling," and even then, this statement is only true if all other independent variables remained constant.²⁰³ Furthermore, the regression analysis assumes the existence of a cause-and-effect relationship, but does not eliminate the possibility of other confounding variables.²⁰⁴ Regardless, despite the need for caution in interpreting these results, the empirical data supports an argument that the implied warranty resulted in higher rent rates.

2. Regression Analysis 2: Annual Waiver Analysis

The annual waiver analysis provided empirical evidence that the form of the implied warranty used may relate to higher rent rates. Of the eleven years examined, four reached a level of significance suggesting the existence of a relationship between the ability to waive the

^{201.} See id.

^{202.} While the assumption underlying regression analyses is that a cause-and-effect relationship exists, the analyses do not actually establish the existence of such a relationship. *See* Nagelkerke, *supra* note 195, at 691–92.

^{203.} See id.

^{204.} It remains possible that independent variables not used in these analyses acted as "confounding variables." These confounding variables would be the actual cause of the observed relationship due to their correlation with both the dependent and independent variables. *Id.*

implied warranty and rent rates. Two years, 1974 and 1984, achieved a level of actual statistical significance.²⁰⁵ Despite the limited number of statistically significant years, the results demonstrate that the ability to waive the implied warranty related to lower average rent payments in at least two years.

In 1974 and 1984, the average B-value (regression coefficient) equaled -35. The conclusions that may be drawn from this average B-value are limited.²⁰⁶ However, the results suggest that in these two years, the ability to waive the implied warranty resulted in an average rent payment of \$35.00 less per month. Furthermore, in all four years that reached a sufficient level of significance, the B-value was negative. This implies that where the analysis evidenced at least some relationship between waiver and rent rates, the ability to waive the implied warranty related to lower rent payments.

The relationship between these results and the results from the implied warranty analyses is also worth noting. For example, in 2004, existence of the implied warranty theoretically raised rent rates by \$35.00. In the same year, the ability to waive the implied warranty lowered rent rates by \$36.00. A possible implication is that a waivable form of the implied warranty may have raised rent rates much less than \$36.00 relative to nonexistence of the implied warranty. Hypothetically, this would mean that the ability to waive the implied warranty could act to offset the costs of the implied warranty in some locations. While this implication was not examined further for this Comment, it is one of several areas that may deserve further analysis.

3. Regression Analysis 3: Analysis of Changes Over Time

Critics of the implied warranty argued that landlord abandonment and similar factors would lead to sharper increases in the bottomquartile rent rates in locations that recognized the implied warranty. However, the analysis of changes over time provided no empirical evidence of a relationship between the implied warranty and percentage increases in rent rates.

While the lack of significant results in this analysis may be due to methodological errors, other variables, such as percentage increase in household income, did show statistically significant relationships with

^{205.} If this analysis utilized the same significance level as Hirsch, .05 or 95%, three of the years would have reached a level of statistical significance. See Hirsch et al., supra note 14, at 1129; see also supra note 198 and accompanying text.

^{206.} See Nagelkerke, supra note 195, at 691-92.

percentage increases in rent.²⁰⁷ As no further steps were taken to pursue this analysis beyond those originally planned, it remains possible that further examination would yield statistically significant results.²⁰⁸ Therefore, while further analysis of this issue is warranted, there is still no empirical evidence that the implied warranty resulted in sharper increases in rent rates.

4. Housing-Conditions Analysis

The housing-conditions analysis yielded results that warrant further examination of the relationship between housing defects and the implied warranty. While the analysis, by design, did not measure the statistical significance of its results, it did provide evidence that the implied warranty positively affects the condition of rented dwellings. Furthermore, the analysis provided evidence that the ability to waive the implied warranty may only have a negligible effect on the overall condition of rented dwellings.

The comparison of housing conditions between warranty locations and no-warranty locations, Figure 11, appears to show that the conditions of warranty dwellings improved relative to no-warranty dwellings over the years examined.²⁰⁹ For example, in 1974 and 1975, roof leaks occurred in a greater percentage of warranty dwellings than no-warranty dwellings; however, from 1984 through 1996, roof leaks occurred in a greater percentage of no-warranty dwellings. Additionally, while warranty dwellings had a greater percentage of cumulative defects in 1977, from 1980 through 1986 the cumulative number of defects in warranty dwellings was consistently lower than in no-warranty dwellings. Although these results do not prove that the implied warranty increased housing quality, they do imply the existence of such a relationship.

Differences in housing conditions between waiver dwellings and nowaiver dwellings were less marked than the differences between warranty dwellings and no-warranty dwellings. The results in Figure 12 appear to demonstrate that the cumulative defects in waiver dwellings exceeded those in no-waiver dwellings until 1984.²¹⁰ Beginning in 1984, however, the number of cumulative defects in waiver dwellings

^{207.} However, the overall R2 for these analyses did not reach a threshold of significance. This may imply that the use of a broader scope of variables and shorter time spans would return different results.

^{208.} Future examinations should include a greater number of independent variables and shorter time spans. In order to accomplish this, it will likely be necessary to use data beyond that available through AHS.

^{209.} See Figure 11, supra Part IV.D.

^{210.} See Figure 12, supra Part IV.D.

became comparable to those in no-waiver dwellings. Additionally, after 1977, the difference in the percentage of dwellings with a specific defect never exceeded 9% across the two conditions. Therefore, while the difference between housing conditions in waiver dwellings and no-waiver dwellings appeared greater in early years, the general trend showed increasingly similar housing conditions in later years.

F. Limitations of Results

It is important to note that limitations to these analyses exist and must be considered when determining the implications of this Comment. First, the inherent limitations of the methods used require caution in the interpretation of the results. Furthermore, the possibility of errors in the methodology should not be discounted, particularly with regard to the analysis of changes over time.

With regard to the inherent limitations of the methods used, it should be noted that these analyses did not "prove" anything. Although the strength of the regression analyses provided powerful empirical evidence to support arguments that the implied warranty raised rent rates, they did not prove the existence of a causal relationship between the implied warranty and increased rent rates. Instead, the analyses demonstrated that the data does not disprove such a relationship. Furthermore, the analysis of housing conditions did not test for statistical significance and only examined a limited number of housing conditions. As such, further analysis is required before concluding that the implied warranty improved housing quality.

Errors in the methodology of this analysis are possible; indeed, even the forms of analysis used in this Comment are open to criticism.²¹⁴ It is not known if limitations in the available data affected the results, nor is it known if analysis of additional years would have yielded different results. In particular, the lack of a significant relationship in the regression analysis of changes over time may have resulted from the examination of time spans that were too long.

Despite the inherent and methodological limitations, the statistically significant results obtained do provide a wealth of empirical evi-

^{211.} The R2 allows us to predict the value of a dependent variable based upon a given independent variable; it demonstrates variation given certain circumstances but does not establish cause and effect. See Nagelkerke, supra note 195, at 691.

^{212.} See id.; Schervish, supra note 197, at 203.

^{213.} The housing conditions examined were limited to those that the AHS included in its surveys. Furthermore, housing conditions with extremely low response rates were excluded from all analyses.

^{214.} See, e.g., Hillman, supra note 5, at 842 (criticizing Hirsch's use of this form of statistical analysis in the examination of rent rates).

dence beyond that previously available. Furthermore, these results provide insight and direction for further examination of these relationships.

V. IMPACT

To the extent that this Comment attempts to determine whether or not the implied warranty is related to higher rent rates, the conclusion appears affirmative. However, this determination does not "solve" the debate over the implied warranty; instead, it changes the focus. For forty years, the central axis of the debate has been whether or not rent rates would increase following adoption of the implied warranty of habitability. As a result, arguments over the possibility of rent increases have dwarfed discussions of how to handle such increases. Furthermore, judicial intent, legislative policies, and alternative arguments have been glossed over to emphasize legal economics. For academics and legislatures alike, discussion and debate over the implied warranty should now focus on determining if higher rent rates undermine the fundamental policies behind the warranty and, if so, what actions can remedy the current situation.

A. Impact on the Academic Debate

To the extent that opponents of the implied warranty argued that its adoption would result in higher rent rates, the empirical evidence supports their claims. Despite the importance of this conclusion to the underlying arguments of the debate, it does not resolve the overarching concerns that have fueled the debate.²¹⁸ A desire for affordable housing, particularly for the poor, fueled academics like Hirsch in criticizing the implied warranty.²¹⁹ Knowledge that rent rates increased should intensify, not dampen, these concerns. Furthermore, rent rates are only proximately related to the concerns for tenants' rights and increased housing quality.²²⁰ Insofar as these concerns are used to

^{215.} See id.; Strahilevitz, supra note 3, at 1876.

^{216.} See, e.g., Hillman, supra note 5, at 842 (discussing the arguments over the effects on rent rates); Hirsch et al., supra note 14, at 1101 (emphasizing the debate between Ackerman and Komesar as it related to rent rates and minimizing arguments over subsidy programs and alternatives).

^{217.} See, e.g., Posner, supra note 11, at 259-63 (discussing only the economics of the debate with minimal consideration for how increased rent rates affect the intended goals).

^{218.} See, e.g., Craswell, supra note 13, at 382-85.

^{219.} Hirsch et al., supra note 14, at 1139.

^{220.} Craswell, *supra* note 13, at 382-85.

measure the efficacy of the implied warranty, future arguments should be framed around, but not determined by, the increase in rent rates.²²¹

A determination that rent rates increased does not preclude debates over how to maintain affordable housing under the implied warranty.²²² Despite the perceptions of Ackerman and Kennedy as "dissenters" who simply argued that rent rates would not increase,²²³ both acknowledged that rent rates could increase.²²⁴ Accordingly, they propounded methods of counteracting such a situation with supplementary programs.²²⁵ Ackerman proposed a number of subsidy- and tax-related programs to offset potential financial harm created by strict code enforcement.²²⁶ In light of current troubles in federal subsidy programs²²⁷ and evidence that rent rates did increase, Ackerman's proposals may be owed further examination.²²⁸

^{221.} See id. at 383-85.

^{222.} See Ackerman, Regulating Slum Housing, supra note 13, at 1105, 1108; Kennedy, supra note 13, at 500, 505.

^{223.} See Hirsch et al., supra note 14, at 1101; Rabin, supra note 1, at 559.

^{224.} Ackerman, Regulating Slum Housing, supra note 13, at 1112 (stating that it was possible that "rent levels in 'code' houses would rise somewhat as residents from 'subcode' apartments find the code houses relatively more attractive than before"); Kennedy, supra note 13, at 506 ("Microeconomic theory at this level of abstraction cannot tell us what to expect.").

^{225.} See Ackerman, Regulating Slum Housing, supra note 13, at 1113-34 (discussing various methods of using taxes or housing subsidies to limit the impact of strict code enforcement on rents); Kennedy, supra note 13, at 497-501 (discussing the use of selective code enforcement as a method of keeping rent rates from increasing after implementation of a code enforcement program).

^{226.} See Ackerman, Regulating Slum Housing, supra note 13, at 1113-34. In part, these programs were an attempt to ensure the effectiveness of redistribution of wealth through code enforcement. Id. at 1188. The propriety of using the implied warranty for wealth redistribution is an ongoing debate. Id. (noting that the intent to use code enforcement for redistribution "may, in the eyes of those who make their spiritual home the University of Chicago, be enough to invalidate the program's entire claim to legitimacy").

^{227.} For varying perspectives on current problems and debates in the area of federal housing subsidies, see generally Michael A. Fletcher, *Bid to Cut Housing Subsidies Is Decried*, Wash. Post, June 26, 2005, at A01 (discussing attempts to discontinue federal housing subsidies in order to limit "handouts" and encourage homeownership); Michael A. Fletcher, *Worry over Public Housing*, Wash. Post, June 26, 2005, at A03 (describing the negative impact of reduced housing subsidies for the poor); Roger K. Lewis, *In Downturn, Build up Stock of Affordable Rental Housing*, Wash. Post, Dec. 20, 2008, at 506 (arguing for increased subsidies to build up affordable housing stock); Timothy Williams, *Eviction Anxiety Rattles a Formerly Subsidized Upper Manhattan Building*, N.Y. Times, Oct. 16, 2008, at A37 (discussing 633 eviction notices sent out after housing subsidies were discontinued).

^{228.} Ackerman, Regulating Slum Housing, supra note 13, at 1113-70. For other arguments regarding the best method of ensuring housing affordability, see Komesar, supra note 11, at 1175-80 (critiquing Ackerman's subsidy model and providing alternative examples); Schwallie, supra note 11, at 547-50 (critiquing subsidies and selective code enforcement as methods of increasing affordability while advocating for alternative programs); but see Salins, supra note 8, at 23-25 (stating that the goal of increasing housing affordability is a "moving target" without defined lines that "can never be eliminated").

Kennedy's arguments that selective code enforcement could prove beneficial in certain neighborhoods are similarly deserving of further consideration. The extent to which landlord abandonment and housing stock depletion caused increased rent remains debatable. Nevertheless, for those who believe that these are relevant considerations, Kennedy's proposals regarding selective code enforcement provide a foundation for programs intended to increase affordability under the implied warranty. The propriety, efficacy, and application of selective code enforcement programs are debatable; however, there remains significant support for the belief that these programs could ameliorate rent increases.

Concerns over increased housing quality and benefits for tenants as a class are addressed only in part by this Comment. The evidence suggests that housing quality improved under the implied warranty;233 whether or not this evidence signifies that tenants benefited as a class remains debatable.²³⁴ It is not unreasonable to assume that increased rent rates harm tenants;235 however, this assumption is not universally accepted.²³⁶ Both Richard Craswell and Richard Markovits believed that rent rates would increase after the adoption of the implied warranty; however, they simultaneously concluded that the warranty would benefit tenants.²³⁷ Their arguments focused on the premise that tenants would only pay increased rent to the extent that they felt benefitted.²³⁸ Under Craswell's analysis, the only real measure of the effectiveness of the implied warranty was the extent to which rent rates increased.²³⁹ Therefore, in light of the simultaneous increases in rent and housing quality, a debate over the effectiveness of the implied warranty remains open for further consideration.

This Comment resolves one narrow issue that has overwhelmed debates over the implied warranty. However, in the holistic sense, a de-

^{229.} See Kennedy, supra note 13, at 497-501.

^{230.} This issue has been widely cited as an expected cause of rent increases. See, e.g., Posner, supra note 11, at 259–63; Meyers, supra note 11, at 892–94. Although this Comment determines that existence of the implied warranty related to higher rent rates, it did not determine causal relationships. See supra notes 211–12 and accompanying text.

^{231.} See Kennedy, supra note 13, at 497-504.

^{232.} Id.

^{233.} See supra Part IV.E.4.

^{234.} Compare Posner, supra note 11, at 259-63 (arguing that rent increases harm tenants), with Craswell, supra note 13, at 382-85 (arguing that rent increases do not necessarily harm tenants), and Markovits, supra note 13, at 1819-20 (same).

^{235.} See Posner, supra note 11, at 259-63.

^{236.} Craswell, supra note 13, at 382-83; Markovits, supra note 13, at 1817, 1820.

^{237.} Craswell, supra note 13, at 382-98; Markovits, supra note 13, at 1817, 1820.

^{238.} Craswell, supra note 13, at 382-83; Markovits, supra note 13, at 1817, 1820.

^{239.} See Craswell, supra note 13, at 398.

termination that rent rates increased fails to inform several highly pertinent questions: Would the use of supplementary programs alleviate future increases in rent?²⁴⁰ Have tenants benefited as a class?²⁴¹ Have poor tenants been dealt more harm than benefit?²⁴² Do tenants exercise their rights?²⁴³ Is a goal of wealth redistribution satisfied if rent rates increase?²⁴⁴ Should increased rents in residential settings preclude imputation of similar warranties in condominiums or commercial leases?²⁴⁵ As the implied warranty moves forward and expands into new contexts, these questions remain highly relevant to any academic discourse of the topic.

B. Impact on Future Legislation

Forty-nine states have adopted the implied warranty;²⁴⁶ this Comment does not prove or allege that doing so was in error. Nor is it implied that Arkansas' decision not to adopt the implied warranty²⁴⁷ was either preferable or unwise. Instead, this Comment presents a basis for reevaluation of specific state statutes based upon the policies that each state hopes to advance.

To the extent that an individual state is primarily concerned with the affordability of rental housing, particularly for the poor, the results of this analysis signify that the implied warranty may be counterproductive. Outright abandonment of the implied warranty would not necessarily correct this problem; however, other options remain for future legislation. Supplementary programs, such as those discussed by Ackerman and Kennedy, may alleviate current and future rent rates by decreasing the burdens on landlords and tenants alike. Furthermore, limiting the breadth of current statutes may also decrease the costs that landlords must pass on to their tenants. Finally, where affordability is the primary concern, waiver of the

^{240.} See Ackerman, Regulating Slum Housing, supra note 13, at 1113-70; Kennedy, supra note 13, at 497-504.

^{241.} See Craswell, supra note 13, at 398.

^{242.} See Posner, supra note 11, at 259-63.

^{243.} See Blasi, supra note 158, at 865.

^{244.} See generally Ackerman, Regulating Slum Housing, supra note 13, at 1188.

^{245.} See Bogart, supra note 109, at 275; Brennan, supra note 109, at 3041.

^{246.} See supra note 95 and accompanying text.

^{247.} See Ark. Code Ann. § 18-17-601 (2003).

^{248.} See supra Part IV.E.1.

^{249.} Accord Ackerman, Regulating Slum Housing, supra note 13, at 1188.

^{250.} See id. at 1113-70; Kennedy, supra note 13, at 497-504.

^{251.} See Posner, supra note 11, at 260-61.

warranty should be permitted.²⁵² While none of these considerations guarantee lower rent in the future, the analyses indicate that they are among the most viable options.²⁵³

For those states where quality of housing was the primary concern in enacting the implied warranty, there is reason to believe that the implied warranty succeeded in achieving its intended goals. The results are not overwhelming, but they do connote a relationship between the implied warranty and fewer defects in the average residential leased property.²⁵⁴ If it is accepted by these states that increased rent is a fair price for higher quality housing, the implied warranty has been a success.

Perhaps the most significant implication of this analysis is for those states that have determined the implied warranty cannot be waived.²⁵⁵ Although not examined at length in the analysis, the effects of prohibiting waiver may require reexamination of existing statutes. The public policy behind these proscriptions is reasonable: the implied warranty would be ineffective if tenants could waive it through contracts of adhesion.²⁵⁶ However, to the extent that quality of housing reflects the effectiveness of the implied warranty, the ability or inability to waive the warranty may not drastically alter its efficacy.²⁵⁷ At the same time, the prohibition of waiver is statistically related to higher rent rates.²⁵⁸ Attempts to protect tenants with the implied warranty may be commendable;259 however, this analysis suggests that tenant protection through proscription of waiver may cause harm without a corresponding benefit.²⁶⁰ Therefore, waiver of the implied warranty, though seemingly undesirable, is an option that all states should consider.

^{252.} Prohibition of waiver of the implied warranty is statistically related to higher rent rates. See supra Part IV.E.2.

^{253.} This Comment finds that these considerations had the most significant relationship with higher rent rates. See supra Part IV.E.

^{254.} See supra Parts IV.D, E.4.

^{255.} See, e.g., Colo. Rev. Stat. § 38-12-503(5) (2008); Mass. Gen. Laws ch. 111, § 127L (LexisNexis 2009); Wis. Stat. § 704.07(1) (2008).

^{256.} See, e.g., Green v. Superior Court of S.F., 517 P.2d 1168, 1170 (Cal. 1974) ("[P]ublic policy requires that landlords generally not be permitted to use their superior bargaining power to negate the warranty of habitability rule.").

^{257.} There was no significant difference in the quality of housing when states permitting waiver were compared with states that did not permit waiver. See supra Part IV.D, E.4.

^{258.} See supra Part IV.E.4.

^{259.} See, e.g., Anthony T. Kronman, Paternalism and the Law of Contracts, 92 YALE L.J. 763, 763-70 (1983) (advocating the use of paternalism through proscription of waivers of the implied warranty of habitability).

^{260.} See supra Part IV.E.4.

As legislatures move forward in reexamining and expanding the rights and obligations of landlords and tenants, they should consider the goals and policies behind their legislation in light of this analysis. This Comment does not presume that there is one "right answer" for the creation of landlord–tenant laws. Instead, the policies and goals of each individual state should determine which approach best serves their needs.

VI. CONCLUSION

This Comment argues that empirical evidence demonstrates the existence of a relationship between the implied warranty of habitability and higher rent rates. In light of that evidence, this Comment goes one step further, arguing that the determination of such a relationship creates as many questions as it does answers. Evidence that the implied warranty raised rent rates does not preclude determining that tenants benefited as a class. If further analyses determine that the implied warranty did improve housing conditions, tenants may have benefitted by paying higher rent rates in exchange for fewer out-ofpocket repair costs. Additionally, if further analyses do not establish a relationship between the implied warranty and percentage increase in the bottom-quartile rent rates, low-income tenants may not have borne the burden of increased rent rates. For those seeking to further shed light on the effects of the implied warranty, these questions provide a suitable route. However, regardless of the empirical evidence that this or future analyses establish, the "correct" method for creation and modification of landlord-tenant laws must always be guided by the public policy and goals of the legislature.

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