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Economic Feasibility – The Challenge to Eminent Domain Appraisers Under Lucas

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Introduction

The respective fields of Law and Economics view eminent domain quite differently. Fischel (1985) says "It seems to be a requirement for law journal articles on takings to begin by admitting that the issue is tangled, confused, inconsistent, and intractable." Fischel (1985) goes on to posit what, "…economic analysis can do to unravel the taking conundrum." (pg. 50).

That is the purpose of this paper – to unravel the taking conundrum from an economic perspective. It is not the purpose of this report to outline the law of takings. However, the salient economic analytical methods are, in fact, normative and derived from the law and from the writings of legal scholars (Fischel, 1998). That is, the economic analytical methods are an expression of what is derived from the law, rather than what is explained by theory and observed, empirically, by participants in the economy. In other words, the economics of takings explains how economic agents ought to behave according to the law, rather than how they would behave in an otherwise unfettered market. Thus, by necessity, any exposition on the economics of eminent domain must reference both the salient economics theories as well as the salient legal theories, if only to compare and contrast the two while "unraveling the conundrum."

Finally, the principle focus of this study is the factors that constitute the special case of a complete regulatory taking. To get there, it is necessary to review the conditions which do not constitute a categorical or complete regulatory takings, so as to recognize which empirical pegs fit into which theoretical (or, as explained earlier, which normative) holes.

The Economics of Eminent Domain

This section outlines the underlying economic theories which are relevant in this case. As discussed previously, the economics of takings is normative – it is derived from the law, rather than from economic theory and empirical evidence. However, it us useful to illustrate some of the basic economic thinking, so as to see how economists interpret the law and how the normative economics of takings interfaces with the rest of the economic body of knowledge.

If economists were asked to develop a theory of takings, consistent with the rest of the body of knowledge of economics, there would be a strong argument that takings law might not even need to exist. It is a manifestation solely of the view Americans have concerning the relationship of between publicly held rights and privately held rights. Indeed, prior to the U.S. Constitution, there is ample evidence that private rights trumped public rights. This is consistent with the economics of English Common Law, that once an estate was granted, it could not be rescinded (beyond the obvious limitations of the estate itself)[i]. Thus, when William Penn wrote the land grants for settlers in Pennsylvania, he had to insert a clause in each providing that the state could reacquire up to 6% of each grant without compensation to build roads between towns which had

not yet been built or even planned. While subsequent theories of Eminent Domain incorporated into the U.S. and State Constitutions obviated the need for such a rule, it is more than a historical curiosity that, citing Penn, a 6% threshold for uncompensated takes has been cited into the 20th century, for example in *The Matter of Michael Butler* (1941).

As an alternative, some economists would posit market-based compensation schemes which, while providing for the concept of taking, obviate the need for compensation. One early example shows how, in a purely theoretical context called a "Pigovian world"[ii], the government makes every decision based on a cost/benefit analysis. Positive value projects are undertaken, while negative value projects are rejected. It's important to note that such a Pigovian world neither exists nor, if it did, would run afoul of American concepts of the role of government. Also, such a Pigovian construct makes no attempt to discern how benefits are allocated among the citizenry. Thus, a taking from citizen which would benefit all others would be completely acceptable without regard to the morality thereof. Further, in this sort of economy, compensation is always inefficient. (Blume, Rubinfeld, Shapiro, 1984), and hence never paid, which at least partially explains why people do not chosen a Pigovian form of government.

While the world according to Pigou (1920) doesn't exist, understanding it helps get us to another theoretical construct which is somewhat closer to reality. This is the purely utilitarian approach outlined by Michelman (1967). In this model, the criterion of fairness as espoused by Rawls (1971) is invoked. In this approach, compensation in a take is a function of efficiency gains (if any) enjoyed by the property owner, settlement costs, and what Michelman terms "demoralization costs". This latter is illustrated by the example of the greater "damage" felt by a

person who has a watch stolen versus a person who merely loses a watch. In a for-profit or investment world, settlement costs would include the actual value of the property taken while demoralization costs would include any foregone profits from future investment opportunities.

Of course, neither the Pigovian world of Blume, Rubenfeld, and Shapiro (1984) or the utilitarian-fairness world of Michaelman (1967) exist in reality. In dealing with the world as it exists, both Musgrove (1939) and Samuelson (1954) find a paradox – that at equilibrium an efficient market for public services does not emerge[iii]. Tiebout (1954) solves this problem with the simple realization that there are actually two markets for public goods: the national market (the U.S. Government) and the locals markets (states, counties and cities). The latter actually compete for "customers" (citizens) among themselves, and citizens chose where to live in the U.S. based on choices about the mix of public goods offered. Of course, the natural and logical extension of Tiebout (1954) is that the way cities approach providing for and paying for public goods should not be uniform across the U.S., and indeed uniformity would have the ironic effect of destroying the efficiency which comes from competition.

But, in the face of competing markets of public goods, how to investors and economic agents make choices? Rational Expectations is one of the most commonly invoked explanations for the behavior of market participants. In cases such as the one at hand, this would hold that property owners should foresee the potential for a "taking" as just one of the many risks inherent in real estate development or ownership and should factor risk adjusted returns accordingly. Interestingly enough, this is fully consistent with the Investment Backed Expectations theory

presented in *Penn Central* and more fully as cited in the Justice Thurgood Marshall's writing for a unanimous court in the subsequent *Kirby* decision.

Of course, theoretical economics has to be manifested in practical financial economics structures[iv]. One way to conquer this problem is through Markowitz-like diversification[v]. In short, a Markowitz portfolio diversifies away idiosyncratic risk. As such, a rational real estate developer which undertakes a series of projects factors into the risk estimate of each one the probability of a taking. The developer doesn't know which one or more projects will be the subject of a "take", or even if one will or if more than one will. However, in a rational-expectations world, the developer is compensated by all of the projects which are not the subject of a take for the losses incurred in any project which is the subject of a take.

Unfortunately, this solution has the same limitation as is faced when applying rational expectations to labor economics. Most property holders in America own one property – their personal residence. The value of equity in that property typically exceeds the value of the sum of all other assets held by that property owner[vi]. As such, the property owner cannot, practically, form a Markowitz portfolio which includes his or her personal residence.

The usual financial-economics response to the inability to diversify is to provide quasi-diversification through an insurance contract. However, no such private insurance contracts relative to takings costs have emerged in America. It is generally thought that the lack of such private insurance is a manifestation of the government as the "insurer of last resort" in eminent domain cases. Hence, there actually is insurance, but every property owner is insured and the

general public pays the premiums. Blume and Rubinfeld (1984) propose that private insurance should, in fact, be instituted for all except those too poor to pay.

Fischell (1995), however, shows the fallacy in this. The government is rarely the most efficient insurer, and in other matters private insurance is often chosen over the government "as the insurer of last resort" because of the enormous efficiency gains in the private sector. Kaplow (1986), in fact says that the government is so inefficient at such activities that it should not pay for any taking at all, thus forcing some private sector solutions to emerge.

There are two other problems with private insurance in this specific case, which rule it out as a cure for the practical lack of diversification. First, there is the well known economic Moral Hazard problem[vii]. Since such "takings" insurance will be costly, only there will be a great incentive for property developers to spend alternate resources determining if their property may be the subject of a taking and when such a taking may occur. There will be significant incentive to acquire inside information. In the end, only the property developers who know that they are the subject of an impending take will pay for the insurance. A corner solution will soon emerge, as the cost of the insurance rapidly approaches the cost of one take and the relative cost of gathering information on whether insurance is needed or not rapidly declines. Indeed, it was this moral hazard problem to which Justice Marshall alluded in his *Kirby* opinion.

The moral hazard dilemma was also recognized by the Court and was a factor in *Andrus v. Allard*, In this case, the ruling on the U.S. Eagle Protection Act of 1940, the court provided no compensation to the owners of eagle feathers which predated the act. Unfortunately, any number

of proffered solutions (exemption of pre-1940 feathers, compensation for old feathers, rental income from feathers, etc.) all led to a moral hazard problem. Hence, a total, categorical take of the feathers was allowed with no compensation awarded. Unfortunately, the court sidestepped the relevant economic issues, and Justice Brennan's opinion for a unanimous court rested instead on the economically dubious proposition that loss of value for future interest is hard to prove. Of course, when a vacant parcel is taken for a highway widening, its present value involves a discounted estimate of future streams of income in exactly the same way. Epstein (1985) properly criticizes Justice Brennan's rationale (pg. 76).

Even if the Moral Hazard problem could be obviated, Fischel (1995) points out that existing insurance contracts (and thus, this hypothetical "takings" insurance) does not pay for what he calls the "demoralization" costs of the loss (see subsequent discussion on utilitarian economics). Indeed, Fischel would posit that this demoralization cost is one explanation why eminent domain compensation often exceed actual fair-market-value of properties taken.

Coase (1960, 1988) holds that takings is just a transactions costs problem[viii]. In short, the private property owner has an economic use and the general public would benefit from some alternative use. If the general public benefits more than the private individual, then the cost associated with the taking is just a transaction cost to be settled between the parties involved. However, what about a partial taking, in the case of zoning law? Coase (1960) invokes the example of free-range cattle versus fenced cattle. Ellickson (1986) empirically explores the Coase theorem in Shasta County, California, where rules had been changed from open to closed ranges. He found that the Coast Theorem did not hold up, and that private rules supplanted public laws which

supposedly followed Coase's transaction-cost-based model. In the end, the Coase-based-laws proved inadequate and irrelevant.

Fischel (1995) was motivated by Ellickson (1986) to explore the history of areas around Scranton, Pennsylvania, before and after *Pennsylvania Coal*. He finds that the neat and clean solution posited by the Coase Theorem did not emerge after *Pennsylvania Coal* either (Fischel, 1995, Ch.1).

The Coase Theorem would, of course, have provided a simple solution to *Miller v. Schoene*, save that one bargaining failure would have negatively affected many apple growers, who required that far less valuable red cedar trees be destroyed to save apple crops. However, even Coase (1988) urges economists to realize that actual and high transaction costs may cause such simple solutions to vaporize.

One additional note on basic economic models is the concept of Pareto Optimality. Pareto (1897) holds that overall social welfare increases with any change that leaves one or more participants better off while leaving no participant worse off. Indeed, Pareto Optimality is consistent with both a Pigou world as well as the utilitarian world of Michaelman. As will be shown subsequently, though, in takings matters, Pareto Optimality runs head-long into fairness doctrines.

In short, there is a broad body of economic theory to suggest how takings <u>should</u> be compensated or <u>if compensated at all</u>. However, all of these fail in the face of the Fifth Amendment takings

clause and specifically in the court rulings which have followed the Fifth Amendment. Thus, the role of economics is relegated to explaining how economic agents should behave in the face of takings laws and rulings, rather than explaining what sort of takings laws and regulations best fit in an economic world. This is a normative role, but one which is vital to translate legal constructs into economic actions.

This normative role is not without its ironies. For example, subsequent to *Lucas*, the State of South Carolina gained title to the property. By that time, the Legislature of that state had amended the law to provide for some relief for developers. The state, of course, had asked Lucas to preserve each of his lots as public benefit, at a personal cost to Lucas of roughly $600,000 per lot. Subsequent to the state's acquisition of title, a neighboring property owner offered the state $315,000 for one of the lots, promising to keep it undeveloped to protect his view. However, the state rejected this offer, preferring to sell both lots to a developer who planned to build on them for a price of $392,500 per lot. Thus, the state rejected the opportunity to preserve at least one of the lots at a cost to the taxpayers of $77,500, yet had previously attempted to deny compensation to Mr. Lucas in the amount of $600,000 for the very same preservation (Berger, 1993, Charleston Post and Courier, 1993).

Takings Law from an Economic Perspective

This section will not attempt to trace the history of takings law, but rather will accept the law as it is today, as established by *Lucas*. However, to fully understand the economics of *Lucas*, it is necessary to review the economics contained in some of the predecessor cases. Thus, this

section will outline some of the salient cases, which may or may not continue to be relevant today in a legal sense, only to illustrate the economic reality of what the Court means in *Lucas*. It is also important to note that, to develop a consistent normative-economics explanation of the compensation associated with takings, the exposition of the relevant case law does not necessarily follow chronologically.

First, it is useful to note that the law seems to deal with two separate but intersecting questions. First, to what extent is a matter a physical invasion versus a regulatory invasion? Second to what extent is a take partial versus total? In combination, these two questions give us four possible economic states of nature:

Total (or "categorical") regulatory invasions is the subject of the next section of this exposition.

Total physical invasion of property. This is generally the most commonly observed "total take" for a road widening or other public project. Generally the law is clear and compelling that a property owner is to be compensated for the fair value of the property taken[ix].

Partial physical invasions[x]**.** While these partial takes do not carry much implication for this study, an exploration of the issues is illuminating. Notably, as Fischel (1995) points out, the Takings Clause is actually a right to a remedy. The possibility that compensation may not be paid is illustrated by the benefit-offset issue, which was popular in the late 1800's and discussed in detail by Scheiber (1971, 1973) and Segal (1986). If a public agency took a part of a person's land for a railroad, the value of the part taken may be offset by the improvement in the value of

the remainder. As a result, in Illinois (where a great deal of railroad construction occurred in the late 1800's), railroad takings frequently resulted in an assessment of damages of one dollar. Despite this, most farmers of the era were, as Friedman (1986) put it, "…pathetically eager for railroads" and generally accepted the benefit-offset premise.

Sheiber (1973) notes that by 1910, new state constitutions had sharply curtailed the benefit-offset rule. However, the Nebraska Supreme Court put to rest the benefit-offset premise in *Prudential Insurance*, holding that fairness doctrines not only trumped the benefit-offset premise but also overwhelmed the concept of Pareto Optimality. In *Prudential*, the Central Nebraska Public Power and Irrigation District took 54 acres of Prudential's 160 acres of farmland for an irrigation project which would serve 200,000 neighboring acres. As a result of this project, Prudential's remaining 106 acres was unquestionably more valuable than the 160 acres had been before the project. Thus, from both a benefit-offset perspective and a Pareto Optimality perspective, Prudential had no reason to complain. However, the Court held that "…it is unjust that one individual should be required to pay for them [the benefits of irrigation] by a contribution of property while his neighbor who is not taken enjoys the same advantage.

Partial regulatory takes This area of the law has faced some of the more interesting challenges and rulings over the past century, an can best be traced to *Pennsylvania Coal*, although it is often (and understandably) viewed in economic circles as a physical taking case, because the "physical" estate taken is that of the surface rights owners who find their properties collapsed into what used to be anthracite coal shafts. However, it's not the surface dwellers who brought suit[xi], but rather the coal company who sued one of them over the distribution of the "bundle of

sticks", to invoke the commonly used teaching analogy, which the coal company and the surface dwellers shared[xii].

Justice Holmes was viewed in his day as an opponent of using the Constitution as a shield against business regulation. As such, his opinion in *Pennsylvania Coal* is not one of the favorites among his biographers. Indeed, Novick (1989) does not even mention this opinion. Even more surprising, the most popular biographer of Holmes, Bowen (1944), fails to mention the case even though her own brother, Howard Drinker, was one of the attorneys representing Pennsylania Coal!

The Pennsylvania Supreme Court, which ruled against the coal company, held that police power (what economists prefer to call "regulatory authority") trumped contract and property rights. Holmes seemed willing to cut the government a great deal of slack, and the court was only interested if the diminution in value as a result of the regulation was sizable. Holmes did not concur with the position that all property is held under the implied limitation of police power regulations. If that were the case, then police power would trump both the Fifth Amendment as well as the contract clause (Article I, Section 10).

Holmes, however was interested in what had come to be called the "support estate", separate and apart from the surface or subsurface estates, which the Kohler Act took from the coal company and gave to Mahon and his neighbors[xiii]. In the end, he disagreed with Justice Brandeis, the loan dissenter in the case, who felt that the removal of the supporting pillars was a nuisance and as such threw the case within the proper bounds of police power.

But, rather than follow what, on the surface appears to be the obvious pattern with *Pennsylvania Coal*, just four years later the Court upheld a newly adopted zoning law that was alleged to have caused a 75% diminution in value of a property. This time, in *Euclid v. Ambler Realty* (1926), the Court likened nonconforming uses in a residential area to a "pig in a parlor", and thus the Court granted its approval to the then novel institution of comprehensive zoning[xiv].

So, why the shift of gears from one case to another, from *Pennsylvania Coal* to *Euclid*? Where is the common theme? Rose (1984) concludes that *Pennsylvania Coal* hinged not on the question of "too much taking", but rather on the fact that a bundle of rights were being taken from finite one category of property owners (there were only nine anthracite coal mining companies in Pennsylvania at the time) and given to another finite class (the number of surface property owners affected was actually quite limited.) The implication from Rose (1984) is that if this had actually been a transfer of rights to the general public, the Holmes court ruling would have been far different regardless of the size of the diminution in value.

That theme espoused by Rose (1984) allows us to connect the dots between *Pennsylvania Coal*, thorough *Euclid*, and on to *Penn Central*. In this latter case, the Court held that a partial taking was compensable only under certain circumstances. Indeed, and not coincidentally Brandeis' dissent in *Pennsylvania Coal* includes his famous hypothetical sale of air rights which later becomes the basis for *Penn Central*.

Without rehashing the facts of the case, it's sufficient to note that the Court affirmed the regulation of the New York Landmarks Commission limiting the rights of the financially strapped Penn Central Transportation Company to, effectively, sell the air rights above Grand Central Station. In so doing, Justice Brennan, writing the opinion, constructed a three-part test, which has come to be known as the ad-hoc criteria. It includes a consideration of:

1. The nature of the government action – does it cause (usually compensable) physical invasion or, at the other end of the spectrum, does it abate a nuisance?

2. Does it interfere with "investment backed expectations"? Is the loss entirely prospective and thus indicative of present value or does the owner have irretrievable sunk-costs in the project?

3. Is there some residual value left, or has the property been diminished of all economically beneficial, viable, or productive uses?

Point 1, from the perspective of an economist, would seem to be a matter of fact rather than a matter of economic or legal conjecture. Among the bundle of rights held by the owner of real estate is the right to physical possession, which is generally equated with the right to use and the right to exclude others from using the property. Thus, a property owner who had exclusive use of a site, but by regulation must now allow others an easement to physically pass through that site, has suffered a physical diminution. This was the key in the *Nollan* decision, where the

property owner was obligated to provide an easement through his land to allow the general public to walk along the beach.

Even in the case of a physical taking, such as in *Nollan*, the Court does not have a "one size fits all" yardstick but rather a "nexus with original purpose" test. In the case of *Nollan*, the easement and the regulation to which exception was granted had no nexus of purpose. Had such a nexus been shown to exist, then, as Justice Scalia discussed in the opinion for the Court, no taking would have occurred even though a physical invasion had been made.

On the other hand, rent control has, under some circumstances, been shown to be a physical invasion if the rent control is so egregious that it creates an insufficient incentive for the tenant to ever leave the property. In *Hall*, Judge Kozinski, who is considered well versed in economics issues, issued an opinion which has come to be called the Kozinski Paradox, that a highly efficient rent control scheme should be denied because it is tantamount to granting a fee simple interest in the property (Fischel, 1995, pg 314).

Note too that in *Penn Central*, the court is only interested in the invasion (or lack thereof) of the existing physical structure. The loss of the air rights – the prospective rights to build above the existing structure – is inconsequential in this case, as Epstein (1985) explains (pg 64)

In Point 2, the court attempts to differentiate between reasonable expectations of future benefits, the present value of which determine the value of the real estate, and wasted "sunk costs" which are irretrievable in the market and have no influence on the present value of the property.

Interesting, from an economics perspective, *Penn Central* gives little guidance in this. The difference is probably better illustrated by the Court's refusal to hear *Good* in 2001, thus upholding the Appeals Court decision from 2000. Mr. Good purchased 40 acres in the Florida Keys in 1973 with an eye to residential development. Much of the land was in salt marshes, and in his own court documents Mr. Good revealed the problems anticipated with ever getting the necessary state permits even for a scaled-down project. Coupled with this at least two endangered species were discovered on his site, and in the end the Equity Court found no taking had occurred simply because the Corps of Engineers denied him a dredging permit. Mr. Good appealed, and ultimately the U.S. Supreme Court refused the case, holding that Mr. Good had little if any investment backed expectations for the property, and indeed much of the costs he claimed were irretrievably sunk in a nearly hopeless venture.

Good posited two other interesting arguments which were denied at the 5th Circuit Court of Appeals level. First, he claimed that *Lucas* obviated the investment backed expectations criteria. The Appeals Court quickly tossed this aside, holding that the Supreme Court's doctrine set forth in *Penn Central* is still valid for a partial takings. Indeed, the Appeals Court may have been reading Justice Kennedy's opinion in Lucas, when he said, "Property is bought and sold, investments are made, subject to the State's power to regulate. Where a taking is alleged from regulations which deprive the property of all value, the test must be whether the deprivation is contrary to reasonable, investment backed expectations."

Good also argued that the Endangered Species Act was not in force in 1973 when he began this undertaking. The Appeals Court held that "…surely Appellant was not oblivious to this trend" of rising environmental awareness and ever-tightening land use regulations. This, of course, gives greater substance to Justice Scalia's "background principles", which he introduced in his *Lucas* opinion. Citing both Mr. Good's inaction between 1973 and 1981 as well as the original contract which noted potential difficulties in obtaining permits, the court held that Mr. Good must have been aware that the standards and conditions governing the issuance of permits could change to his detriment.

The third point in *Penn Central* asks the pivotal question which leads inevitably into the economic arguments of *Lucas*: have all economic uses of the property been taken? In *Penn Central*, the court gave little indication of exactly where along the yardstick between unaffected (or unzoned) uses and no-remaining-use the trigger point might lie. Lucas, however, provided that trigger point, and this is discussed in greater detail in the subsequent section.

The Economics of Regulatory Categorical Takings

Lucas picks up where *Penn Central* leaves off in the third point of the ad-hoc test. Specifically, the third point provides a trigger to determine if the regulatory take is partial or categorical.

The law appears to provide some sort of compensation either in partial or total physical takes. In In partial regulatory takes – which is the *Penn Central* defined situation – no compensation is called for unless investment backed expectations have been violated. However, *Good* seems to

set the bar fairly high for determination that an investment was, in fact, reasonably compensatable under the law. What is left, therefore, is made up of all of the regulatory takings in which a categorical taking has been made and no remaining economic life remains. Given the state of the law, it appears that there are three necessary and sufficient conditions for an economically definable regulatory categorical taking to have occurred:

1. Physical possession of the property must remain with the property owner (thus, no physical taking or invasion has occurred, either in the entirety or by easement – it is a regulatory matter only).

2. The regulatory matter under question was neither in existence or foreseeable at the time the investments were made. (The *Good* ruling, Justice Scalia writing in Lucas, and the Rational Expectations premise each and collectively appear to set the bar rather high here).

Note that these two taken together constitute necessary conditions, but are neither together nor individually sufficient economic conditions for a categorical taking to have occurred. While the third condition is both necessary and sufficient, it alone is not sufficient:

3. Have all economically beneficial, viable, or productive uses of the property been terminated, or are there any economically beneficial, viable, or productive uses remaining?

To explore this point in detail, it is illustrative to explore the "remainder" of Mr. Lucas' property. Justice Blackmon, writing in dissent, offered that Mr. Lucas did, indeed, retain some economically viable uses of the property. He could still, "…picnic, swim, camp in a tent or live on the property in a movable trailer."

Justice Blackmon may have not realized the extent to which he had dammed Mr. Lucas' property rights with faint praise. As it was, Mr. Lucas' ability to picnic and swim were no greater and no worse than the general public as a whole – the beach is open to the general public without charge -- and thus had no unique private value. Further, the Isle of Palms subdivision within which this property exists has specific covenants and restrictions against using a tent or a "moveable trailer", and thus these uses have no value to Mr. Lucas.

But, it is more interesting to note how low Justice Blackmon places the bar to determine what is an economically viable use. In short, "all economically viable uses", at least in Justice Blackmon's opinion, does not have an "investment backed expectations" test. In other words, these do not have to be profitable uses, but simply uses which have positive utility. Indeed, under Justice Blackmon's opinion, *Lucas* requires no more of real estate than earlier Court opinions require of old eagle feathers – the ability to do something profitable with them is inconsequential as long as they continue to create positive utility.

Lower and state court rulings following *Lucas* seem to bear this out. *Powers v. Skagit County*, involved land-use restrictions prohibiting building in a flood plain where the owner previously had been granted building permits, but had allowed them to expire before beginning

construction. The Washington State Court of Appeals stated "…unless [the plaintiff] can demonstrate on remand that he is entitled to categorical treatment under *Lucas* (by showing that his property retains no economically viable use as a result of the regulations), then the trial court's determination that the regulations are insulated from his takings challenge must be affirmed."

In *Barnardsville Quarry* the New Jersey Supreme Court rejected a takings challenge to a local ordinance limiting the permissible depth of a quarry that reduced the value of the plaintiff's land by over 90 percent. *Lucas* had no impact on the analysis or the ultimate decision, presumably because both parties recognized that it was not a total taking.

In *State of Delaware v. Booker*, the Superior Court of Delaware rejected a takings challenge after finding *Lucas* inapplicable to a prohibition on building in a highway "buffer zone" that was created when a new highway was built on adjacent condemned property: "Defendants incorrectly rely on Lucas and assume building prohibitions necessarily render land valueless. In *Lucas*, the state legislature's building restriction did render the land valueless but those facts were significantly different from the facts of the Defendants' case... While a building prohibition on coastal lots bought by a residential developer for the purpose of constructing houses upon them rendered the property in *Lucas* valueless, the same is not true of farmland which has been and currently is used in the same capacity."

In *Booker,* the court went on, "…defendants focus too narrowly on whether a regulation does or does not prohibit building. The determinative question is whether the regulation completely

deprives the owner of 'any reasonable economic use' and, thus, renders the property valueless. Defendants cannot claim their land is valueless simply because they might have developed it in the future. The possibility of future development is irrelevant because the land, as evidenced by the current use, has not been rendered completely worthless. The regulation is considered a taking only if it deprives the owner of all 'economically viable use of his property.' "

Summary and Conclusions

This analysis has summarized the normative economics "rules" concerning various aspects of takings. As shown, from an economics perspective, takings fall into one of four mutually exclusive but comprehensively exhaustive categories: physical takings (either total or partial) or regulatory takings (either total or partial).

This analysis then outlined the very specific differences between the two types of regulatory takings: the partial or ad-hoc taking, shown under *Penn Central* to be ineligible for compensation, and the total or categorical taking, which is compensable. While there are several differences between the two, the principle criteria separating them seems to be the presence or absence of remaining economic uses.

Neither the courts nor the economic texts have attempted to provide a comprehensive definition of "remaining economic uses". However, the writings of Justice Blackmon coupled with subsequent court rulings give some general rules of thumb which seem to be consistent with *Lucas:*

1. While investment backed expectations was cited in *Penn Central* as one criteria for consideration, it no longer appears to set a standard after *Lucas.* Indeed, Butler (1993), writing for the libertarian and generally pro-property-rights Cato Institute, decried *Lucas* for setting the bar at a level where hardly any regulatory takings will be determined to be compensable. Quoting from Butler (1993), "…The Supreme Court's decision in Lucas was a major disappointment because the opinion unnecessarily limited its impact to unusual situations where the regulatory taking renders the property "valueless." Justice Antonin Scalia, writing for a majority of six, delineated a boundary between compensable and noncompensable land-use regulations based on the distinction between total and partial regulatory takings. Justice Scalia held that the Takings Clause reached only those land-use restrictions that deprived the owner of 'all economically beneficial uses' of property."
2. Justice Brennan, writing in *Lucas*, albeit in dissent, suggests that "economically beneficial uses" include anything which provides positive utility to the property owner. Indeed, in citing purely personal recreational uses, which have neither transactional or rental value, he seems to draw a line directly from *Andrus v. Allard* in suggesting that as long as personal uses were viable, no compensable take had occurred.

The principle distinction agreed to by the majority in *Lucas* was that the property owner was prohibited from any feasible use whatsoever (not withstanding the personal positive utility uses suggested by Justice Brennan). The Court made no distinction as to whether or not these uses

resulted in profits to the property owner, much less whether such profits might provide a rate of return consistent with investment backed expectations. Hence, as implied by Butler (1993), in a regulatory takings matter post-*Lucas*, the court has set the bar so very high for determination of what is compensable that if there is any viable use for the property after the regulation, then compensation is apparently not warranted. From an economic standpoint, the 5th Circuit's *caveat emptor* caution to land-buying developers as in *Good* seems to be the most sound advice.

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Endnotes

[i] Some economic theorists have pointed to a "reserved power" doctrine, which would hold that the head of state was the original holder of all property as, for example, feudal tenures. The successor state to the monarchy could thereby exercise its option to reacquire without compensation. Stoebuck, (1972) has shown that, in practice, no such reserved power doctrine has ever been in place, and "…there is no indication that any English or American government has in fact reserved any such power." (pg. 558).
[ii] See Pigou, 1920
[iii] Paul Samuelson was the third person and the first American to win the Nobel Prize in Economics, awarded to him in 1970. Musgrove and Samuelson primarily showed that there was no efficient means to exclude non-payers from enjoying the benefits of such public goods as national defense.
[iv] To the lay person, the difference between "economics" and "financial economics" may seem tenuous or artificial, yet Finance and Economics are usually taught in different yet closely linked departments at the University level. A good working definition is as follows: Economics is concerned with money, transactions, labor, and income. Financial Economics is concerned with the practical structures which enable those to occur. The relationship between Economics and Financial Economics is analogous to the relationship between Physics and Engineering, although Finance and Financial Economics are arguably closer in methods.
[v] Markowitz was awarded the 1990 Nobel Prize in Economics for development of this. While the original theory was posited in a journal article in 1952, the entire theory is best described in his seminal 1991 text, which followed the award of the Nobel.
[vi] Diversifying the investment in labor is the example more classically taught in the classroom.
[vii] The Nobel Prize in Economics was awarded both in 1996 and in 2001 to economists who explored the Moral Hazard dilemma. In 1996, the prize was awarded to Oxford Professor James Mirrlees (jointly with William Vickery). In 2001, the prize was awarded to Professors George A. Akerlof, Michael Spence, and Joseph E. Stiglitz, all of whom wrote to varying degrees on the Moral Hazard problem.
[viii] Coase won the 1991 Nobel Prize in Economics for the Coase Theorem.
[ix] Property taken in the entirety by the Federal government or with Federal funds is appraised and compensation awarded consistent with rules and procedures out lined in the Uniform Appraisal Standards for Federal Land Acquisitions.
[x] Temporary physical takes are an exception to the rule not covered in this exposition, but the complexity suggested under *Lake Tahoe* renders this beyond the scope of what is covered here. The law, as we understand it, is clear that temporary physical takes are compensable, but *Lake Tahoe* holds that a temporary regulatory take is not.
[xi] Actually, Mahon was an attorney and the son of a senior executive of Pennsylvania Coal, from whom he bought the house. There is some history to suggest that this case was brought specifically for the anthracite companies to test the law in the most favorable jurisdiction possible. However, Holmes notes that, despite all of that, a good job was done by attorneys from both sides.
[xii] Much of the subsequent discussion of *Pennsylvania Coal* is taken from Fischel, 1995, Ch. 1.
[xiii] The concept of the support estate had only recently been developed in the *Penman* case, 1917, by Philip V. Mattes, who also wrote the briefs for the City of Scranton in *Pennsylvania Coal.*
[xiv] Thus, the source of the pun "Euclidean Zoning", whenever planners draw lines between industrial and residential neighborhoods.