Taxing Land Rents, Now Demonstrable and Feasible, is the Perfect Revenue Source of Government Finance

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Thailand's Proposed Land and Building Tax

The government of Thailand is now contemplating the institution of a nationwide real property tax – which is being referred to generally as a land and building tax.[1] It would be more comprehensive and replace two other taxes on real estate enacted in 1932 and 1965. The new tax rates would be 0.5% on commercial land and buildings, 0.1% on residential land and buildings, and 0.05% on agricultural land. Undeveloped land will be taxed initially at a rate of 0.5% of assessed value, but will then double every three years until it reaches a rate of 2.0%. The newspapers are saying that the new property tax regime will likely be imposed by the year 2011, depending upon the completion of assessment of some thirty million real property parcels throughout the country.[1]

Various rationales have been offered to justify the new revenue stream, besides supplementing a potpourri of taxes on personal and corporate income, sales (VAT), business, petroleum, tariffs and customs. The primary purpose voiced is that the government needs more money, but as presently conceived the tax would add to the complexity. Despite the welter of all these, there is no pretext made that they are well-administered, equitable, efficient, neutral, or certain. These are the normal textbook benchmarks of what are held out to be the bases of a sound tax regime. Various other pronouncements have maintained that it is intended also to stem land speculation and foster development, reduce inequality, pay for new infrastructure, and decentralize government services by giving localities for the first time a base of finance.

The greatest support for this initiative has come from the Thai bureaucracy and academia, both important forces in Thailand's policy designs. It has been steadfast in its claim that it will be able to maintain an up-to-date valuation of property parcels on a frequent and regular basis. This avowal comes despite recognition that some regions, especially in Greater Bangkok, have seen property values skyrocket and then quickly fall in the short space of a few years. Moreover beside the classification into commercial, residential and agricultural parcels, some 61 types of buildings and properties are being categorized and identified for assessment.

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[1] The source material for the first section of this paper is largely taken from English language newspapers published in Thailand during the past two years, 2009 and 2010. These are the *Bangkok Post* and *The Nation*. Among these sources, the most comprehensive description is from the May 11, 2009 issue of the *Bangkok Post*. Financial data on current revenue streams is taken from the website tables of the Royal Thai Government's Ministry of Finance, Information and Communication Technology Center.

Spokespersons in various Ministries have predicted that if the appraisals can be completed the land and building tax can be passed into law by the Parliament by the end of 2010 and implemented by the year 2011. Finance Minister Korn Chatikavanij has projected that the new tax will raise about Bt70 billion, the equivalent of $218 million, or roughly that which the country now raises from the personal and corporate income tax, and various petroleum, VAT, business taxes and stamp duties. Others are not so sanguine. Even if the Treasury Department maintains responsibility to perform frequent valuations, and localities are at liberty to set rates and revenue demands, the expense of carrying out assessments on a regular basis for 30 million parcels is itself a huge cost.

A Better Solution is a Tax on Land Values Alone

If the government is serious about implementing a new tax regime, however, it should avoid getting started on the wrong foot. Every indication shows that it is about to do just that. Despite the fact that most of those proposing the land and building tax are well aware of tax systems internationally, the government officials responsible for its advocacy seem not to have given adequate attention to its variants. If they did, they would see that there is a far more attractive alternative, one that is technically feasible only in the past decade or so. This is what is commonly called the land value tax.

The conventional real property tax as known in most English-speaking countries is really two separate taxes from an economic point of view: a tax on land values and a tax on improvement values. Each has very different dynamics and each influences behavior in a different way. Any tax on improvements, essentially buildings, penalizes maintenance and construction initiatives. Just as taxing wages discourages work, as taxing interest discourages savings, and taxing sales discourages consumption, taxing improvements to real estate rewards the wrong behavior. There are long histories of tax folly from the time trees were taxed effecting deserts, when taxing windows led to darkness, and taxing lot frontage led to outlandish "shotgun houses" in the old American West. The titleholder that maintains and improves property to the full extent that the site warrants is penalized with a higher tax. The owner that lets his property go to wrack and ruin is rewarded with a lower assessment and hence a lower tax. That's just one of its significant problems.

On the other hand, the tax on the assessed value of the land component of a parcel encourages investment and development. The higher the tax the more the owner is encouraged to build on the site so as to recover his carrying costs. Underused and vacant parcels in high value urban cores tend to be improved.[2] This development then fosters the

[2] In 1995, Professor Nicolaus Tideman of Virginia Tech University and his graduate student, Florenz Plassmann (now a professor at the University of Binghamton) completed a highly technical study of land value taxation as used in the 23 cities in Pennsylvania using such a tax. It concluded: "The results say that in all four categories of construction, an increase in the effective tax differential [between land and buildings] (1) is associated with an increase in the average value per permit. (2) In the case of residential housing, a 1% increase in the effective tax differential is associated with a 12% increase in the average value per unit.… From the perspective of economic theory, it is not at all surprising that when taxes are taken off of buildings, people build more valuable buildings. But it is nice to see the numbers." See "A Markov Chain Monte Carlo Analysis of the Effect of Two-Rate Property Taxes on Construction." *Journal*

necessary density to make localities walkable and less vehicle dependent. What vehicles then service the areas tend to be public transit services. The tax on land values and the tax on improvement values are like a train with an engine on each end: they work in opposite ways and negate what powerfully beneficial effects a tax on land value alone has.

Since the primary concern of this conference is environmental policy and the use to which revenue streams can be put to accomplish sound environmental goals, I will return to this line of thought shortly. It is important, however, to recognize that a tax on land values comports perfectly with all the principles of sound tax theory. Among them are efficiency, neutrality, equity, administrability, stability, and simplicity. An ideal tax is neutral and efficient with respect to markets and progressive in so far as those who have fewer resources will pay less. A sound tax is also easily administered, simple to understand, and provides a stable and reliable revenue stream. It is certain in the face of any attempts at evasion. One can't escape a land tax by taking it to the Isle of Man or the Cayman Islands. Many students hold the view that all taxes have downside attributes so that any revenue system must necessarily make compromises and trade-offs. This claim is very much open to challenge. It is important here only to emphasize that taxes impact behavior in ways that go far beyond their purposes of supporting public services. To this extent, their architecture needs to be carefully designed and understood.[3]

Tax principles as enumerated above have been recognized in various ways since first set forth by Adam Smith.[4] But in recent years there are considerations above and beyond those relevant to revenue design itself. Environmental concerns ought to be thought of as equally important, particularly as they address land use configurations. Sprawl development and transportation dependency are effectively addressed by a land value tax in a far more efficient and deft way than by command-and-control approaches (i.e., planning and zoning) are capable of doing.[5] Taxing land parcels according to their market value fosters the configuration of land use patterns that best suits the demands of the community as a whole. Those sites that reflect where people want to be command the highest land values; those sites that are of marginal use or concern from a pricing perspective are taxed less and reflect less pressure to improve. Business and commercial parcels tend to cluster in high value areas, residential parcels develop at the edges, and agricultural and forest property is relieved of any pressures to develop and consume land.

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of Urban Economics March, 2000, pp. 216-47. Several other studies show equally dramatic impacts. See www.urbantools.org.

[3] For further discussion of the textbook principles of sound tax theory as they have evolved over the years, See http://www.progress.org/cg/battprincip02.htm. See also infra, H. William Batt, "The Fallacy of the 'Three-Legged Stool' Metaphor" *State Tax Notes,* Volume 35, No. 6, pp. 377-381 (February 7, 2005). http://www.cooperativeindividualism.org/batt_on-tax-policy.html

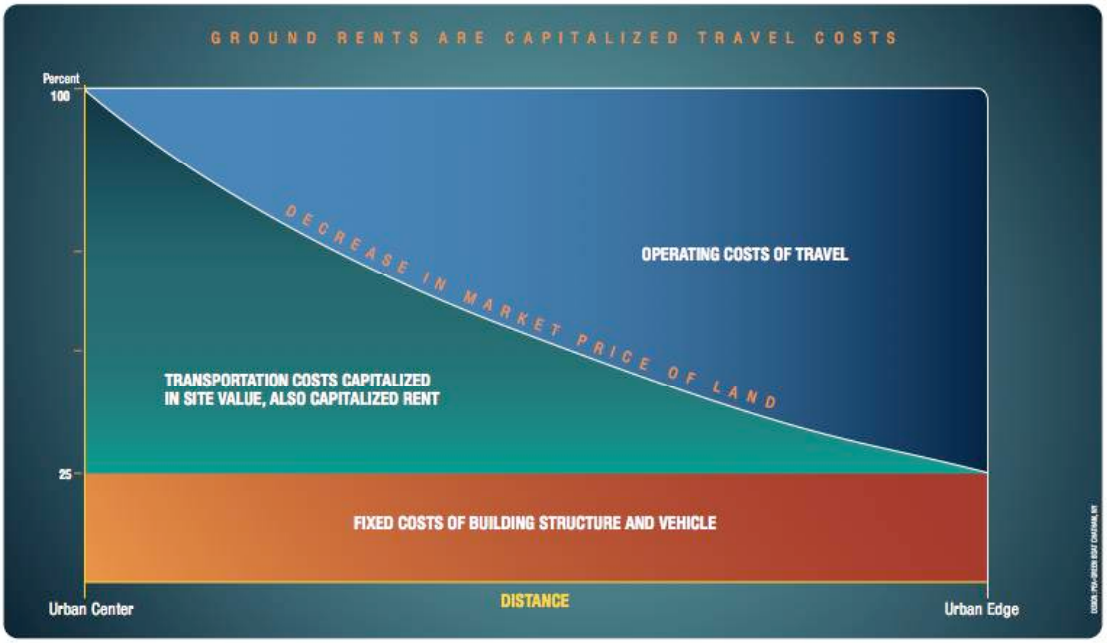
[4] In *The Wealth of Nations*, Book V, Ch 2, Part 2, he concluded, "Ground-rents and the ordinary rent of land are … the species of revenue which can best bear to have a peculiar tax imposed on them."

[5] See H. William Batt, "Stemming Sprawl: The Fiscal Approach," Chapter 10 from the book, *Suburban Sprawl: Culture, Theory, and Politics*, edited by Matthew J. Lindstrom and Hugh Bartling. Rowman & Littlefield Publishers, Inc., 2003. Accessible online (September, 2010) at http://www.wealthandwant.com/docs/Batt_SSFA.htm

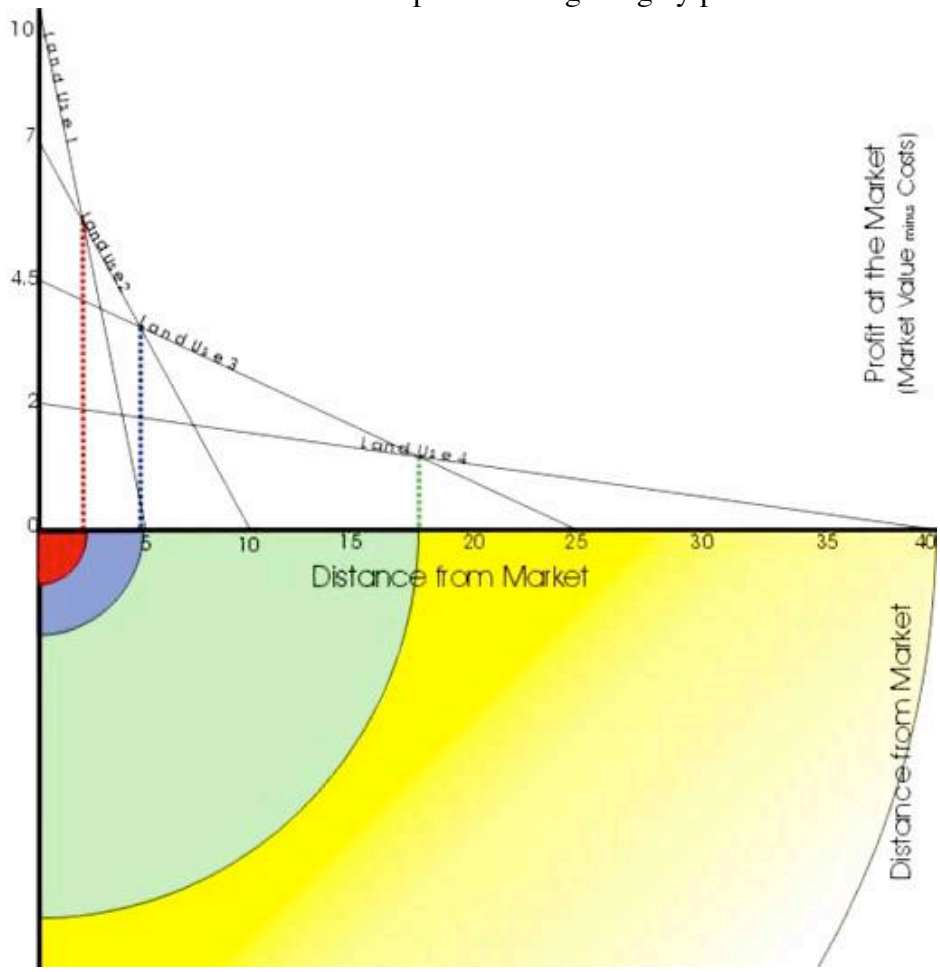
Taxation of Natural Resource Rents

The market value of land parcels reflects what classical economists called rent, also called ground rent or economic rent. Although originally thought of as applying to the productivity of farmland, rent is today identified far more with urban properties. This is a different meaning of the word rent than when paying someone for the use of some property, whether for things like tools or for real estate purposes. Land rent is a flow of value through any natural resources that command a market price on account of their market demand. It applies as much to air or water or mineral and petroleum resources as much as to locations. Any items that have a market price not created by human hands or minds can have rental value – even airport timeslots, electronic signals, and satellite orbits. Because their value results not from any one person's efforts, resource rents can be understood as socially created wealth; they are the mutual result of common enterprise and rents flow through a property more than they are generated by it.

Site rent can also be construed as capitalized transportation costs. Sites with high market value are easily accessible; by whatever mobility means are at hand. Land sites reflect all such costs – those borne by individual members of society as well as those borne collectively. Site rents and transportation costs in a metropolitan area are essentially reciprocal: parcels in urban cores have high access and rental value whereas parcels in remote areas have high transportation costs and low rental value. One way or another the people have to pay for access to market exchanges, whatever sort or style they have: one pays either for the privilege of occupying a location or for the cost of getting there. But since transportation costs reflect the use of materials and energy, it makes sense that they be efficiently consumed, important for a well-designed locality.



German economic geographer named Heinrich von Thunen worked all this theory out almost two centuries ago.[6] He calculated the costs of bringing farm goods to market and as they related to the most suitable distance from the market on which to grow them. The reciprocal of this was his understanding the value of the market sites themselves. He appreciated that locations in urban cores had site prices many times those in agricultural areas. He further understood the relationship between site rents and access. When von Thunen lived there was little use of fossil fuels for transportation purposes; he died before the carbon age was fully upon us and before transportation costs became for the moment almost inconsequential. We live today in a time of temporary luxury when it comes to energy consumption, an age which most believe will soon pass.[7] Given how intractable land use configurations are once set in place, societies are foolish to develop patterns that will make them far less livable once the petroleum age largely passes.



Returning once more to the matter of the flow of ground rents through locations, one needs to understand that if the public does not recapture the socially created rent it is capitalized in a lump-sum market price. To titleholders to such sites this constitutes a windfall gain, what John Stuart Mill called an "unearned increment." This is surplus

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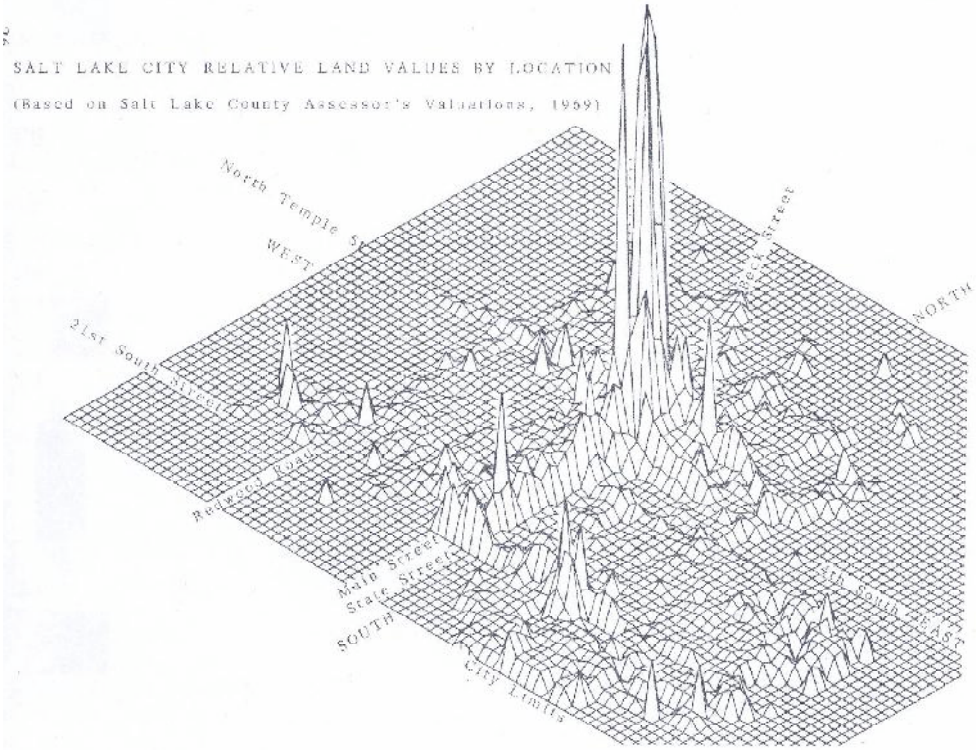
[6] Thünen, Johann Heinrich von. (1826). *The Isolated State*. Oxford: Pergammon Press (1966).
[7] See, for example, the writings of Richard Heinberg, *The Party's Over, Power Down, The Post Carbon Reader*, and *Peak Everything*, all from New Society Publishers, and http://www.hubbertpeak.com/.

wealth reflecting social productivity that becomes effectively frozen and unavailable as resource capital. It is a leaden drag on economic enterprise so long as this wealth is not put back in circulation. Moreover, if this ground rent is not taxed and restored to the economy, the public then is forced to rely on other taxes that have more downside impacts. As earlier noted taxes on wages and goods discourage economic vitality, distort market choices, and are administratively expensive to collect and enforce. Lastly, when entrepreneurs or households opt to make real estate investments they are forced to pay artificially inflated prices for locations where value is fed by speculative practices. Members of society pay twice as a result, first for real estate investment loans and then again in taxes to support public services. The only winners are speculators and bankers.

Illustration of Salt Lake City's Very Good Land Value Assessments, 1969



Source: Claron E Nelson, *This is a Community: Salt Lake City*, University of Utah Press, 1971.

It needs to be emphasized once more that when land sites are artificially inflated in price by speculators keeping them off the market waiting for a gain, those who would elect to use those sites were they available are forced to choose second-best and sub-optimal locations instead. Rather than market-clearing efficiencies assuring the rational development of social spaces, one finds the leapfrog and haphazard unfolding of choices. All this adds to extra costs in infrastructure – roads, utility services, public amenities and community services – that are also less than optimal in their provision. Spatial arrangements thereby impose their social costs several times over, all of which leads to community well being that is far below what could be optimally obtained. Its costs are reflected especially in the consumption and waste of natural resources and human effort.

Chances for private capture the socially created rental value of land arose only during the past four centuries in what has called the "great land rush." From roughly 1650 on natural resources that earlier were regarded as part of the public commons were turned into a marketable commodity and privatized for selfish gain.[8] Although it has been best chronicled in the history of the Americas, this was a worldwide phenomenon. Moreover it was rationalized and justified in numerous arguments and judicial decisions.[9] The world is only now beginning to appreciate the downside implications of this rush to privatization. The loss of natural resources consequent upon treating them either as "free goods" or commodities captured by whatever parties have secured legal titles results in the impoverishment of everyone, and even jeopardizes the sustainability of the earth.[10]

We are now far down the road to privatization of the common natural resources of the earth, a process that has been traced to what is known as the "enclosure movement" first initiated in the early Tudor era of English history.[11] It would be difficult to recapture and restore much of this property to the public realm.[12] A more promising solution is to

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[8] John C. Weaver, *The Great Land Rush and the Making of the Modern World, 1650-1900*. Montreal: McGill-Queen's University Press, 2003; Victoria Freeman, *Distant Relations: How My Ancestors Colonialized North America*. Toronto: McClelland and Stewart, 2000; Ronald Wright, *Stolen Continents: 500 Years of Conquest and Resistance in the Americas*. New York: Houghton Mifflin Mariner Books, 1992; Stephen Aron, *How the West was Lost: The Transformation of Kentucky from Daniel Boone to Henry Clay*. Baltimore: Johns Hopkins University Press, 1996; Stuart Banner. *How the Indians Lost Their Land: Law and Power on the Frontier*. Cambridge: Harvard University Press, 2005; Richard Kluger, *Seizing Destiny: The Relentless Expansion of American Territory*. New York: Random House, 2007. Alfred N. Chandler's *Land Title Origins: A Take of Force and Fraud*, published by the Georgist-oriented Robert Schalkenbach Foundation in 1945, anticipated all of these.

[9] The legitimacy of titles to real property has recently been described and explored in what is commonly called the "Doctrine of Discovery." See Robert J. Miller, *Native America, Discovered and Conquered: Thomas Jefferson, Lewis & Clark, and Manifest Destiny*. Westport, CT: Praeger, 2006. Stated another way, it's "Finders, Keepers." See also Robert J. Miller, et. al, *Discovering Indigenous Lands: The Doctrine of Discovery in the English Colonies*. New York: Oxford University Press, 2010. My review of the first book, including enumeration of the Doctrine of Discovery, is online at http://www.cooperativeindividualism.org/batt-h-william_review-of-native-america.html.

[10] Herman Daly and Joshua Farley, *Ecological Economics: Principles and Applications*. Washington, DC: Island Press, 2003; and Michael Common and Sigrid Stagl, *Ecological Economics: An Introduction*. New York: Cambridge University Press, 2005.

[10] Several books have been written in the past decade on the fallacies of the neoclassical economic paradigm. The most trenchant criticism originally came from Nicholas Georgescu-Roegen, *The Entropy Law and the Economic Process*. Cambridge: Harvard University Press, 1971, followed by Herman Daly, *Steady-State Economics*. Washington, DC: Island Press, 1991, and Herman Daly, *Beyond Growth: The Economics of Sustainable Development*. Boston: Beacon Press, 1996. For discussion on recognition of nature as the common birthright of humanity, see Elinor Ostrom. *Governing The Commons: The Evolution of Institutions for Collective Action*. Cambridge: Cambridge University Press, 1990; Susan Buck and Elinor Ostrom. *The Global Commons: An Introduction*. Washington: Island Press, 1998; John A. Baden and Douglas S. Noonan (Eds), *Managing the Commons*, Second Edition. Bloomington: Indiana University Press.1998; Joanna Burger, et al., (Eds), *Protecting the Commons: A Framework for Resource Management in the Americas*. Washington: Island Press, 2001.

[11] Karl Polanyi, *The Great Transformation: The Political and Economic Origins of Our Time*. New York: Reinhart & Co., 1944, and Beacon Press, 1957.

[12] An analogy may be with efforts by Native American tribes to recover titles to lands taken from them. Numerous websites chronicle these breeches and efforts at recompense, but they have tended for the most part to drag on for decades on end without solution. See, for example, "The Trail of Broken Treaties," at

collect the rent from land parcels based upon their market price, treating land not as a commodity to be owned by title in fee-simple but rather as a usufruct. As earlier explained, since economic rent is a socially created product, there is every moral ground for its public recapture.[13] This policy not only encourages the economy to perform far more efficiently,[14] it also restores a sound moral basis to the economy and offers a clear theory of distributive justice. That which is rightfully the public's is returned to the public; that which is created by one's own mind or body is one's own to possess. The commons and the private realms are restored to a comprehensible moral framework.

The concept of usufruct ownership, in contrast to fee-simple title, is a term that needs to be restored to contemporary discourse.[15] It constitutes the legal right to use and benefit from property, typically natural resource property, that other persons, institutions, or the general public have formal title to, at least so long as the property is not damaged or degraded. The English word usufruct derives from the Latin expression *usus et fructus*, meaning "use and enjoyment," cognate to English "use and fruits." The concept of usufruct goes back to ancient times, and has been far more evident in societies of the world than the notion that elements of nature can be owned as commodities. Just as the terms usufruct and fee-simple are typically opposites, so are the terms leasehold and freehold. Thomas Jefferson wrote, citing John Locke, that "the land belongs in usufruct to the living,"[16] a quote that Henry George often repeated, as in his noted speech, "The Crime of Poverty." George also held that private capture of that which was God-given constituted theft, pure and simple: "Thou Shalt Not Steal!" he told the Anti-Poverty Society of New York in 1887.[17] Native American people put the same principle differently: We do not inherit the earth from our ancestors; we borrow it from our

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http://www.aimovement.org/ggc/trailofbrokentreaties.html and the "Land Into Trust" Movement of the National Congress of American Indians at http://www.ncai.org/Land-Into-Trust.57.0.html.

[13] By the same token, public capture of the product of one's labor or of the labor itself is more ethically questionable. In the case of one's labor and the products of one's labor, the wealth is earned fair and square. In the case of privately captured wealth from economic rent, one is hard-put to justify it at all. John Stuart Mill, an early proponent of public capture of rents, argued that "landlords grow richer in their sleep without working, risking or economizing. The increase in the value of land, arising as it does from the efforts of an entire community, should belong to the community and not to the individual who might hold title." John Stuart Mill, *Principles of Political Economy*, bk. 5, chap. 2, sec. 5. Supportive quotes similar to this are easily found for Blackstone, Jefferson, Paine, and many other leading figures of the 18th and 19th centuries. It was Henry George, the last great moral integrator and defender of classical economic theory that articulated this position most lucidly in his monumental 1879 work, *Progress and Poverty*. New York: Robert Schalkenbach Foundation.

[14] Current tax designs are dreadfully inefficient and destructive. Harvard economist Martin Feldstein estimated that the burden from the income tax alone is more than 30 percent, and about 50 percent if social security taxes are added. Martin Feldstein, "Tax Avoidance and the Deadweight Loss of Income Taxes," *Review of Economics and Statistics* (November, 1999). Abridged: www.cooperativeindividualism.org/feldstein_martin_deadweight_loss.html. Although studies have not shown this in as conclusive a way, the sales tax is in all likelihood just as inefficient.

[15] A collection of quotations and uses are found at http://www.wealthandwant.com/themes/Usufruct.html

[16] Jefferson letter to James Madison, Paris, Sep. 6, 1789.

[17] Henry George, "Thou Shalt Not Steal," an Address delivered on 8 May 1887 to the Anti-Poverty Society, New York City. Henry George argued that seizing private titles to land, and by extension any elements of nature, was essentially theft, and was the moral equivalent to owning slaves. See http://www.wealthandwant.com/HG/George_TSNS.html.

children. Even in American society where private property in land and nature is held most firmly, the law doesn't talk about it in such terms. Rather it talks about property ownership as a "bundle of rights."[18]

Rent Payments in Classical Thai Civilization

Using this frame of reference, the utility of the concept of economic rent has all the more meaning. The history of Thai society (Siam) from its earliest records until the beginning of modern times makes clear that payment of rent for the use of land was centuries ago worked out in great detail. It can be traced for over 500 years from the time of King Trailok (1448-1488) of the Ayudhayan state dynasty, which preceded the present Bangkok Chakri dynasty by 300 years. Trailok instituted a social hierarchy called *sakdi na*, *na* meaning land, governing different grades of social privilege and land ownership. According to Chulalongkorn University professor Kullada Kesboonchoo Mead,

> All males were incorporated into a single social hierarchy called the *sakdina* system, with each man, except the king, given a place in the pecking order (*sakdina*) starting from a high-ranking prince with 100,000 *sakdina* to a that (slave) with five *sakdina*. The state dictated that all male members of the peasant class or commoners (*phrai*) who had a *sakdina* mark of twenty-five must register under a master (*nai*) who was a noble and had a *sakdina* mark of 400 or higher. Every *phrai* subjected to this corvèe system had to spend six months a year serving his *nai*, who was supposed to look after the welfare of his *phrai*. Each *nai* was given a number of *phrai* as private property, called *phrai som*, and as manpower belonging to an administrative unit (*krom*) or office (*kong*) called *phrai luang*. Those who submitted tax in kind were called *phrai suai*. The last group of manpower was slaves (*that*), who achieved this status either through debt bondage or as prisoners of war. They had a *sakdina* mark of five. All that was considered the private property of his *nai* and had to work full time for his master.[19]

Professor Frank Darling, a long-time American student of Thai society, wrote in 1970[20] that what legal system existed until the Western impact was developed during the Ayudhaya period (1350-1767). It consisted, he says, of four elements and associated ministries (*krom*): The *Thammasat*, the *Rajasat*, the *Code of Manu*, and *Sakdi Na.*[21] The first governed the authority and behavior of the king, the second those of the bureaucracy, the third particular protocols involving the way the people should treat the king, and the last, the *Sakdi Na*, involved land ownership and rights. He notes that one of the titles the king held was *Chao Paendin*, or 'lord of the land.' The land was granted in usufruct according to the social status, competence, and loyalty of particular people toward the king, and this ranking system also determined a person's treatment before the royal court. One should also note that the "nation" of Siam was defined in that era less by geographic boundaries than by the unified rule over the resident people. Only much later did political

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[18] See, for example, Barron's Educational Series: *Dictionary of Real Estate Terms, Sixth Edition*, Jack P. Friedman, et al. (editors). 2004; also at www.answers.com.

[19] Kullada Kesboonchoo Mead, *The Rise and Decline of Thai Absolutism*. London & New York: Routledge Curzon, 2004, p.12.

[20] Frank Darling, "The Evolution of Law in Thailand," *The Review of Politics*, 32:2 (1970), 197-218.

[21] Robert Lingat, "Evolution of the Conception of Law in Burma and Siam," *Journal of the Siam Society*, Bangkok: 38:1 (January, 1950), pp 9-31, on which Darling may have relied. See also, Andrew Huxley, *Thai Law: Buddhist Law: Essays on the Legal History of Thailand, Laos, and Burma*. Bangkok: White Orchid Press, 1996.

boundaries, as employed in the West by the 1648 Treaty of Westphalia, define the governing reach of the royal domain.[22]

Histories of Siam note also that in the earliest period manpower was scarcer than land, and that its availability to the ruling class was the key to administrative control. The use of slaves and corvée labor were the most common and reliable means of provision, even though the slavery system was not regarded in this case as particularly harsh. In fact only by the mid-late 19th century was slavery entirely eliminated.[23] Corvée was by far the more common obligation, and varied according to one's status in the society.[24] In its most legitimate sense, it was payment for the privilege of using the king's (i.e. the common) land and was calculated according to the yield of what the land provided. The number of months of labor varied, and continued in connection with constructing the Rangsit canal in the central plain until the early 20th century. Young men of ages 18-20 could, however, buy their way out of this annual obligation by paying a tax of 6 baht, and those between the age of 20 and 26 were obligated to three months or submit payment of 18 baht.[25]

If payments for the right to use land were not made in labor, they were more often made in kind. David Feeny notes that in the central plain, the richest rice-growing areas carried a rent payment of 40 percent of the crop on the "good land" and 12 to 16 percent of the crop on "poor land."[26] The amount due, one should note, was related to the productivity yield of the land and not to its area or to any other measures or standing. Naturally, land that was well irrigated or with better fertility had greater yield and called for higher rent payments. Farmers who attended to their lands regularly were recognized as having *de facto* ownership, but if they were to leave the plots fallow for a period longer than three years, ownership reverted to the king. Given the importance of leaving plots to regenerate their fecundity on a regular basis, this might have had the potential for generating tensions. But since land was plentiful there was little difficulty for farmers in finding new plots on which to work. It constituted in effect a system of crop rotation.

Formalized titles to land sites grew gradually, and were traceable from the era of Rama IV (King Mongkut) and the signing of the Bowring Treaty with England in 1855. In good part this evolution followed Western models at least insofar as titling of parcels is involved. The first land code was enacted in 1901 prompted by the growing settlement of land in the Central Plain especially around the growing canal system that spawned

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[22] Peter Vandergeest and Nancy Le Peluso, "Territorialization and State Power in Thailand," *Theory and Society*, Vol 24, No 3, (June, 1995), pp. 385-426; and Thongchai Winichakul, *Siam Mapped: A History of the Geo-Body of a Nation*. Honolulu: University of Hawaii Press, 1994.

[23] David Feeny, "Competing Hypotheses of Underdevelopment: A Thai Case Study." *The Journal of Economic History*, Vol. 39, No 1 (March, 1979), p. 124.

[24] David Feeny, "The Decline of Property Rights in Man in Thailand, 1800-1913," *The Journal of Economic History*, Vol. 49, No. 2 (June, 1989), pp. 285-296.

[25] Tej Bunnag, *The Provincial Administration of Siam: 1892-1915*, London: Oxford University Press, 1977, pp. 9-10.

[26] David Feeny, *The Political Economy of Productivity: Thai Agricultural Development, 1880-1975*, Vancouver: University of British Columbia Press, 1982, Ch. 6. Nicholas Tarling (ed.), *The Cambridge History of Southeast Asia: Volume 2, Part 1* Cambridge: Cambridge University Press, 1992, 1999. p. 171, 143; B.J. Terwiel, *A History of Modern Thailand: 1767-1942*. University of Queensland Press, 1984.

aggressive speculation and land disputes. The result was the first cadastral survey and the adoption of the Torrens system of document records.[27] Subsequent laws further tightened the formality of land titles in ways differing only in small aspects from Western patterns. One observer, writing in 1968, reflects an outsider's view of Thai real property law and the apparent approval accorded it.

…King Rama V (King Chulalongkorn) introduced the modern idea of land ownership, legally distinguishing factual occupancy from ownership, and he created a system in which no protection is given to occupancy but only to ownership. This led to a confusion in Thailand's land tenure system. In 1936 a more flexible land law was legislated, and since then the system has become stabilized. The current land law, *kotmãi thî din phõ sõ* 2497, which was legislated in 1954, adheres in its essentials to the ideas of the 1936 law, recognising three different stages in acquiring land–occupancy, utilization and legal possession.[28]

Yet, as explained below, contemporary Western law, relying on neoclassical economics,[29] gives no place to the significance of economic rent, hence no attention to it in Thai law.

Major Changes in Thai System of Property Rights in Land: 1800-1982

Period	Institutional Change
Early 19th Century	Usufruct rights, paid for in corvèe labor and kind
1811	Survey of land holdings, title deeds based on taxation of land
1836	Removal of tax exemption on rice lands held by nobles
1851-68	Title deeds issued based on tax receipts on paddy land
1861	Edict clarifying private property rights with provision for monarch's right of eminent domain
1867-68	Title deeds based on area harvested
1882-83	Title deeds based on area owned
1880s	Standardized forms and procedures prescribed in an effort to reduce land disputes
1892	Comprehensive land law enacted with provision for title deeds and use of land as collateral
1901	Torrens system of land registration instituted and cadastral surveys conducted
1936	Law of 1901 amended to allow for ownership based on registration with the Land Department of claims on unsurveyed lands
1954	New land law enacted providing for a variety of documents and levels of security of land rights
1972	Use of unrectified aerial photomaps begun to speed issuance of certificates of utilization
1982	Increase in rate of issuance of title deeds is made a priority

Source: James T. Thomson, David Feeny, and Ronald J. Oakerson: "Common Property Resource Management," in Daniel W. Bromley (ed.), *Making the Commons Work: Theory, Practice and Policy*. San Francisco: International Center for Self-Governance, Institute for Contemporary Studies, 1992. p 146.

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[27] See Jeremy H. Kemp, "Legal and Informal Land Tenures in Thailand," Modern Asian Studies, Vol. 15, No. 1 (1981), pp. 1-23; and Peter Vandergeest and Nancy Lee Peluso, "Territorialization and State Power in Thailand," *Theory and Society*. Vol. 24.No.3 (June, 1995), pp.402 ff.

[28] Quoted in Kemp, p. 5, from Toru Yano, "Land Tenure in Thailand," *Asian Survey* (1968) V. 8, No.10. pp. 853-4.

[29] For a summary understanding of the difference between classical and neoclassical economics, and its central importance to this discussion, see Mason Gaffney et al, *The Corruption of Economics*. London: Shepheard-Walwyn. 1994. See also www.wealthandwant.com/docs/Batt_HTRGUOTWET.html.

The evolution of land ownership toward the Western pattern of fee-simple has unfolded along with other economic changes. The increase in the population from a few million a century ago to over 66 million in the year 2010 has meant that the demand for land has grown as well. Absent any modern policy provision for the collection of ground rent, its flow has been mostly capitalized in the market price of parcel sites. The result is that its growing cost has made it accessible to fewer and fewer people. Moreover, the competition for land has led to opportunistic speculation and to haphazard and wasteful development that is always consequent upon such artificially constrained market forces. The manipulation of land markets by interested parties and institutions leads further to its being subject to cycles of pricing that have far-reaching consequences for the rest of the economy. This is a thesis only now being adequately understood and documented, and has yet to be incorporated in public policies among various nations of the world.[30]

The royal or government collection of rent flows from the productivity of resources and sites was in the form of labor and yield, as was true in classical economies for most all societies in the pre-modern era. In Asia, however, still another form of income developed for the support of elites known as tax farming. Professor Kullada explains that initially the greatest source of the king's wealth was the "Royal Warehouse" (or *Phra Klang Sinkha*), through which most trade was carried out. But over time various franchises for the tax farming of goods were passed out which allowed various nobles to develop power bases of their own. In what would come to be known as the practice of "eating the land" (*kin muang*), some thirty-eight tax farms were established under the mid 19th century reign of Rama III (King Mongkut). Since by this time international trade had expanded substantially, there were ample opportunities to skim surpluses that were linked to commercial transactions, what today is known as "rent-seeking." As she explains it,[31]

> The new tax farms can be divided into three categories. The first represented all newly produced export goods such as sugar, pepper, tobacco and cotton, which were farmed, taxed from producers and also subject to export taxes. The second included six items from the former export monopolies such as ivory, sapan wood, red wood, etc. The inefficient revenue-collecting mechanism employed by the Royal Warehouse through the monopoly system was replaced by the enterprising Chinese tax farmers who realized that assiduous collection was in their own interest.
>
> The third category of tax farm arose from the massive influx of Chinese immigrants, of which the majority worked in new forms of production. The migration produced a huge labour force, which stood outside the traditional system of production. Concentrated in the central plains and eastern provinces, it created a big market for food, consumer goods and services, gambling and lotteries. The Siamese state, like

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[30] Among the recently published books that provide detailed study and argument on this thesis are the following: Fred Foldvary, *The Depression of 2008*, Santa Clara University, 2007; Fred Harrison, *Boom Bust: House Prices, Banking and the Depression of 2010*, London: Shepheard Walwyn, 2005; Fred Harrison, *Ricardo's Law: House Prices and the Great Tax Clawback Scam*. London: Shepheard Walwyn, 2006; Phillip J. Anderson, *The Secret Life of Real Estate: How it Moves and Why*. London: Shepheard Walwyn, 2008; Mason Gaffney, *After the Crash: Designing a Depression-Free Economy*. Boston and London: Wiley-Blackwell, 2009. A far older book, with equally interesting statistical data is Homer Hoyt, *One Hundred Years of Land Values in Chicago*. University of Chicago Press, 1933, Beard Books, 2000. Also relevant are the several published works of Michael Hudson, and his website at http://michael-hudson.com/ .

[31] Kullada Kesboonchoo Mead, *The Rise and Decline of Thai Absolutism*. London & New York: Routledge Curzon, 2004, p.22 ff.

the western colonial governments, found vice to be a major source of revenue. The Chinese immigrants also presented a potential tax farm for opium, which was in great demand….

With the increased revenues from taxation, the state was less dependent on the traditional manpower system. Corvèe began to be replaced with more flexible and easily mobilised waged labour. Building materials were obtained more efficiently by purchase than by *suai* (tax in kind), because the state could now afford to pay for them. The commutation of the land tax, mentioned earlier, indicates the extent of the money economy.

The strength of Conservative Siam lay in its members involvement in trade and taxation. With their ministry portfolios, the Bunnags (a powerful family) exercised control over major tax farms such as opium, spirits, and the import and export tariffs. [The] land tax also brought in considerable revenue. In their official capacity and in accordance with the practice known as *sib lod* (taking a tenth), they earned ten percent from these taxes. [These families] used their politically powerful positions in the reign of King Mongkut to hand over to the Treasury a constant revenue irrespective of the expansion of the tax base, and to reserve the excess for their own purposes.

With the advent of the reign of Rama V, a substantial rivalry had evolved between the conservative nobility and the king. Since the conservative families in control of the traditional sources of revenue such as the tax farms and land rent threatened the king's standing, this alternate base of power had to be undermined. She explains how the king managed to disarm these elements:

The king's strategy for discrediting the Conservative grouping was to publicize how its members had abused their positions. He began by targeting Phraya Ahanborirak (Nut), the Minister of *Krom Na* (Ministry of Land), who had extensive responsibilities for collecting the land tax, one of the main sources of state revenue since the Bowring Treaty. It was not coincidental to the king's purpose that Phaya Ahanborirak was also Somdet Chaophraya's nephew. In addition, the king picked the land tax as a test case because the revenue it raised could easily be checked by calculating internal consumption of rice and the quantities exported." (The king later put Phraya Ahanborirak on trial, as well as other officials of the Ministry of lands. They were convicted of embezzlement.)[32]

With the rival factions to the king effectively eliminated, so were the traditional sources of taxation which the nobility controlled, the tax farms and the land tax. The king's revenue regime was now largely based on trade and associated tariffs. Land rent, no longer taxed, was now effectively available to be privatized and capitalized in the value of the parcels, leading as a consequence to an even greater competition for titles to real property. The continuing development of infrastructure, both public and private in the form of port and canal waterways, rail and road transportation systems, and other investments would raise the market price of locations to make land resources in all their forms even more lucrative and pivotal sources of wealth in a modernizing Thai economy.

Land Rent in a Modern Economy

One needs to ask how much rent is there in a modern nation's economy. Is it a significant enough surplus that taxing it to support government would be adequate? With all the advantages to be had by removing rent from the markets, just like removing sand from the gears of a machine, how much of a productivity surplus would it constitute? Estimates are difficult, because even with the advent of computers and data the neoclassical economics profession has not pressed governments for the financial data compilation that would allow us to adequately measure it. The US National Income and

[32] Kullada, pp 58-60.

Product Accounts list a figure of roughly 1 or 2 percent, a figure that we know is ridiculous.[33] Even back-of-the envelope calculations suggest that it is many times this. Yet we know that all taxes other than those that capture rent – i.e., those on labor and goods, incur enormous economic inefficiencies, what economists call deadweight loss. We know that absent the presence of such tax regimes the amount would be much greater, for after all the shifts through an economy they may take, all taxes ultimately come out of rent.[34] Other scholars have explained it a bit differently, in one case by the acronym ATAAER: All taxes are at the expense of rent. Put still another way, total rent left is net of taxes. Moving beyond contemporary attempts at its calculation, one finds references counting rent payments for many other societies and times. Historically, as in Thailand, rent payments were usually made in forms other than money. It was often true that payment was a proportion of a farmer's yield or a specified number of days of corvée labor. Based on practices of the period, classical economic theory took as a given that rent surplus constituted about a third of a society's economy.[35] An old English nursery rhyme reflects this common practice when feudal arrangements were at their peak:

Bah, Bah black Sheep, Have you any Wool? Yes Sir, Yes Sir, Three Bags full. One for my Master, One for my Dame, One for the little Boy That lives down the lane.[36]

One quick study, based on the potential of a full land tax but excluding the rents from pollution rights, the spectrum, landing slots, corporate charters, internet addresses, and other sources, suggests that land rent alone amounts to about 28 percent of GDP,[37] and a far more detailed and sophisticated study of the total land rent in Australia estimated that the total is well above thirty percent of GDP. It concluded that "the 'bottom line' reinforces the overall conclusion … that land-based tax revenues are indeed sufficient to allow total abolition of company and personal income tax."[38] An enumeration of sites where additional rents situate would take enormous effort, but Professor Mason Gaffney has suggested fifteen major sources as a start, all of which by their private capture now reduce economic productivity.[39] When all is said and done, he

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[33] The US data doesn't include capital gains from rent or imputed rent from owner-occupied homes.

[34] This has been explicated most thoroughly by Professor Mason Gaffney using the acronym ATCOR. For several further discussions of ATCOR, see http://www.wealthandwant.com/themes/ATCOR.html .

[35] See Marc Bloch, *French Rural History: An Essay on Its Basic Characteristics*. (Berkeley: University of California Press, 1966, 1970) p. 72; H.S. Bennett, *Life on the English Manor: A Study of Peasant Conditions, 1150-1400*. (Cambridge: Cambridge University Press, 1937, 1971). Ch V: "Rents and Services," pp. 97-125, *passim*; and Paul Bairoch. *Cities and Economic Development: From the Dawn of History to the Present*. (Chicago: University of Chicago Press, 1991), p. 283.

[36] This rhyme is traceable to France as well, as far back as the 17th century. See Wikipedia and other sites.

[37] Steven Cord, "How Much Revenue Would a Full Land Value Tax Yield?", *American Journal of Economics and Sociology*, Vol. 44, No.3 (July, 1985).

[38] Terry Dwyer, "The Taxable Capacity of Australian Land and Resources," *Australian Tax Forum*, January, 2003. Governments in developed societies usually comprise from about 25 to 30 percent of GDP. It is difficult to generalize because many functions that are privatized in one nation are public in another. See http://carriedaway.blogs.com/carried_away/2003/10/us_government_s.html . The US Congressional Budget Office calculates that Federal Government Outlays from 1962 to 2001 range from roughly18 to 20 percent. See http://carriedaway.blogs.com/carried_away/2003/10/us_government_s.html State and local governments constitute the remainder.

[39] Mason Gaffney, "Sounding the Revenue Potential of Land: Fifteen Submerged Elements," *Groundswell,* September-October, 2004, and http://www.progress.org/cg/gaff1004.htm

suggests that "The Hidden Taxable Capacity of Land [is] Enough and to Spare" in supplanting all present taxes.[40] This is a significant finding, because we know from various studies how much the deadweight loss from the current taxes is. Harvard economist Martin Feldstein estimated that the burden from the income tax alone is more than 30 percent, and about 50 percent if social security taxes are added.[41] The sales tax is in all likelihood just as inefficient.[42] Looked at another way, substantial proof has now been developed to show, as George himself originally argued,[43] that

> In every civilized country, even the newest, the value of the land [i.e. the amount of taxable rent] taken as a whole is sufficient to bear the entire expenses of government. In the better-developed countries it is much more than sufficient. Hence it will not be enough merely to place all taxes upon the value of land. It will be necessary, where rent exceeds the present government revenues, commensurately to increase the amount demanded in taxation, and to continue this increase as society progresses and rent advances.

In the past thirty years, economists of major stature have demonstrated the validity of what has come to be called the Henry George Theorem.[44] Gilbert Tucker, a self-taught student of Henry George, foretold the case decades earlier in a short book titled *The Self-Supporting City*. In it, he boldly begins arguing,

> Municipal taxation as now levied can and should be a thing of the past: the American city can be a self-supporting corporation, meeting its expenses from its rightful income. Taxation is unnecessary, because the city has, in its physical properties, acquired through the years, by the expenditure of its people's moneys, a huge capital investment from which it collects only a very small part of the return earned.[45]

The virtue of taxing rent is that it captures unearned income that is otherwise windfall gains to households and businesses. It is typically the wealthier elements of the population that have title to property resources, so that to them the capture of rent constitutes a "free lunch." The component of the population that owns no land of any sort, typically the poorest elements of society, pay no rent taxes at all for the reason that resource rents, coming from sources with inelastic supply, cannot be passed forward. This makes the taxation of land rents highly progressive, besides their possessing all the other attributes of a sound tax structure.[46]

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[40] Mason Gaffney, "The Hidden Taxable Capacity of Land: Enough and to Spare," *International Journal of Social Economics*, Vol. 36, No.4 (2009), pp.. 328-411.

[41] Martin Feldstein, "Tax Avoidance and the Deadweight Loss of Income Taxes," *Review of Economics and Statistics* (November, 1999). Abridged: www.cooperativeindividualism.org/feldstein_martin_deadweight_loss.html

[42] This is suggested by another study of Australia, where the data is much more accessible and accurate. See W. Erwin Diewert and Denis A. Lawrence, "The Deadweight Costs of Capital Taxation in Australia," Paper presented to Treasury Seminar Series, Canberra, 19 December 1997, available online www.dp9801.pdf.

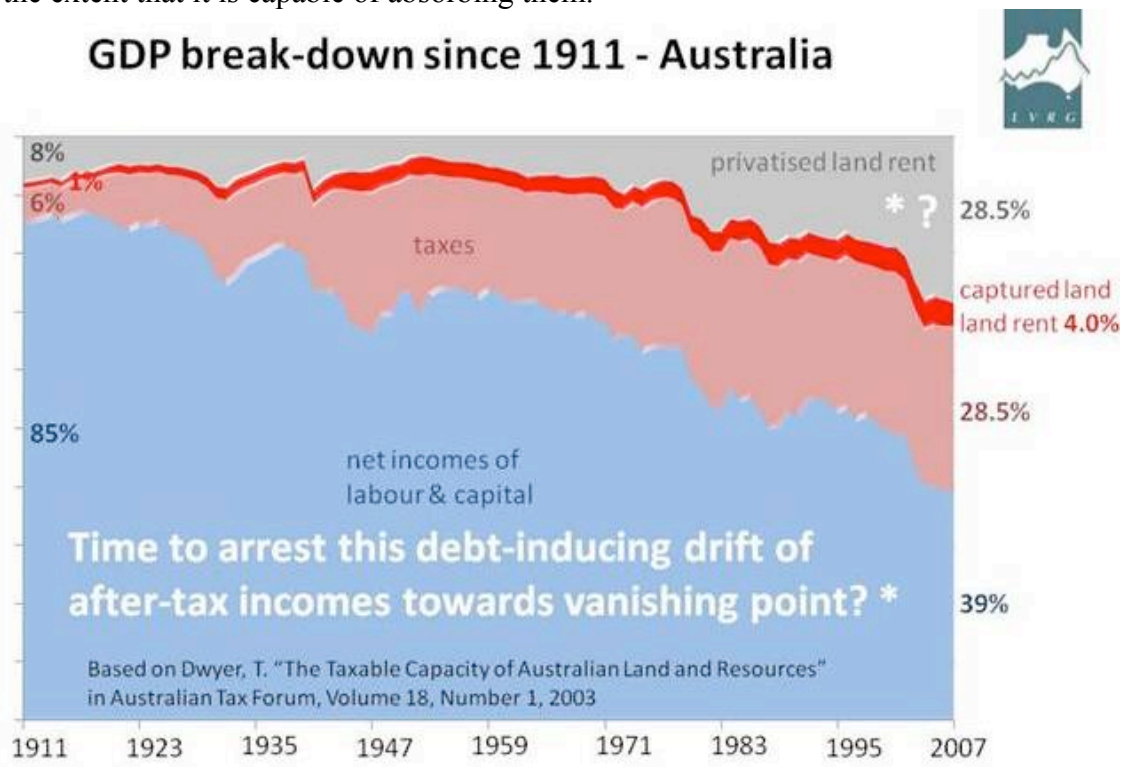
[43] Henry George. *Progress and Poverty*. New York: Robert Schalkenbach Foundation, 1879, 1962.

[44] Among them are Nobel Laureates William Vickrey and Joseph Stiglitz. For a more complete list and discussion of this argument, including an account by Gilbert Tucker who anticipated all this, see his *The Self-Supporting City*. New York: Robert Schalkenbach Foundation, 1946, 1958, and with a new afterward by this writer, 2010.

[45] Gilbert M. Tucker, *The Self-Supporting City*. New York: Schalkenbach Foundation, 2010 Edition. p. 1.

[46] Numerous materials are available to attest to this. Among the most accessible websites, with links to many others, are www.cgocouncil.org, www.theIU.org, www.Schalkenbach.org, www.urbantools.org, www.labourland.org, www.cooperativeindividualism.org/, www.earthrights.net, www.prosper.org.au .

Most of the literature exploring the nature and sources of economic rent tends to focus on what flows through surface locations of the earth, what is known as ground rent or land rent. Very little attention has been given to rent sources from other elements of nature, since ground rent is likely to be the largest single component. But a significant additional source of resource rent is generated from minerals and fossil fuel extraction. Consider also the wealth of the world's oceans, mostly used today as a source of fish. The electromagnetic spectrum, the frequencies on which radio, television, mobile phone and other signals travel in today's world, all yield economic rents. And not to overlook it, the air sink itself has rental value to the extent that it is used for pollution emissions, at least to the extent that it is capable of absorbing them.[47]



Source: Land Values Research Group, Australia http://www.lvrg.org.au/

Restoring the Birthrights of Thai People

The capture of economic rent offers to Thailand a way to set right an insult to the nation perpetrated by its recent past Prime Minister, Thaksin Shinawatra. His rise to wealth and power, only in the year 2001, was due to his having fortuitously invested in the mobile phone industry just at the moment that it was exploding in use.[48] In a period of

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[47] See Paul Collier, *The Plundered Planet: Why We Must – and How We Can – Manage Nature for Global Posterity*. New York: Oxford University Press. 2010; Mason Gaffney, "Sounding the Revenue Potential of Land: Fifteen Submerged Elements," *Groundswell,* September-October, 2004, and http://www.progress.org/cg/gaff1004.htm Mason Gaffney, "The Hidden Taxable Capacity of Land: Enough and to Spare," *International Journal of Social Economics*, Vol. 36, No.4 (2009), pp. 328-411.

[48] As an illustration of how strategically placed Thaksin's Shin Corporation was, one needs only to recognize that telephone service through landlines was practically non-existent when suddenly cell phone technology burst forth. This allowed the country to install signal towers across the land and essentially

a decade he came to be worth billions. From there he expanded his empire to include other communications enterprises such as radio, television, satellite, newspapers, and of course real estate, and was able on that basis to essentially buy his way to political power. As in the typical Thai way of doing things, he formed his own political party, had his own newspaper, his own media network, and his own coterie of attendants. Mr. Thaksin's wealth came almost totally from his capture of the frequency rents that escalated as the demand and use of mobile phone communication expanded throughout the country. His wealth was essentially a windfall gain, just as the rise in land values are to titleholders.[49]

Thaksin soon thereafter sold his near monopoly mobile-phone business for an estimated four billion dollars to Temasek Holdings, an international conglomerate in Singapore. The sale was accomplished in a way that allowed him to avoid any tax payments to the Thai government, but equally troublesome was the fact that it gave control of one of Thailand's key industries to an organization beyond its own borders. With control of the now privatized telecommunication monopoly in foreign hands the nation relinquished a core element of its capital investment. More significantly still was the loss of what is arguably a natural resource birthright of the Thai people, the common ownership of its electro-magnetic spectrum. Since the spectrum is as much a part of what is classically called "land" as are surfaces of the earth, there is sound reason to maintain that it should be regarded similarly. Thai law has for over a century stipulated that foreigners should not be allowed to own titles to Thai land,[50] but yet natural resources analogous to land have until now escaped the logic applied elsewhere. As other natural resources draw greater attention of international business ventures, it is not too soon for the government to turn its attention to the looming danger of losing other resources.

Yet the simple solution rests in the practice of collecting rent from the spectrum yields that have already been relinquished. Were the nation to collect this rent from the spectrum and from natural resources owned by other internationally owned businesses, there would be less incentive for them to be captured by outside interests, giving them less leverage over Thai government and economy, with less tax revenue needing to be taken from Thai people themselves from other sources, and assuring greater recovery of

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leapfrog over existing technologies at a far lower investment cost. When I was first in Thailand in 1962 in a rural Peace Corps post, the only way I could have asked for help (had I needed it) would have been to rely on the police radio service to contact Bangkok. Today cell phones are as ubiquitous in Thailand as they are in any advanced industrial nation.

[49] It is telling, however, that when Mr. Thaksin was indicted, and convicted, for corruption, it was not on account of his evasion of taxes on the sale of his communications corporation. The prosecutors had no understanding of the importance of economic rent to the success of his venture. Rather, he along his wife, were convicted for not paying taxes on parcels of land in the city of Bangkok. There the windfall capital gain of the real estate could be understood and measured, even if the term rent was never employed.

[50] The prohibition of foreign ownership of land in Siam was formalized in a memorandum of 1899, authored by Phraya Mahayotha. The text reads that if foreign subjects were allowed to acquire land easily, "they will soon own all agricultural land, because, as we have seen, whenever foreign subjects hold land, they acquire power, and the people nearby have to live in fear, they have to endure abuse, and can't seek redress in the courts." As a consequence, "Those who can't stand it have to move in search of new lands … and those who don't yield to the mistreatment fight back, in some instances to their death." Quoted in Tomas Larsson, "Intertextual Relations: The Geopolitics of Land Rights in Thailand," *Political Geography* Vol. 26 (2007), pp 782-783.

the "commons" the country it is now at the risk of losing. Collection of economic rent is the natural defense against the seizure of resources by international businesses on a worldwide basis, a logical protection against the pressures of globalization, and the best protection against corporate power overwhelming political sovereignty. The value of many industries lies in the fact that they yield significant amounts of economic rent. But if the rent is taxed the ownership has value only for other purposes. They would cease to be so lucrative a prize for foreign nations. In appreciation of the merit of collecting rents from natural resources regardless of their ownership, Henry George wrote,

> I do not propose either to purchase or to confiscate private property in land. The first would be unjust, the second needless. Let the individuals who now hold it still retain, if they want to, possession of what they are pleased to call *their* land. Let them buy and sell, and bequeath and devise it. We may safely leave them the shell, if we take the kernel. It is not necessary to confiscate land; it is only necessary to confiscate rent.[51]

As much as George was an advocate of collecting the socially created economic rent that flowed through natural resources, he also defended free trade among nations.[52] The latter is as controversial today as it was in his time over a century ago. What should also be understood, however, is that George advocated free trade only after economic rent was publicly captured, this to assure that no nation's industries and peoples would stand at the mercy of any other, and that comparative advantages and economies of scale would obtain without beggar-thy-neighbor policies.

A Technical Detail: Assessing Price and Value

An objection is often raised concerning the ability of assessors to assign a value to the base of any resource that might be targeted for its taxable rent. In the case of those resources that are fungible, their value can be auctioned off on a regular and periodic basis. This applies to mining sites, fishing grounds, petroleum fields, spectrum frequencies, and air pollution sinks. As to land parcel values, especially in cities where most of the land value lies, concern was often expressed that one could not know with any confidence how much of an improved parcel was land value and how much value lay in the improvement. This was because land parcels are much less fungible and because sales are far less frequent. Fortunately, computer technology is quickly overcoming this obstacle, even though many assessors have always held the view that the valuation of land sites is far easier than valuing buildings.[53] Much of the earlier difficulty seems to be explained by the inertia of the economics to taxation approaches and to the fact that sales records contain the price of land and improvements totaled together. Since improved

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[51] Henry George. *Progress and Poverty: An Inquiry Into The Cause of Industrial Depressions and of Increase of Want with Increase of Wealth … The Remedy,* Book VIII, Chapter 2. New York: Robert Schalkenbach Foundation, 1879, 1962 printing, p. 405.

[52] Henry George, *Protection or Free Trade: An Examination of the Tariff Question, with Especial Regard to the Interests of Labor*. New York: Robert Schalkenbach Foundation, 1886, 1966.

[53] See, for example, Ted Gwartney, "Estimating Land Values," http://www.henrygeorge.org/ted.htm Michael Hudson, "The Lies of the Land: How and Why Land Gets Undervalued," http://www.wealthandwant.com/docs/Hudson_Lies.html Max J. Derbes, Jr. *The Appraisal of Land*. Chicora, PA: Mechling Press, 2005, and H. William Batt, "Land Value Maps are Not New, But Their Utility Needs to be Re-Discovered." *International Journal of Transdisciplinary Research*, Vol. 4. No. 1 (2009), pp 108-158.

parcels are sold far more frequently than unimproved land parcels, these have become the benchmark of valuation quality. Residential parcels change ownership typically as often as once every five years, whereas industrial, commercial, and agricultural parcels tend to have very stable ownership. Therefore the standard of valuation for non-residential parcels is far more relaxed. The official *Handbook* of The International Association of Assessing Officers (IAAO) states that "the chief measure of uniformity [in aggregate analysis] is the coefficient of dispersion (COD), which, depending on the nature of the properties involved, should not exceed 10.0-15.0 for residential properties, 15.0-20.0 for commercial properties, and 20.0 for vacant [i.e., rural] land."[54] The limitations of this "eyeball method" have left property owners believing that property taxation is based on subjective judgments and is therefore questionably equitable. The triangulation algorithms that are being developed for computer applications, especially when coupled with available aggregate sales data and regression calculations, now allow a higher degree of confidence in the assignment of tax bills than other tax regimes are able to claim.

Batt GCET-Taxing Land Rents.doc
September 15, 2010
Word Count: 7,300

[54] Joseph K. Eckert, et al, *Property Appraisal and Assessment Administration*, Chicago: IAAO, 1990, p. 547.