

Private roads: Response to Zhang and Levinson

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Abstract:

Zhang and Levinson (2009) have joined the ranks of those who seriously contemplate a private road and highway industry. But their support for privatization is a limited one. The present paper is an attempt to obviate their support for restricting the economic freedom of private street and road owners.

Purpose of this paper: to promote road privatization

Design/methodology/approach: criticize Zhang and Levinson

Findings: Zhang and Levinson are fair weather friends of privatized highways

What is original/value of paper: road privatization will save thousands of lives.

Key words:

Traffic fatalities; congested highways; privatization; deregulation

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I wish to welcome Zhang and Levinson (2009) to the ranks of scholars who at least seriously consider the case for free enterprise roads, highways, streets, etc.

Why is it so important that these ranks be swelled? There are two reasons, one crucially imperative, the other of no little importance. The first is the fact that some 40,000 people in the U.S. perish annually from highway fatalities, and this is the fault of public ownership. Privatization is the last best hope for radically reducing this horrid statistic. The second, a minor reason compared to that one, but very important in its own right, is traffic congestion. This costs the American economy millions of dollars per year, and even fits into the first consideration in a minor way: road rage is enhanced by traffic congestion, and this in and of itself leads to road deaths.

The usual explanation given for traffic fatalities is speed, driver inattention, drunkenness and drugged driving, bad weather conditions, etc. But this is totally fallacious. Rather, the massive killings are due to the failure of government road

managers to *deal* with these challenges. If there were private profit and loss making entrepreneurs in charge, the death rate would be radically reduced due to competition. Similarly, under private enterprise it is more than likely that peak load pricing would be introduced, and traffic congestion would be a phenomenon of the past.

So I once again repeat my congratulations to Zhang and Levinson (2009) for joining the ranks of scholars who seriously contemplate, and often even advocate, privatization of this industry. Unfortunately, this welcome must come accompanied by an asterisk. For, instead of favoring a fully free enterprise private enterprise road industry, they invite in, only, one that is greatly constrained and hemmed in by a welter of restrictions and regulations.

What is their reasoning on this matter? What are their reservations about full *laissez faire* in this sector of the economy? They are not fully weaned away from road socialism on these; following grounds:

“... private roads possess spatial monopoly power and will likely charge higher-than-optimal tolls on their users, leading to welfare losses. In addition, market

entry barriers due to high construction cost and demand uncertainty imply that the private road economy is not a perfect market.”

This is highly problematic. *Every* geographical business has “spatial monopoly power.” This applies not only to “long, thin things” such as pipelines, railroads, water and sewer lines, telephone lines, etc. It also pertains to each and every commercial enterprise that takes up space, which means each and every one of them without exception. For example, bakeries, shoe stores, groceries, pharmacies, hotels, etc. How can we prove any such claim? It is simple: two things cannot occupy the same relevant space at the same time. If the jewelry store occupies 123 Elm Street in Nowhere, USA, then the filling station cannot also have this as its address.

Then, consider the claim that private roads will “charge higher-than-optimal tolls.” There are difficulties here. For one thing, this is predicated upon an outdated, mischievous understanding of monopoly versus perfect competition. Among the other fallacies of this perspective are that it involves invalid interpersonal comparisons of utility. How does the state know what the optimal price for road usage would be? To think that it does is to ignore the contributions of many economists to the debate over socialist calculation. If we have learned anything

from this debate, it is that central planners, in the absence of market prices, cannot rationally plan. Yet, it is the very market prices that would emanate under road privatization that Zhang and Levinson are advocating be undermined.

For another, this relies upon the institution, the government, which is responsible for the massive traffic deaths in the first place. These authors in effect are relying on one branch of the government, the anti-trust regulators, to overcome the flaws in the policies of another branch, those in charge of roads, streets and highways. Suppose one division of a supermarket created problems, let us suppose the meat and butcher section. Would we choose to ameliorate this another branch, for example that which deals with fruit and vegetables? They would hardly be our first choice, since we would look to the root of the initial difficulty and see that entire institution as problematical.

Zhang and Levinson continue their rejection of a fully free market for highways:

“Therefore, comparing a centralized public ownership with an unregulated private ownership is not fair because in theory, proper regulations on private roads can improve welfare.... Limited by the length of the paper, we will only consider the

price ceiling regulation in which a global maximum toll level (e.g., \$3 per km) is set for all private roads.”

Very much to the contrary, it is exceedingly fair to compare a centralized public ownership with an unregulated private ownership. The present situation, it bears repeated, creates some 40,000 needless deaths per year. The best estimate for the number of needless fatalities in the latter case is around 10,000. Thus, 30,000 people could be saved on an annual basis. It is not only “fair” it is *imperative* to compare these two very different systems of road management. Many innocent lives are at stake.

If economics 101 teaches us anything, it is that a price ceiling at any level brings about a shortage. We all can picture the supply and demand drawing with an illustrated maximum price placed below equilibrium. What ensues? Well, demand exceeds supply and we have a shortage. Even on the basis of interventionist neo-classical economics, it simply makes no sense to impose a “\$3 per km” on every roadway. Surely, the supply and demand conditions would not be homogeneous all throughout the entire country. And also if we want to have a full employment enactment for economists, we should spend vast amounts of treasure on us dismal

scientists so that we can figure out which price ceilings should be placed upon which streets and avenues?

The next arrow in the quiver of is this:

“For any regulatory policy, there is also the issue of optimal regulation. In the case of price ceiling, the optimal ceiling price that maximizes social welfare needs to be determined so that the full potential of the regulation can be appreciated.”

Here, these authors are entirely correct. It is indeed important to determine “the optimal ceiling price.” But, from reading in between the lines, one gets the impression that in their view it would be impossible for the optimal ceiling price to be none at all. Rather, what they appear to have in mind is some price, perhaps not the exact same for all roads that lies below equilibrium. But why will the “full potential” be realized when shortages are created? Who benefits from when demand exceeds supply? It is difficult to see that anyone would, except for the bureaucrats charged with rationing a limited supply amongst numerous customers. However, we already have just that situation: traffic congestion. And, we already have a maximum price set below equilibrium, at present. It is a zero price.

Last but not least, Zhang and Levinson deviate from the free enterprise position as follows:

“When the ceiling price is too high, its influence on private roads’ pricing and investment decisions is marginal. When it is too low, private roads may not be willing to expand an under-built network to the optimal capacity level. We identify the optimal ceiling price by simulating a large number of alternative ceiling prices (i.e., from \$0 to \$10 per km in \$0.1 increments) and evaluating the corresponding welfare measures. Although a global ceiling price for all links is assumed herein for simplicity, the optimal ceiling price in theory could vary on a link-by-link basis.”

Happily, our authors make the best of a bad business by allowing that regulated prices cannot be of a one size fits all variety. Their comment about high ceilings being marginal is also in the right direction. If they are high enough, they will have no effect whatsoever. For example, if the maximum price allowed is \$1 million per inch travelled, it would not “bite” at all. But then comes the full employment for economists consideration: doing empirical research on this matter.

I, along with all other dismal scientists approve of this as a matter of instinct. But not when so many innocent lives are at stake. Let us have instead full free

enterprise, unencumbered by price controls, and a radical reduction in traffic fatalities.

References:

Anderson, William. 2007. "Roads, Bridges, and Socialist Capital"

<http://www.mises.org/story/2670>

Baird, Charles. 1980. Rent Control: The Perennial Folly, Washington D.C.: The Cato Institute

Barnett, William, Walter E. Block and Michael Saliba. 2005. "Perfect Competition: A Case of 'Market-Failure,'" Corporate Ownership & Control. Vol. 2, No. 4, summer, p. 70-75

Beito, David T. 1988. "Voluntary Association and the Life of the City," Humane Studies Review, Fall

Beito, David T. 1989. "Owning the Commanding Heights," Essays in Public Works History, vol. 16.

Beito, David T. 1993. "From Privies to Boulevards: The Private Supply of Infrastructure in the United States during the Nineteenth Century," in Jerry Jenkins and David E. Sisk, eds., *Development by Consent: The Voluntary Supply of Public Goods and Services*. San Francisco: 23-48.

Beito, David T. and Linda Royster Beito. 1998. "Rival Road Builders: Private Toll Roads in Nevada, 1852-1880," *Nevada Historical Society Quarterly* 41 (Summer), 71-91

Benson, Bruce. 2005. "The Mythology of Holdout as a Justification for Eminent Domain and Public Provision of Roads." *Independent Review*. Vol. 10, No. 2, Fall, pp. 165-194

Benson, Bruce L. 2007. *Private Policing and Private Roads: A Coasian Approach to Drunk-Driving Policy*. *Economic Affairs*, Vol. 27, Issue 4, pp. 30-38, December 2007. Available at SSRN: <http://ssrn.com/abstract=1044347> or <http://dx.doi.org/10.1111/j.1468-0270.2007.00777.x>

Block, Walter E. 1983. "Theories of Highway Safety," *Transportation Research Record*, #912, 1983, pp. 7-10.

Block, Walter E. 1996. "Road Socialism," *International Journal of Value-Based Management*, Vol. 9, pp. 195-207

Block, Walter E. 1998. "Roads, Bridges, Sunlight and Private Property: Reply to Gordon Tullock," *Journal des Economistes et des Etudes Humaines*, Vol. 8, No. 2/3, June-September, pp. 315-326

Block, Walter E. 2002. "A critique of the legal and philosophical case for rent control," *Journal of Business Ethics*, Vol. 40, pp. 75-90;

Block, Walter E. 2009A. *The Privatization of Roads and Highways: Human and Economic Factors*; Auburn, AL: The Mises Institute

Block, Walter E. 2009B. "Public-Private Partnerships: The Worst of Both Worlds," May 6;

<http://www.freedompolitics.com/articles/public-897-socialism-partnerships.html>

Block, Walter E., William Barnett II and Stuart Wood. 2002. "Austrian Economics, Neoclassical Economics, Marketing and Finance," Quarterly Journal of Austrian Economics, Summer, Vol. V, No. 2, pp. 51-66

Block, Walter and Block, Matthew. 1996. "Roads, Bridges, Sunlight and Private Property Rights," Journal Des Economistes Humaines Et Des Etudes, Vol. VII, No. 2/3, June-September

Block, Walter E., Joseph Horton and Ethan Shorter. 1998. "Rent Control: An Economic Abomination," International Journal of Value Based Management, Vol. 11, No. 3, pp. 253-263

Block, Walter E., and Edgar Olsen, eds. 1981. "Rent Control: Myths and Realities, Vancouver, The Fraser Institute

Boettke, Peter J. 2001. Calculation and Coordination: Essays on Socialism and Transitional Political Economy. London: Routledge, 2001.

<http://www.mises.org/etexts/cc.pdf>

Boiteux, M. 1960. Peak-Load Pricing. *The Journal of Business*, 33(2), 157–179.

<http://www.jstor.org/stable/2351015>

Butler, Eamonn, ed. 1982. *Roads and the Private Sector*. London: Adam Smith Institute

Butler, Eamonn, ed. 1988. *The Mechanics of Privatization*, London: Adam Smith Institute

Caplan, Bryan. 1996. “A Practical Proposal for Privatizing the Highways and Other ‘Natural’ Monopolies.” *Economic Notes* 72. Libertarian Alliance, London

Carnis, Laurent. 2001. "Management versus Ownership: The Road-Privatization Debate.”

The Quarterly Journal of Austrian Economics vol. 4, no. 2: pp. 51-59

http://www.mises.org/journals/qjae/pdf/qjae4_2_4.pdf

Carnis, Laurent. 2003. “The Case for Road Privatization: A Defense by Restitution.” *Journal des Economistes et des Etudes Humaines*. Vol. 13, No. 1, pp. 95-116

Cadin, Michelle, and Block, Walter E. 1997. "Privatize the Public Highway System," *The Freeman*, February, Vol. 47, No. 2., pp. 96-97.

Childs, Roy A., Jr. 1977. "The invisible hand strikes back," *The Journal of Libertarian Studies*, Vol. 1, No. 1, Winter, pp. 23-34

Cobin, John, M. 1999. *Market Provisions of Highways: Lessons from Costanera Norte*. *Planning and Markets*, Volume 2, Number 1.

De Palma, Andre and Robin Lindsey. 2000. "Private toll roads: Competition under various ownership regimes," *The Annals of Regional Science*, Vol. 34, pp. 13-35.

De Palma, Andre and Robin Lindsey. 2001. "A Model of Curb Rights In Private Urban Transit Markets," *Canadian Transportation Research Forum, Proceedings of the 36th Annual Conference*, pp. 581-596

Diamond, Jr., Arthur M. 1987. "The Intergenerational Invisible Hand: A Comment on Sartorius's 'Government Regulation and Intergenerational Justice,'" *The Journal of Libertarian Studies*, Vol. 8, No. 2, Summer, pp. 269-274

DiLorenzo, Thomas J. 2004. "Long Lines and Cleared Markets."

<https://mises.org/wire/long-lines-and-cleared-markets>

DiLorenzo, Thomas. 2011. "A Note on the Canard of 'Asymmetric Information' as a Source of Market Failure." Quarterly Journal of Austrian Economics, Vol. 14, No. 2, 249–255, Summer

http://mises.org/journals/qjae/pdf/qjae14_2_6.pdf

DiLorenzo, Thomas. 2016. The Problem with Socialism. Washington, DC: Regnery Publishing

Ebeling, Richard M. 1993. "Economic Calculation Under Socialism: Ludwig von Mises and His Predecessors," in Jeffrey Herbener, ed., The Meaning of Ludwig von Mises, Norwell, MA: Kluwer Academic Press, pp. 56-101

Flew, Anthony. 1987. "Social Science: Making Visible the Invisible Hands," The Journal of Libertarian Studies, Vol. 8, No. 2, Summer, pp. 197-212

Foldvary, Fred. 1994. Public Goods and Private Communities: The Market Provision of Social Services. Edward Elgar.

Friedman, Milton and George Stigler. 1946. "Roofs or Ceilings?," September, Irvington-on-Hudson: Foundation for Economic Education, http://www.fee.org/library/books/Roofs_or_Ceilings.asp; reprinted as Friedman, Milton, and George Stigler. 1981. "Roofs or Ceilings?" in Rent Control: Myths and Realities, Walter E. Block and Edgar Olsen, eds., Vancouver: The Fraser Institute.

Gallant, A. Ronald and Roger W. Koenker. 1984. "Costs and benefits of peak-load pricing of electricity: A continuous-time econometric approach." Journal of Econometrics
Volume 26, Issues 1–2, September–October, Pages 83-113

Galles, Gary. 2017. "Rent Control Makes for Good Politics and Bad Economics." April 9; <https://mises.org/blog/rent-control-makes-good-politics-and-bad-economics>

Garrison, Roger W. 1985. "Intertemporal Coordination and the Invisible Hand: An Austrian Perspective on the Keynesian Vision," *History of Political Economy* vol. 17, no. 2 (Summer), pp. 309-21

Gordon, David. 1997. "No Contest: review of *Perfect Competition and the Transformation of Economics*, by Frank M. Machovec, Routledge, 1995." *Mises Review*, Vol. 3, No. 3, Fall;

http://mises.org/misesreview_detail.aspx?control=17

Grampp, W.S. 1950. "Some Effects of Rent Control," *Southern Economic Journal*, April, pp. 425-426

Grant, R.W. 1989. "Rent Control and the War Against the Poor," Manhattan Beach, CA: Quandary House

Hayek, Friedrich A. 1935A. "Socialist Calculation Debate: The Present State of the Debate" In Friedrich A. Hayek (Ed.), *Collectivist Economic Planning: Critical Studies on the Possibility of Socialism*. London: Routledge and Kegan Paul. 1935. Pp. 201-43.

Hayek, Friedrich A. 1935B. "The Nature and History of the Debate." In Friedrich A. Hayek (Ed.), *Collectivist Economic Planning: Critical Studies on the Possibility of Socialism*. London: Routledge and Kegan Paul. 1935. Pp. 1-40.

Hayek, Friedrich A. 1940. "Socialist Calculation: The Competitive 'Solution'". *Economica*, Vol. 7 (May): 125-49.

Hayek, F.A. 1948. "Socialist Calculation I, II, & III," *Individualism and Economic Order*, Chicago: University of Chicago Press.

Hayek, Friedrich A. 1964. *Individualism and Economic Order*. Chicago: University of Chicago Press.

Hayek, Friedrich A. 1981. "The Repercussions of Rent Restrictions," *Rent Control: Myths and Realities*, Walter E. Block, ed., Vancouver: The Fraser Institute

Hayek, Friedrich A. 2010. "The Meaning of Competition." March 15;

<http://mises.org/daily/4181>

Hazlitt, Henry. 2008 [1946]. Economics in One Lesson. Auburn, AL: Mises Institute;

http://mises.org/books/economics_in_one_lesson_hazlitt.pdf

Hibbs, John and Gabriel Roth. 1992. Tomorrow's Way: Managing roads in free society. London: Adam Smith Institute;

<http://www.adamsmith.org/sites/default/files/images/uploads/publications/Tomorrow'sWay.pdf>

Hoff, Trygve J.B. 1981. Economic Calculation in a Socialist Society, Indianapolis: Liberty Press

Hoppe, Hans-Hermann. 1989. A Theory of Socialism and Capitalism. Economics, Politics, and Ethics, Boston: Kluwer Academic Publishers.

<http://www.hanshoppe.com/publications/Soc&Cap.pdf>

Hoppe, Hans-Hermann. 1993. The Economics and Ethics of Private Property: Studies in Political Economy and philosophy (Boston: Kluwer Academic Publishers,

Johnson, M. Bruce, ed. 1982. "Resolving the Housing Crisis: Government Policy, Decontrol, and the Public Interest, San Francisco: The Pacific Institute

Lewin, Peter, and Steven Phelan. 1999. "Firms, Strategies, and Resources."

Quarterly Journal of Austrian Economics 2, no. 2: 1-18.;

http://mises.org/journals/qjae/pdf/qjae2_2_1.pdf

Lindbeck, Assar. 1972. The Political Economy of the New Left, New York: Harper and Row; cited in Rydenfelt, Sven, "The Rise, Fall and Revival of Swedish Rent Control," in Rent Control: Myths and Realities, Walter E. Block and Edgar Olsen, eds., 1981. Vancouver: The Fraser Institute, 1981, pp. 213, 230.

Klein, Dan. 1990. "The Voluntary Provision of Public Goods? The Turnpike Companies of Early America," Economic Inquiry, October, pp. 788-812

Klein, Dan and Fielding, G.J. 1992. "Private Toll Roads: Learning from the Nineteenth Century," Transportation Quarterly, July, pp. 321-341.

Klein, Dan and Fielding, G.J. 1993A. "How to Franchise Highways," Journal of Transport Economics and Policy, May, pp. 113-130

Klein, Dan and Fielding, G.J. 1993B. "High Occupancy/Toll Lanes: Phasing in Congestion Pricing a Lane at a Time," Policy Study, No. 170, Reason Foundation, November 1993

Klein, Dan, Majewski, J., and Baer, C. 1993A. "From Trunk to Branch: Toll Roads in New York, 1800-1860," Essays in Economic and Business History, pp. 191-209

Klein, Dan, Majewski, J., and Baer, C. 1993B. "Economy, Community and the Law: The Turnpike Movement in New York, 1797-1845," The Journal of Economic History, March, pp. 106-122

Knipping, Oliver and Richard Wellings. 2012. Which Road Ahead - Government or Market? IEA: London. <http://www.iea.org.uk/publications/research/which-road-ahead-government-or-market>

Lemennicier, Bertrand. 1996. "La Privatisation des rues," Journal Des Economistes Et Des Etudes Humaines, Vol. VII, No. 2/3, June-September, pp 363-376

Machovec, Frank M. 1995. Perfect Competition and the Transformation of Economics. Routledge

Mises, Ludwig von [1922] 1981. Socialism: An Economic and Sociological Analysis. Translated by J. Kahane. Indianapolis: Liberty Fund;
<http://mises.org/books/socialism/contents.aspx>

Mises, Ludwig von. 1975[1933]. "Economic Calculation in the Socialist Commonwealth," in Hayek, F.A., ed., Collectivist Economic Planning, Clifton, N.J.: Kelley

Mises, Ludwig von. 1977. A Critique of Interventionism, New Rochelle, N.Y.: Arlington House; <http://www.mises.org/etexts/mises/interventionism/contents.asp>

Mkrtchian Gor. 2019. "Why Private Roads Would Have Fewer Traffic Jams."
<https://mises.org/power-market/why-private-roads-would-have-fewer-traffic-jams>

Mohring, Herbert. 1970. "The Peak Load Problem with Increasing Returns and Pricing Constraints," *American Economic Review*, 60(4), September, 693-705.

Myrdal, Gunnar. 1965. "Opening Address to the Council of International Building Research in Copenhagen"; cited in "Dagens Nyheter (Swedish Newspaper), 25 August 1965, p. 12; cited in Rydenfelt, Sven, "The Rise, Fall and Revival of Swedish Rent Control," in *Rent Control: Myths and Realities*, Walter E. Block and Edgar Olsen, eds., 1981.

National Highway Traffic Safety Administration. Undated. United States Department of Transportation. <https://www.nhtsa.gov/>

Peltzman, Sam. 1975. "The Effects of Automobile Safety Regulation." *Journal of Political Economy*; Vol. 83, No. 4, August pp. 677–726.

<https://www.jstor.org/stable/1830396>

O'Toole, Randal. 2009. *Gridlock*. Washington D.C.: Cato Institute.

Perrie, Victoria and Walter E Block. 2018. "Rent control and public housing."
Political Dialogues: Political Dialogues: Journal of Political Theory. pp. 49-56;
<http://apcz.umk.pl/czasopisma/index.php/DP/article/view/DP.2018.004/16658>

Reisman, George. 2005. "Platonic Competition." December 20;
<http://mises.org/daily/1988>; <https://mises.org/library/platonic-competition>

Roth, Gabriel. 1966. A Self-financing Road System, London, England, The
Insitute of Economic Affairs.

Roth, Gabriel. 1967. Paying for Roads: The Economics of Traffic Congestion,
Middlesex, England: Penguin.

Roth, Gabriel. 1987. The Private Provision of Public Services in Developing
Countries, Oxford: Oxford University Press

Roth, Gabriel. 2006. Street Smart. Independent Institute

Roth, Gabriel and Eamonn Butler. 1982. Private Roads Ahead: Ways of Providing
Better Roads Sooner. London: Adam Smith Institute

Rothbard, Murray N. 1961. "Competition and the Economists." May;

<http://mises.org/daily/5732/Competition-and-the-Economists>;

<https://mises.org/library/competition-and-economists>

Salerno, Joseph. 2011. "Perfect Competition: "Gobble"-degook," November 24;

<http://blog.mises.org/19459/perfect-competition-gobble-degook/>

Salin, Pascal. 1996. "Cartels as Efficient Productive Structures." The Review of Austrian Economics. Vol. 9, No. 2, pp. 29-42;

http://www.mises.org/journals/rae/pdf/rae9_2_2.pdf

Salins, Peter D. 1980. The Ecology of Housing Destruction: Economic Effects of Public Intervention in the Housing Market, New York: New York University Press.

Schrepel, Thibault. 2015. "'Perfect Competition' and Antitrust" May 6;

<https://mises.org/library/perfect-competition-and-antitrust>

Semmens, John. 1981. "Road to Ruin," The Freeman, December

Semmens, John. 1983. "The Privatization of Highway Facilities," Transportation Research Forum, November

Semmens, John. 1985. "Highways: Public Problems and Private Solutions," The Freeman. March

Semmens, John. 1987A. "Intraurban Road Privatization," Transportation Research Record 1107

Semmens, John. 1987B. "Using Competition to Break the U.S. Road Monopoly," Heritage Foundation. December 14

Semmens, John. 1987C. "Intraurban Road Privatization," Transportation Research Record 1107

Semmens, John. 1988A. "Privatization: Saving While Serving the Public," Goldwater Institute, April 25

Semmens, John. 1988B. "Taking Over the Roads," Liberty (November)

Semmens, John. 1991A. "Why We Need Highway Privatization," Laissez Faire Institute. March

Semmens, John. 1991B. "Private Highways? They're Cheaper, Better, Fairer," Phoenix Gazette (April 3)

Semmens, John. 1992A. "The Rationale for Toll Roads: You Get What You Pay For." Phoenix Gazette (December 16)

Semmens, John. 1992B. "Highway Privatization: What Are the Benefits for Arizona?," Goldwater Institute (December)

Semmens, John. 1993. "From Highways to Buy-Ways," Spectrum (Fall)

Semmens, John. 1994A. "Highway Investment Analysis," Arizona Department of Transportation (December 1994)

Semmens, John. 1994B. "Privatize Driver's License, Registration System," Tribune (December 25)

Semmens, John. 1995A. "How to Solve Mandatory Auto Insurance," Goldwater Institute (July 1995)

Semmens, John. 1995B. "Privatizing Vehicle Registrations, Driver's Licenses and Auto Insurance," *Transportation Quarterly*, Fall, Vol. 49, No. 4, pp. 125-135

Semmens, John. 1996A. "Selling the Roads: Privatizing Transportation Systems," *Liberty*

Semmens, John. 1996B. "Goodbye, DMV," *Liberty* (January)

Smith, Adam. [1776] 1979. *An Inquiry into the Nature and Causes of the Wealth of Nations*, Indianapolis, IN: Liberty Fund

Staley, Sam and Adrian Moore. 2009. *Mobility First*. Lanham, Md.: Rowman & Littlefield,

Tucker, William. 1990. *The Excluded Americans: Homelessness and Housing Policies*, Washington D.C.: Regnery Gateway

Tullock, Gordon. 1996. "Comment on 'Roads, Bridges, Sunlight and Private Property', by Walter E. Block and Matthew Block," *Journal des Economistes et des Etudes Humaines*, Vol. 7, No. 4, December, pp. 589-592.

Turvey, Ralph. 1968. "Peak-Load Pricing." *Journal of Political Economy*; Volume 76, Number 1; <https://www.journals.uchicago.edu/toc/jpe/1968/76/1>

Zhang, Lei and David Levinson. 2009. "The Economics of Road Network Ownership: An Agent-Based Approach." *International Journal of Sustainable Transportation*, 3:339–359; ISSN: 1556-8318 print=1556-8334 online
DOI: 10.1080/15568310802259999;

<https://conservancy.umn.edu/bitstream/handle/11299/179980/ERNO.pdf?sequence=3> HYPERLINK

["https://conservancy.umn.edu/bitstream/handle/11299/179980/ERNO.pdf?sequence=3&isAllowed=y"](https://conservancy.umn.edu/bitstream/handle/11299/179980/ERNO.pdf?sequence=3&isAllowed=y) & HYPERLINK

["https://conservancy.umn.edu/bitstream/handle/11299/179980/ERNO.pdf?sequence=3&isAllowed=y"](https://conservancy.umn.edu/bitstream/handle/11299/179980/ERNO.pdf?sequence=3&isAllowed=y)isAllowed=y

