

PRIVATIZATION AND THE 19TH-CENTURY TURNPIKE

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Introduction

Americans “discovered” privatization in the 1980s as their concern about the cost and adequacy of government programs increased. But deciding whether particular services should be provided by public or private agencies is a long-standing concern, extending all the way back to the formation of the Jamestown colony. In fact, American history provides one of the richest arrays of examples as to how privatization can work. By virtue of undergoing enormous changes, including performing as the world’s largest economy since the mid-19th century, America has been an excellent laboratory for voluntary institutions.

American institutional diversity spans all the way from completely private and voluntary efforts to those provided entirely by government. By this dimension, highway systems usually appear among the least promising for private operation. Modern scholars have worked out the precise reasons why private owner-operators would be expected to perform unusually poorly in the environment of roadways.¹ The instincts of average Americans long anticipated the experts, however, concluding that the benefits from road systems were so diffuse that private firms could not recoup enough in tolls to support the appropriate amount of services. The logic of their reasoning is unassailable. Roads are valuable precisely because they allow access among locales. Thus, one would expect that because they must levy tolls to support operations, private roads must discourage travelers in order to control

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¹See, for example, the discussion of public goods in a standard economics textbook such as Gwartney and Stroup (1987, chap. 17).

access, adding to the deterrence of the tolls themselves. In other words, that form of administration is believed guilty of making transactions excessively costly as well as misallocating social resources.

Recent scholarship helps us to understand that highways need not be a clear-cut “public good” as has been commonly supposed (Cowen 1988). They need not fulfill the two requirements which imply that the service must be provided through government in order to be provided efficiently. First—unlike a true public good—each user of a highway imposes a cost on other users by occupying space as well as wearing the roadway. Second, users can be selectively denied the services of the roadway. This allows managers to charge a toll for admission and, more generally, regulate the use of the road. While such exceptions may appear picayune, they allowed enterprising Americans sufficient leeway to create a comprehensive network of private toll roads in the early 19th century.

The Rise of American Turnpikes

In the first three decades of the 19th century Americans built more than 10,000 miles of turnpikes, mostly in New England and the Middle Atlantic states. Relative to the economy at that time, this effort exceeded the post-World War II interstate highway system that present-day Americans assume had to be primarily planned and financed by the federal government. The turnpikes markedly upgraded the road system. Roadbeds were smoothed and hardened to aid year-round use. Curves were straightened and bridges replaced fords. This prompted a predictable surge in traffic and gave a big boost to the developing economy. Toll roads continued to carry much of the interior commerce of the United States until newer technologies, particularly steamboats and railroads, surpassed them.²

The conditions that prompted turnpikes began developing in the latter half of the 18th century. Colonial roads had been the responsibility of the local township. Each elected one of their number to supervise construction and maintenance. The supervisors were empowered to call all able-bodied residents to repair roads several days each year. The arrangement was widely disparaged because unseasoned supervisors and unenthusiastic workers obviously produced much less than a professional operation would have yielded (Taylor 1951, chap. 2). Yet the common wisdom may be wrong. While the output seemed mediocre, the cost of the resources was correspondingly low. Work was scheduled during slack farming periods

²See Durrenberger (1931), Evans (1948), Kirkland (1948), Taylor (1934), and Wood (1911).

and pursued by parties who gained from repairing ruts and potholes in decreasing order of their damage.

The growth of the economy, particularly the expansion of interior trade about 1800, put severe strains on the informal system of colonial roads. Increased traffic overwhelmed the townships' ability to maintain the through routes, eroding the roadbed long before local work parties returned to restore them. The resulting frustrations prompted a general outcry for better road management practices. After the Revolutionary War, Americans experimented with such administrative reforms as converting resident obligations from road work to taxes in order to hire private contractors. Other variants were borrowed from the English turnpikes that had already been developed in the face of a similar challenge. The English had settled on the mechanism of a "trust," which administered major highways much like a public utility. While roads were owned and managed by private investors, tolls were regulated by government to ensure a "reasonable" return (Pawson 1977).

Americans were dissatisfied with this particular mechanism and attempted to develop more suitable alternatives. While maximum toll charges were usually specified in the charter, American managers were allowed more discretion in structuring operations. Also in contrast to the English practice, American toll roads drew their capital primarily from the locality they served. No doubt the absence of an American capital market encouraged this practice, but it also cleverly enlisted the support of the indirect beneficiaries of toll roads. Not long after the first toll roads began operations, Americans generally recognized that such investments would not match the dividends of competing investments. Most investors, therefore, had to be enlisted by the promise of other benefits that such projects promised to their own enterprises in their locality (Wood 1911, pp. 35–36; Durrenberger 1931, pp. 105–106).

This tactic of tying the total returns of a local turnpike to those of local investors ruled out an advantage that financial markets can supply. Underwriters understand that a stock must be priced so that its expected yield is competitive with the return on other assets. This standardization equalizes the advantage of holding securities so that investors are indifferent among them. In England, where turnpike tolls were regulated so as to maintain a competitive return on the investment, most securities gravitated to investors living outside the locality. But in the United States, the investor's residence and the market for the local turnpikes were tightly linked, which meant that capital was not likely to be drawn from the cheapest source.

Considering this drawback, the American solution appears ingeniously effective. After obtaining a charter from their legislature, organizers of a potential toll road approached the test of attracting local investors. A high percentage of the initial proposals failed to convince sufficient investors that the returns were worthwhile, thus stymieing the project. But many of these ventures discovered other groups of supporters, redrew their proposal to accommodate them, and returned to the legislature for a revised charter. A large share of toll roads were constructed with revised charters.

Thus, despite their idiosyncratic orientation, turnpikes were formed in a type of "market." The process paralleled the procedures employed by modern underwriters of securities. In essence, suppliers of turnpikes were sought—that is, those who would invest in them—who could be matched with consumers—those who would pay to use the new roads. Some buyers and sellers were one and the same, but considerable entrepreneurial effort still was required to develop the two congruent slates.

The experience of developing turnpikes suggests an advantage of privatization that does not often seem appreciated today, even by its proponents. Turning government services over to private suppliers is usually justified by the promise of reducing costs and improving quality. But the critical decision in founding many turnpikes was discovering uniquely local demands that could be meshed with the turnpikes' services. Programs leading to uniform application—as government initiatives typically do—will block localized opportunities. Turning prisons over to private suppliers might, for example, prompt much more ingenuity in using the captive labor supply, while ending the federal postal monopoly could encourage services providing home delivery, such as newspapers, to consolidate services. More broadly, one could make a case that rather than the traditional assumption that public goods require government management, the causation is reversed. The assumption of public ownership converts activities into a public good.

The local matchmaking between turnpike investors and users was complemented by a search by states for the most effective institutional structures. When the process was completed, an array of turnpike procedures suited to circumstances of particular states had been created. States that already had comprehensive road systems understandably sought procedures that emphasized maintenance. Most states, however, were concerned primarily with fostering development in unsettled areas and stressed construction of new roads. Massachusetts refused to grant charters unless a new roadway was the primary objective. Other states, particularly Pennsylvania and Vir-

ginia, sought to recognize and encourage the indirect benefits of roads through subsidies.

Such matchings suggest an important corollary. These days it is commonly assumed that government must foster activities that produce large amounts of indirect benefits. Indeed, many government initiatives are primarily justified by such arguments. But it is often overlooked that many privately produced goods and services also create indirect benefits that are difficult for providers to appropriate. Moreover, there is no compelling reason to believe that sectors such as transportation create a higher proportion of indirect benefits. Improved roads undoubtedly promote economic efficiency in a locality but it is not obvious that the resulting benefits are greater than if the same resources improved health through the purchase of better food or housing.

Americans debated the appropriate treatment of indirect benefits from transportation during this period under the rubric of "internal improvements."³ All through the antebellum period, appropriation bills were introduced in Congress for transportation projects to tie the developing West and South more closely to the East. Clearly the direct beneficiaries were the West and South, but the common argument for their adoption stressed that the benefits to all parts of the nation were sufficiently large to justify national financing. Americans, however, were never sufficiently persuaded to go beyond token projects such as the National (Cumberland) Road. A good part of this predilection was undoubtedly a general reluctance to employ the government on anything beyond obvious public needs. This also helps explain the public's general endorsement of private turnpikes, which occurred in an intellectual climate that was skeptical of big government. Whereas today the general attitude is that almost every "problem" is capable of being ameliorated by government action.⁴

The toll roads' integration of investors and consumers improved the efficiency of capital. Prior to turnpikes there had been considerable slippage between the incidence of taxes and labor obligations imposed by the townships and the services that users received from the resultant roads. Taxes were levied on real estate and personal property. That formula probably corresponded to the benefits that groups such as farmers drew from local roads but failed to reflect the benefits of other groups, such as merchants. That imbalance seems to have been increased by the growth of through traffic, thereby contributing to the growth of the belief that the existing system was

³See Goodrich (1948, 1950).

⁴On the change of attitude toward big government, see Higgs (1987).

so unfair that replacement by something along the lines of turnpikes was warranted.

Regional Variations

The first major turnpike employing the new “American model” was begun in 1792 between Philadelphia and Lancaster, Pennsylvania. It replaced the main route that passed through about a dozen jurisdictions that had proven unable to maintain their portion of the thoroughfare. The project was an immediate success. Traffic increased dramatically because even after paying tolls, travelers found it markedly superior to the roadways they had previously endured. Other localities who were grappling with the same problem were quick to grasp the implications. Within a few decades, turnpikes had been adopted in most densely settled areas, forming the framework of a productive road system.

As Americans applied the (encouraging) model of the Lancaster turnpike elsewhere, variations developed appropriate to local conditions. One obvious characteristic was the density of projects, in particular the concentration to the Northeast. More than half of the turnpikes, measured either by mileage or invested capital, were in New York and New England. And most of the latter were in the three southernmost states of Massachusetts, Rhode Island, and Connecticut, especially when gauged by the cost of construction. Moreover, they were also assembled faster than turnpikes elsewhere in the country. More than three-quarters of the ultimate total were in use in 1810.

This pattern seems to be explained by the density of commerce. Southern New England and Eastern New York included a large share of the wealthiest and most populated areas of Federalist America. Considerable intraregional, overland transportation already existed so turnpikes there promised to aid established commerce as well as stimulating new traffic.

Among such areas Connecticut exemplified this pattern. Unlike Massachusetts and New York, which still had substantial unsettled western lands, the frontier had moved beyond Connecticut's borders. The 1,600 miles of turnpikes instituted in Connecticut were almost twice the length of those in neighboring Massachusetts whose area was 60 percent larger. The success rate was also noticeably better. Only 13 of 113 turnpikes chartered in Connecticut failed to be instituted while in neighboring Massachusetts and Rhode Island the failure rate exceeded 40 percent. Connecticut's interests, therefore, were predominantly improving *existing* routes. In fact, the state went

so far as to construct new roads before turning them over to turnpikes. Connecticut demonstrates that turnpikes were not merely a device to raise capital but also promised important gains in the maintenance and operation of roads.

The Fall of American Turnpikes

The rapid adoption of turnpikes in the Northeast was paralleled by comparatively early dissolution. By 1820 turnpike managers began relinquishing sections to public authorities on which traffic had diminished. Many were completely returned to the respective states in the 1830s and 1840s. The causation seems the same as that which propelled their adoption. Relatively dense traffic made the introduction of new, competing technologies, particularly steamboats and railroads, attractive. Typically, turnpikes that survived longest were usually the relatively simple farm roads removed from major thoroughfares.

The central role steamboats played in the demise of turnpikes is easily overlooked. They preceded railroads by almost three decades. But unlike railroads, they seldom competed parallel to main highways because waterways were circuitous. Even so, the comfort and greatly reduced freight costs of steamboats diverted much traffic away from main roads. This explains why turnpikes were clearly declining prior to the 1840s when the railroad began to have a significant presence.

To the west and south, turnpikes were less common and were introduced at a slower rate. The explanation seems consistent with the analysis for the Northeast. The population density and spending in the West and South were relatively low. Moreover, before this area surpassed the frontier phase and begin to support toll roads, technology was already being developed for alternative means of transportation. West of Ohio, for example, steamboats and railroads offered the best alternatives to toll roads early on. Accordingly, the turnpikes that were attempted were mostly in the "old frontier," such as Western New York, Pennsylvania, and Virginia. These regions had settlers in the early 19th century when turnpikes became feasible but not enough to support a comprehensive network.

It is not surprising, therefore, that the states in the "old frontier" experimented with public policies that attempted to compensate for the deficiency of private demand. The mid-Atlantic states, particularly Pennsylvania, Maryland, and Virginia, were keenly aware of the potential for commerce with the growing West. New York seemed to be winning the race for the West so the other players were actively

searching for ways to become more competitive. Toll roads, along with canals and railroads, were a natural component of such strategies.

Alone among the states, Pennsylvania attempted to encourage turnpikes by becoming a partner in them; in other words, the state purchased stock in formative projects much as local investors were being solicited to do. The logic of this tactic is not clear. It seems unlikely the state expected to recoup much from its investments, as the lack of dividends from toll roads was widely recognized. Nor did Pennsylvania seem to use its equity position to dictate operating policies of the roads. Whatever the case, the exercise was cut short by the panic of 1837 during which Pennsylvania defaulted on its bonds and thus suspended its internal improvements.

Virginia followed a more typical government tactic, giving construction subsidies to turnpikes deemed to have particularly large social benefits. Subsidies ranged from 11 percent to 60 percent with 35 percent to 40 percent being typical (Hunter 1957). The results were disappointing. The claims for meritorious need for projects were shaped much more by the political influence of recipients in the legislature than by an objective assessment of likely benefits. Much of Virginia's toll road assistance went to its western routes in the mountains, routes that had little chance of becoming major thoroughfares.

Private and Public Choice

Fundamentally, the establishment of turnpikes was the creation of a new set of property rights. Previously, maintaining the road was a broad, collective responsibility while there was no charge to anyone for using it. Turnpikes dramatically narrowed the road's ownership, catalyzing the interests of the owners to identify and satisfy potential users. So, for example, while states sought to safeguard users against monopolistic pricing by setting maximum tolls, it was common for private owners to charge much less than the maximum in order to attract travelers. This search by turnpikes for their own individual optimums fostered efficiency of local resources that universal rules could not elicit.

The rearrangement of property rights increased the collective net gains to participants in the road systems. This meant that it was possible for all major participants to share in the benefits and, thus, to have reason to support the new institution. The organizers of turnpikes showed acute sensibility and ingenuity to this end. The techniques they employed to win over major constituencies is a valuable lesson for modern times. For example, travelers on longer

trips paid much of the tolls, but found that better traveling conditions more than compensated for the expense. While local users lost free access to the public roads, they received exemptions for many workaday functions as well as the savings in taxes levied for road maintenance. The local landowners and merchants who supplied much of the capital benefited from increased trade over and above the dividends they earned on their stock.

Turnpikes were quickly embraced because they satisfied an obvious widespread need. The rapid expansion of long-distance, overland transportation put a premium on improving primary highways. Thus, turnpikes were welcomed because they were the catalyst to improve economic opportunities. This situation contrasts with the contemporary environment where the process of privatization is frequently associated with sacrifice. Frequently, privatization has been advanced as a means to cut public spending, which has made Americans resist privatization despite its overall economic benefits.

Turnpikes also suffered from the special peculiarities of the market they served. Many declining sectors are able to consolidate firms and adopt their services to new formats. But turnpikes had to maintain tollbooths continuously at several points in order to collect revenue. In other words, toll roads suffered from high transaction costs and required a large flow of traffic to become self-sustaining, let alone to begin to recoup the investment in the roadway. Thus a decline in traffic, in response to better alternatives in longer distance travel, could quickly produce short-run losses and destroy long-run profitability.

The demise of turnpikes points to another advantage of privatization. Private operations are much more likely to cease operations when demand becomes inadequate. The worst defect with public operations is probably not so much starting improper services as getting them stopped once they become unprofitable. Public suppliers have much more leverage to keep the revenues coming from taxpayers than they do from unsatisfied users.

When the turnpikes began to lose their prime customers, the long-distance users, the private owners had to make adjustments. And unlike governmentally run projects, which can rely on legislative assistance, privately run roads were forced to drop the least remunerative sections. Such disciplinary action, taken under decentralized decisionmaking, provides a wealth of information that is unobtainable in a centralized system. It is this connection that modern opponents of privatization continue to neglect and in doing so fail to see the opportunities inherent in private as opposed to public choice.

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