INTERNATIONAL ROAD FEDERATION

Adam Smith
and the Principles of a Sustainable

Road Policy

(An analysis by Deutsche Gesellschaft für Technische Zusammenarbeit GTZ of the 12 principles of road policy, based on An Enquiry into the Nature and Causes of the Wealth of Nations by Adam Smith, first published 1776)

FEDERATION ROUTIERE INTERNATIONALE - FEDERACION INTERNACIONAL DE CAMINOS

INTERNATIONAL ROAD FEDERATION (IRF)

Historical Roots of the Road Management Initiative (RMI)

edited by
Gerhard P. Metschies

Adam Smith (1723-1790)

On the Occasion of
the IRF Man of the Year Award 2001 to

Ian G. Heggie

at the IRF 14th World Meeting, 11 June 2001,
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Foreword

Today, the declared goal of the International Road Federation IRF is to be at the cutting edge of *progress* in all parts of the road sector. This does not mean just *technical progress*, but economic progress too, as it pertains to road users and road builders but also, and most particularly to the State, with its responsibilities for managing economic policy and transport planning.

It is precisely in this sense that IAN G. HEGGIE is an innovator, blazing new trails by systematically liberating the road-building and road-maintenance sector from the economics of subsidy and an antiquated public-sector and orienting it towards the economics of growth and the private sector.

Ian Heggie, as initiator of the *Road Maintenance Initiative* (RMI) and as author of the groundbreaking book *Commercial Management and Financing of Roads*, has exerted enormous influence on the thinking of the World Bank and of numerous governments around the world.

It is for this reason that Ian Heggie is being honoured with the award of IRF MAN OF THE YEAR 2001 at this 14th IRF World Meeting.

Today, living back in the United Kingdom, and Professor at the University of Birmingham, he is not so far away from the cities of Glasgow and Edinburgh where a fellow countryman of Ian Heggie lived some 225 years ago, a man who laid the foundations of infrastructure policy based on economics. I mean Adam Smith (1726-1790), Professor of Moral Philosophy at the University of Glasgow, who published his own groundbreaking work *An Inquiry into the Nature and Causes of the Wealth of Nations* in 1776.

The IRF hopes that receiving the present reprint with commentary of the chapter on public works from Adam Smith s book, which delves deeply into the subject of road construction, at the same time as he receives his IRF Man of the Year award will clearly testify to the esteem in which Mr. Heggie is held by the worldwide road sector.

I hope that he, as well as IRF members, will derive from reading this special print an understanding of how much both professors, though centuries apart, have committed their lives to furthering the spirit of economic progress for the good of mankind and for the wealth of nations.

Wim Westerhuis, IRF Director General (Geneva Programme Centre)

The main goal of German development cooperation is to alleviate poverty in developing countries.

The *Deutsche Gesellschaft f r Technische Zusammenarbeit (GTZ) GmbH*, commissioned by the Federal Ministry of Economic Cooperation and Development (BMZ), with some 1500 employees on assignment in more than 120 countries of the world, has a very special commitment to the goal of poverty alleviation. Through the provision of economic and social assistance, GTZ empowers people and institutions to bear their responsibility for necessary reforms.

This applies to infrastructure as well and in particular to the ROAD MANAGEMENT INITIATIVE (RMI), within which the World Bank, IRF and GTZ have long since found common ground.

The self-financing of roads and highways, in particular of road maintenance via road-user levies, and its independent management within the scope of road funds are the CORE ELEMETS of the global RMI. As the RMI's chief executive, IAN G. HEGGIE has showed the way for many poor countries, especially in Africa, to overcome their crises and poverty, at least as far as infrastructure is concerned.

It is probably no accident that the basic principles of the Road Management Initiative are practically identical to the principles for infrastructure that ADAM SMITH established so long ago in his famous book.

Any inquiry into the nature and causes of wealth is, by necessity, also an inquiry into the nature and causes of poverty: they are rightly seen as two sides of the same coin.

Joint publication by IRF and GTZ shows how immediately relevant the views of Adam Smith — originally a moral philosopher — have remained for us all to this day.

These views relate to all levels - macroeconomic, governmental, fiscal-administrative, and even self-governmental - and they extend from tax relief for the poor to the privatization and democratization of local decision-making processes.

All these are major milestones toward alleviating poverty in developing countries. In a globalized world, they also constitute an obligation for us all.

Dr. Bernd Eisenblätter, GTZ Director General

Zum Geleit

Auf allen Gebieten des Strassenwesens an der Spitze des *Fortschritts* zu stehen, war und ist das erklärte Ziel der International Road Federation IRF.

Dieser Fortschritt ist aber nicht nur technischer Natur, sondern muß gleichzeitig immer auch *wirtschaftlicher Natur* sein.

Er betrifft daher nicht nur Straßennutzer und Strassenbauer, sondern in besonderem Maße auch den Staat als ªDritten im Bunde, der als Auftraggeber für Wirtschaftspolitik und Verkehr von jeher verantwortlich zeichnet.

Hier hat IAN G. HEGGIE neue Wege gewiesen, in dem er den Strassenbau- und Strassenerhaltungssektor ganz konsequent aus den Fesseln der antiquierten Staats- und Subventionswirtschaft befreite und in den breiten Strom der wachstumsorientierten Privatwirtschaft überführt hat.

COMMERCIAL MANAGEMENT AND FINANCING OF ROADS lautet daher der Titel von Ian Heggies Hauptwerk, mit dem er als Initiator der ROAD MAINTENANCE INITIATIVE (RMI) das Denken der Weltbank und vieler Regierungen weltweit beeinflusst hat.

Dafür wird ihm anlässlich unseres 14 IRF World Meeting der Global Road Achievement Award 2001 verliehen werden.

Ian Heggie hat einen Lehrstuhl an der Universität Birmingham inne und es mag kein Zufall sein, dass er damit auch geographisch in die Nähe jenes Professoren-Kollegen gezogen ist, der in Edinburgh und Glasgow schon vor 225 Jahren die Grundlagen einer wirtschaftlich orientierten Infrastruktur-Politik gelegt hat: Adam Smith (1726-1790) veröffentlichte 1776 sein Hauptwerk AN INQUIRY INTO THE NATURE AND CAUSES OF THE WEALTH OF NATIONS.

Mit dem kommentierten Nachdruck des Buch-Kapitels über Public Works von Professor Adam Smith, das sich besonders mit dem Strassenbau befasst, hofft der IRF heute Professor Ian Heggie anläßlich seiner Preisverleihung eine besondere Freude zu machen.

Möge er - und auch wir alle im IRF - bei der eingehenden Lektüre dieses Sonderdrucks feststellen, wie sehr die beiden Professoren - über die Jahrhunderte hinweg - dem gleichen Geist von wirtschaftlichem Fortschritt zum Wohle der Menschen wie auch dem Reichtum der Nationen verpflichtet sind.

Wim Westerhuis, IRF-Geschäftsführer (Genf)

Die *Armut* in den Entwicklungsländern der Dritten Welt zu bekämpfen, ist das Hauptziel der deutschen Entwicklungszusammenarbeit.

Auch die Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH mit ihren 1500 entsandten Mitarbeitern in über 120 Ländern der Welt ist diesem Ziel der *Armutsbekämpfung* in besonderem Maße verpflichtet, indem sie durch wirtschaftlich-soziale Beratung Personen und Institutionen in den Partnerländern befähigt, die Eigenverantwortung *(ownership) fü*r notwendige Reformen zu bernehmen,.

Dies gilt auch für die Infrastruktur, und besonders die ROAD MANAGEMENT INITIATIVE (RMI), in der WELTBANK, IRF und auch die GTZ seit langem eine gemeinsame Basis gefunden haben.

Die *Selbstfinanzierung* der Strassen und besonders der Straßenerhaltung durch Abgaben der Straßennutzer sowie ihr eigenständiges Management im Rahmen von *Straßenfonds* sind die KERNELEMENTE der weltweiten RMI, als dessen verantwortlicher Leiter IAN G. HEGGIE gerade den armen Staaten der Dritten Welt, insbesondere vielen Ländern Afrikas, zumindest in der Infrastruktur einen Weg aus der Krise und der Armut gewiesen hat.

Es mag kein Zufall sein, dass diese Grundlagen der Road Management Initiative nahezu identisch sind mit den Grundsätzen, die ADAM SMITH in seinem berühmten Buch schon damals für die Behandlung der Infrastruktur aufgestellt hat.

Denn Untersuchungen über *Natur und Ursachen des Reichtums* sind notgedrungen zugleich auch Untersuchungen über *Natur und Ursachen der Armut*: Beide sind zurecht zwei Seiten der gleichen Medaille.

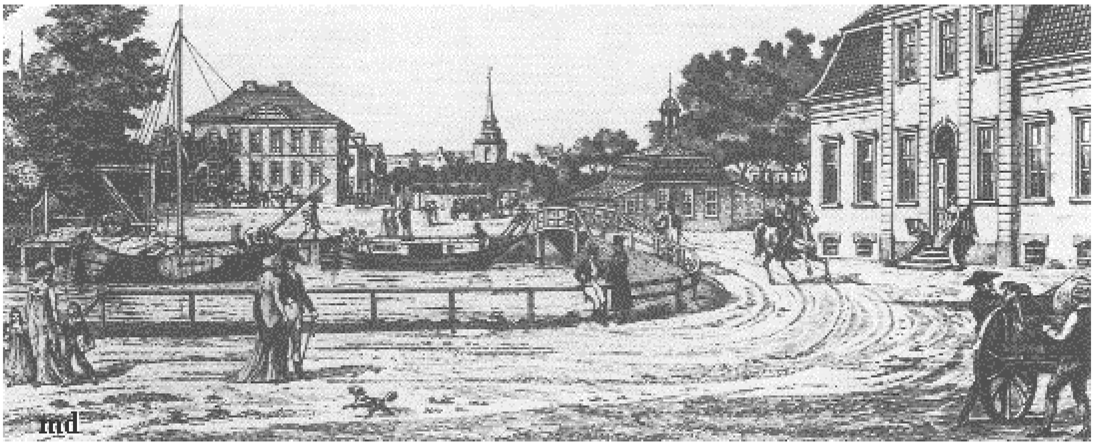
Die gemeinsame Veröffentlichung von IRF und GTZ zeigt, wie aktuell die Thesen und Grundsätze des - ursprünglichen - Moralphilosophen Adam Smith auch heute noch für uns sind.

Sie betreffen alle Ebenen: die der Volkswirtschaft, der Regierung, der Finanzverwaltung bis hin zur Selbstverwaltung der Betroffenen und reichen von der steuerlichen Bevorzugung der Armen bis hin zu Privatisierung und Demokratisierung lokaler Entscheidungen.

Sie sind wichtige Wegemarken für die Bekämpfung der Armut in den Entwicklungsländern. In einer globalisierten Welt sind sie zugleich eine bleibende Verpflichtung für uns alle.

Dr. Bernd Eisenblätter, Geschäftsführer der GTZ

Adam Smith *and* *the Principles* *of a* ***Sustainable Road Policy***



Historical Roots

of the

Road Maintenance Initiative RMI
and
its Principles of Finance and Organisation

by

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An annotated edition of Adam Smith's suggestions
for restructuring the PUBLIC WORKS SECTOR
compared with modern principles
of financing and organization of the ROADS SECTOR:

ADAM SMITH

The Wealth of Nations

Third edition dating from 1784

Adam Smith is the undisputed classic economist. In his major work *An Inquiry into the Nature and Causes of the Wealth of Nations*, he investigates in detail the reasons why some nations — as opposed to others — become wealthy and prosperous.

In his situational comparison of nations, infrastructure and road-building play a particularly important role.

A comparison of his chapter on infrastructure with present-day endeavors toward a "new" kind of infrastructure, i.e., one geared to economic growth, leads to some remarkable insights and conclusions:

(1) Despite enormous progress in road-building and automotive technology as we now know it, the core problems of infrastructural financing and commercial management, both in Europe and in the developing world, remain, in many areas, the same as they were 225 years ago, often reflecting a situation closely similar to that which prevailed a century before the automobile was invented.

(2) Efforts by the World Bank[2] to place the financing and (private-sector) commercial management of the road sector at the core of its reformative endeavors and to achieve relevant political acceptance within the scope of its special ROAD MANAGEMENT INITIATIVE are typical of the global state of public-sector road management.

(3) German development policy[3] is globally supportive of efforts to reform the road sector, and GTZ, through its sector project *Operationalization of the Road Management Initiative* is likewise contributing toward that end.

(4) The following comparison, annotations and elaboration of the twelve principles of a good road-sector policy — after Adam Smith — therefore are of particular topicality in that they completely reject the traditional concept of an "integrated treasury" with regard to infrastructural management.

(5) The 12 principles postulate 4 tiers of 3 principles each. The first tier to be considered is the growth-oriented level of the respective national economy. This is followed by the levels of government concerned primarily with social aspects and national assets. Next comes the finance ministry level responsible for fiscal management. And finally, there is the local level of self-government and public participation (cf. summarizing survey page 4).

As may be seen from the following pages, these 12 principles still have lost none of their global topicality, though 225 years have passed since their formulation.

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[1] The first edition of AN INQUIRY INTO THE NATURE AND THE CAUSES OF THE WEALTH OF NATIONS appeared March 9, 1776.
The first German edition appeared 1776/8 in Leipzig; reprinted in 1990 as dtv-classic no. 2208.
[2] Ian Heggie, "Commercial Management and Financing of Roads" World Bank Technical Paper No. 409, 158 pages, Washington, D.C., 1998.
[3] Bundesministerium f r wirtschaftliche Zusammenarbeit und Entwicklung (BMZ), Sektorkonzept "Strassenwesen in der Entwicklungszusammenarbeit" , Bonn, BMZ-aktuell Nr. 107/ Januar 2000.

I. LEVEL OF NATIONAL ECONOMY		COMMENTARY (pages 4 to 10)
1. The principle of expanding financial needs	***1st principle***	*The annual (public) expenditures for the road sector must increase in parallel with GNP and with traffic volume.*
2. The principle of self-sustaining infrastructure	***2nd principle***	*Most expenditures for public works and road infrastructure need not encumber the national budget, but instead can be defrayed by generating their own special revenues*
	Incidentally:	*Other infrastructural facilities, e.g., the mint/coinage and, in particular, postal services can be not only self-supporting but even profitable.*
3. The user-pays principle for road maintenance	***3rd principle***	*Road users pay in accordance with the magnitude of the road damage they themselves cause.*
	Incidentally:	*This road-maintenance financing principle is extremely fair and equitable, even if it is ultimately the user who pays the price*
II. LEVEL OF GOVERNMENT		
1. The social principle of cross-subsidization for the poor	***4th principle***	*Higher taxation of luxury-article transport by and for the rich, as compared to that of commodities, is an easy way to benefit the poor.*
2. The principle of public-enterprise efficiency in new construction of roads	***5th principle***	*New roads can only be built where road users want them and are able to pay for them.*
	Consequently:	*The financing of new roads and bridges out of money sources other than self-financing is to be rejected*
3. The principle of privatized road	***6th principle***	*Efficient road maintenance can only be expected of those who have a vested interest in it.*
	Note:	*The legislative framework for public management of road funds is still usually lacking.*
	Caution:	*There are, however, opposing arguments against financing road maintenance out of public funds*
III. LEVEL OF MINISTRY OF FINANCE / FISCAL MANAGEMENT		
1. The principle of earmarking of revenue	***7th principle***	*Earmarking of road tolls is vitally important, because the miscellaneous financial requirements of governments tend, unfortunately, toward the infinite.*
2. The principle of progressive vehicle taxation	***8th principle***	*The taxation of trucks / lorries according to weight, i.e., corresponding to the extent of road damage they cause, is only right and proper as long as it serves the sole purpose of road maintenance.*
	Hence:	*However, such weight-specific taxation, if used for other public financing purposes, encumbers the poor more than the wealthy.*
3. The principle of tax-increase credibility	***9th principle***	*The introduction of additional dedicated road taxes is implausible, if the roads are already suffering a lack of maintenance due to misappropriation of established road taxes by the relevant authorities.*
	Note:	*In China, India and the rest of Asia, the main source of financing for trafficways consists of property taxes and land revenue taxes – as opposed to road tolls and vehicle taxes.*
IV. LEVEL OF LOCAL SELF-GOVERNMENT		
1. The principle of democratic regional development	***10th principle***	*In such centralized states as France, the best-kept roads are the national highways needed by the government, while no one takes care of the many little country roads, no matter how economical they may be. Apparently, this also holds true in China and the rest of Asia (see below).*
	Note:	*In China, India and the rest of Asia, the main source of financing for trafficways consists of property taxes and land revenue taxes – as opposed to road tolls and vehicle taxes.*
2. The principle of minimal intervention in country road maintenance	***11th principle***	*Decentralized maintenance of country roads is always the better choice, even if road-tax revenues are too minimal to have much impact.*
3. The principle of urban administrative autonomy	***12th principle***	*The demands of economic efficiency require that city streets be paid for by their immediate local beneficiaries – not by drawing on general budget funds.*
	Incidentally:	*While decentralization does increase the danger of corruption, the consequences remain both tolerable and corrigible.*
Political conclusions *(witten by Adam Smith thirteen years before the French Revolution)*		*Even the compulsory, statute labor for public works expected of country people in the devolved British system is still somehow sufferable, but in the French centralized system, it was ruthlessly implemented as a prime instrument of tyrranical suppression.*

PUBLIC WORKS
Facilitating Commerce and Transport in the Country

Original text by Adam Smith	**Commentary**

(Book 5, Chapter 1, Section 3: Expenditures for PUBLIC WORKS, Part 1)

That the erection and maintenance of the public works which facilitate the commerce of any country, such as good roads, bridges, navigable canals, harbours, etc., must require very different degrees of expense in the different periods of society is evident without any proof.
The expense of making and maintaining the public roads of any country must evidently increase with the annual produce of the land and labour of that country, or with the quantity and weight of the goods which it becomes necessary to fetch and carry upon those roads.
The strength of a bridge must be suited to the number and weight of the carriages which are likely to pass over it. The depth and the supply of water for a navigable canal must be proportioned to the number and tonnage of the lighters which are likely to carry goods upon it; the extent of a harbour to the number of the shipping which are likely to take shelter in it.

The principle of expanding financial needs

1st principle:
The annual (public) expenditures for the road sector must increase in parallel with GNP and with traffic volume.

It does not seem necessary that the expense of those public works should be defrayed from that public revenue, as it is commonly called, of which the collection and application is in most countries assigned to the executive power.

The greater part of such public works may easily be so managed as to afford a particular revenue sufficient for defraying their own expense, without bringing any burden upon the general revenue of the society.

The principle of self-sustaining infrastructure

2nd principle:
Most expenditures for public works and road infrastructure need not encumber the national budget, but instead can be defrayed by generating their own special revenues.

A highway, a bridge, a navigable canal, for example, may in most cases be both made and maintained by a small toll upon the carriages which make use of them: a harbour, by a moderate port-duty upon the tonnage of the shipping which load or unload in it. The coinage, another institution for facilitating commerce, in many countries, not only defrays its own expense, but affords a small revenue or seignorage to the sovereign. The post-office, another institution for the same purpose, over and above defraying its own expense, affords in almost all countries a very considerable revenue to the sovereign.

Incidentally:
Other infrastructural facilities, e.g., the mint/coinage and, in particular, postal services can be not only self-supporting but even profitable.

When the carriages which pass over a highway or a bridge, and the lighters which sail upon a navigable canal, pay toll in proportion to their weight or their tonnage, they pay for the maintenance of those public works exactly in proportion to the wear and tear which they occasion of them.

It seems scarce possible to invent a more equitable way of maintaining such works. This tax or toll too, though it is advanced by the carrier, is finally paid by the consumer, to whom it must always be charged in the price of the goods.

The user-pays principle as applied to the cost of road maintenance

3rd principle:
Road users pay in accordance with the magnitude of the road damage they themselves cause.

As the expense of carriage, however, is very much reduced by means of such public works, the goods, notwithstanding the toll, come cheaper to the consumer than he could otherwise have done; their price not being so much raised by the toll as it is lowered by the cheapness of the carriage.

Incidentally:
This road-maintenance financing principle is extremely fair and equitable, even if it is ultimately the user who pays the price.

The person who finally pays this tax, therefore, gains by the application more than he loses by the payment of it. His payment is exactly in proportion to his gain.

Nevertheless, the goods emburdened with the costs of carriage are cheaper than before (meaning before the roads became available).

It is in reality no more than a part of that gain which he is obliged to give up in order to get the rest. It seems impossible to imagine a more equitable method of raising a tax.

When the toll upon carriages of luxury upon coaches, post-chaises, etc., is made somewhat higher in proportion to their weight than upon carriages of necessary use, such as carts, waggons, etc., the indolence and vanity of the rich is made to contribute in a very easy manner to the relief of the poor, by rendering cheaper the transportation of heavy goods to all the different parts of the country.

The social principle of cross-subsidization for the poor

4th principle:
Higher taxation of luxury-article transport by and for the rich, as compared to that of commodities, is an easy way to benefit the poor.

When high roads, bridges, canals, etc., are in this manner made and supported by the commerce which is carried on by means of them, they can be made only where that commerce requires them, and consequently where it is proper to make them. Their expenses too, their grandeur and magnificence, must be suited to what that commerce can afford to pay. They must be made consequently as it is proper to make them.
A magnificent high road cannot be made through a desert country where there is little or no commerce, or merely because it happens to lead to the country villa of the intendant of the province, or to that of some great lord to whom the intendant finds it convenient to make his court.

The principle of public-enterprise efficiency in new-road construction

5th principle:
New roads can only be built where road users want them and are able to pay for them.

A great bridge cannot be thrown over a river at a place where nobody passes, or merely to embellish the view from the windows of a neighbouring palace: things which sometimes happen in countries where works of this kind are carried on by any other revenue than that which they themselves are capable of affording.

Consequently:
The financing of new roads and bridges out of money sources other than self-financing is to be rejected.

In several different parts of Europe the ton or lock-duty upon a canal is the property of private persons, whose private interest obliges them to keep up the canal. If it is not kept in tolerable order, the navigation necessarily ceases altogether, and along with it the whole profit which they can make by the tolls. If those tolls were put under the management of commissioners, who had themselves no interest in them, they might be less attentive to the maintenance of the works which produced them. The canal of Languedoc cost the King of France and the province upwards of thirteen millions of livres, which (at twenty-eight livres the mark of silver, the value of French money in the end of the last century) amounted to upwards of nine hundred thousand pounds sterling.

When that great work was finished, the most likely method, it was found, of keeping it in constant repair was to make a present of the tolls to Riquet the engineer, who planned and conducted the work. Those tolls constitute at present a very large estate to the different branches of the family of that gentleman, who have, therefore, a great interest to keep the work in constant repair. But had those tolls been put under the management of commissioners, who had no such interest, they might perhaps have been dissipated in ornamental and unnecessary expenses, while the most essential parts of the work were allowed to go to ruin.

The principle of privatized road maintenance

6th principle:
Efficient road maintenance can only be expected of those who have a vested interest in it.

The tolls for the maintenance of a high road cannot with any safety be made the property of private persons. A high road, though entirely neglected, does not become altogether impassable, though a canal does. The proprietors of the tolls upon a high road, therefore, might neglect altogether the repair of the road, and yet continue to levy very nearly the same tolls. It is proper, therefore, that the tolls for the maintenance of such a work should be put under the management of commissioners or trustees.

Incidentally:

The levying of road tolls cannot be a purely private concern, but instead requires public monitoring to prevent abuse.

In Great Britain, the abuses which the trustees have committed in the management of those tolls have in many cases been very justly complained of. At many turnpikes, it has been said, the money levied is more than double of what is necessary for executing, in the completest manner, the work which is often executed in very slovenly manner, and sometimes not executed at all.

The system of repairing the high roads by tolls of this kind, it must be observed, is not of very long standing. We should not wonder, therefore, if it has not yet been brought to that degree of perfection of which it seems capable. If mean and improper persons are frequently appointed trustees, and if proper courts of inspection and account have not yet been established for controlling their conduct, and for reducing the tolls to what is barely sufficient for executing the work to be done by them, the recency of the institution both accounts and apologizes for those defects, of which, by the wisdom of Parliament, the greater part may in due time be gradually remedied.

Note:

The legislative framework for public management of road funds is still usually lacking

The money levied at the different turnpikes in Great Britain is supposed to exceed so much what is necessary for repairing the roads, that the savings, which, with proper economy, might be made from it, have been considered, even by some ministers, as a very great resource which might at some time or another be applied to the exigencies of the state. Government, it has been said, by taking the management of the turnpikes into its own hands, and by employing the soldiers, who would work for a very small addition to their pay, could keep the roads in good order at a much less expense than it can be done by trustees, who have no other workmen to employ but such as derive their whole subsistence from their wages. A great revenue, half a million perhaps, it has been pretended, might in this manner be gained without laying any new burden upon the people; and the turnpike roads might be made to contribute to the general expense of the state, in the same manner as the post office does at present.

Since publishing the two first editions of this book, I have got good reasons to believe that all the turnpike tolls levied in Great Britain do not produce a net revenue that amounts to half a million; a sum which, under the management of Government, would not be sufficient to keep in repair five of the principal roads in the kingdom.

That a considerable revenue might be gained in this manner I have no doubt, though probably not near so much as the projectors of this plan have supposed. The plan itself, however, seems liable to several very important objections.

Caution:

There are, however, opposing arguments against financing road maintenance out of public road tolls.
Hence:

First, if the tolls which are levied at the turnpikes should ever be considered as one of the resources for supplying the exigencies of the state, they would certainly be augmented as those exigencies were supposed to require.

The principle of dedicated road revenues

7th principle:
Proper linkage of road tolls is vitally important, because the miscellaneous financial requirements of governments tend, unfortunately, toward the infinite.

According to the policy of Great Britain, therefore, they would probably be augmented very fast. The facility with which a great revenue could be drawn from them would probably encourage administration to recur very frequently to this resource. Though it may, perhaps, be more than doubtful whether half a million could by any economy be saved out of the present tolls, it can scarce be doubted but that a million might be saved out of them if they were doubled: and perhaps two millions if they were tripled.

This great revenue, too, might be levied without the appointment of a single new officer to collect and receive it. But the turnpike tolls being continually augmented in this manner, instead of facilitating the inland commerce of the country as at present, would soon become a very great incumbrance upon it. The expense of transporting all heavy goods from one part of the country to another would soon be so much increased, the market for all such goods, consequently, would soon be so much narrowed, that their production would be in a great measure discouraged, and the most important branches of the domestic industry of the country annihilated altogether. I have now good reasons to believe that all these conjectural sums are by much too large.

Secondly, a tax upon carriages in proportion to their weight, though a very equal tax when applied to the sole purpose of repairing the roads, is a very unequal one when applied to any other purpose, or to supply the common exigencies of the state. When it is applied to the sole purpose above mentioned, each carriage is supposed to pay exactly for the wear and tear which that carriage occasions of the roads.
But when it is applied to any other purpose, each carriage is supposed to pay for more than that wear and tear, and contributes to the supply of some other exigency of the state.
But as the turnpike toll raises the price of goods in proportion to their weight, and not to their value, it is chiefly paid by the consumers of coarse and bulky, not by those of precious and light, commodities. Whatever exigency of the state therefore this tax might be intended to supply, that exigency would be chiefly supplied at the expense of the poor, not the rich; at the expense of those who are least able to supply it, not of those who are most able.

The principle of progressive vehicle taxation

8th principle:
The taxation of trucks / lorries according to weight, i.e., corresponding to the extent of road damage they cause, is only right and proper as long as it serves the sole purpose of road maintenance

Thirdly, if government should at any time neglect the reparation of the high roads, it would be still more difficult than it is at present to compel the proper application of any part of the turnpike tolls. A large revenue might thus be levied upon the people without any part of it being applied to the only purpose to which a revenue levied in this manner ought ever to be applied.

However, such weight-specific taxation, if used for other public financing purposes, encumbers the poor more than the wealthy

The principle of tax-increase credibility

9th principle:
The introduction of additional dedicated road taxes is implausible, if the roads are already suffering a lack of maintenance due to misappropriation of established road taxes by the relevant authorities.

If the meanness and poverty of the trustees of turnpike roads render it sometimes difficult at present to oblige them to repair their wrong, their wealth and greatness would render it ten times more so in the case which is here supposed.

In France, the funds destined for the reparation of high roads are under the immediate direction of the executive power. Those funds consist partly in a certain number of days' labour which the country people are in most parts of Europe obliged to give to the reparation of the highways, and partly in such a portion of the general revenue of the state as the king chooses to spare from his other expenses.

By the ancient law of France, as well as by that of most other parts of Europe, the labour of the country people was under the direction of a local or provincial magistracy, which had no immediate dependency upon the king's council.

But by the present practice both the labour of the people, and whatever other fund the king may choose to assign for the reparation of the high roads in any particular province or generality, are entirely under the management of the intendant; an officer who is appointed and removed by the king's council, and who receives his orders from it, and is in constant correspondence with it. In the progress of despotism the authority of the executive power gradually absorbs that of every other power in the state, and assumes to itself the management of every branch of revenue which is destined for any public purpose. In France, however, the great post-roads, the roads which make the communication between the principal towns of the kingdom, are in general kept in good order, and in some provinces are even a good deal superior to the greater part of the turnpike roads of England. But what we call the cross-roads, that is, the far greater part of the roads in the country, are entirely neglected, and are in many places absolutely impassable for any heavy carriage. In some places it is even dangerous to travel on horseback, and mules are the only conveyances which can safely be trusted.

The proud minister of an ostentatious court may frequently take pleasure in executing a work of splendour and magnificence, such as a great highway, which is frequently seen by the principal nobility, whose applauses not only flatter his vanity, but even contribute to support his interest at court.

But to execute a great number of little works, in which nothing that can be done can make any great appearance, or excite the smallest degree of admiration in any traveller, and which, in short, have nothing to recommend them but their extreme utility, is a business which appears in every respect too mean and paltry to merit the attention of so great a magistrate. Under such an administration, therefore, such works are almost always entirely neglected.

The principle of democratic regional development

10th principle:
In such centralized states as France, the best-kept roads are the national highways needed by the government, while no one takes care of the many little country roads, no matter how economical they may be.

Apparently, this also holds true in China and the rest of Asia (see below).

In China, and in several other governments of Asia, the executive power charges itself both with the reparation of the high roads and with the maintenance of the navigable canals. In the instructions which are given to the governor of each province, those objects, it is said, are constantly recommended to him, and the judgment which the court forms of his conduct is very much regulated by the attention which he appears to have paid to this part of his instructions. This branch of public police accordingly is said to be very much attended to in all those countries, but particularly in China, where the high roads, and still more the navigable canals, it is pretended, exceed very much everything of the same kind which is known in Europe. The accounts of those works, however, which have been transmitted to Europe, have generally been drawn up by weak and wondering travellers; frequently by stupid and lying missionaries. If they had been examined by more intelligent eyes, and if the accounts of them had been reported by more faithful witnesses, they would not, perhaps, appear to be so wonderful.
The account which Bernier gives of some works of this kind in Indostan falls very much short of what had been reported of them by other travellers, more disposed to the marvellous than he was. It may too, perhaps, be in those countries, as in France, where the great roads, the great communications which are likely to be the subjects of conversation at the court and in the capital, are attended to, and all the rest neglected.
In China, besides, in Indostan, and in several other governments of Asia, the revenue of the sovereign arises almost altogether from a land tax or land rent, which rises or falls with the rise and fall of the annual produce of the land. The great interest of the sovereign, therefore, his revenue, is in such countries necessarily and immediately connected with the cultivation of the land, with the greatness of its produce, and with the value of its produce. But in order to render that produce both as great and as valuable as possible, it is necessary to procure to it as extensive a market as possible, and consequently to establish the freest, the easiest, and the least expensive communication between all the different parts of the country; which can be done only by means of the best roads and the best navigable canals.
But the revenue of the sovereign does not, in any part of Europe, arise chiefly from a land tax or land rent. In all the great kingdoms of Europe, perhaps, the greater part of it may ultimately depend upon the produce of the land: but that dependency is neither so immediate, nor so evident. In Europe, therefore, the sovereign does not feel himself so directly called upon to promote the increase, both in quantity and value, of the produce of the land, or, by maintaining good roads and canals, to provide the most extensive market for that produce. Though it should be true, therefore,

Note:
In China, India and the rest of Asia, the main source of financing for trafficways consists of property taxes and land revenue taxes — as opposed to road tolls and vehicle taxes.

what I apprehend is not a little doubtful, that in some parts of Asia this department of the public police is very properly managed by the executive power, there is not the least probability that, during the present state of things, it could be tolerably managed by that power in any part of Europe.

Even those public works which are of such a nature that they cannot afford any revenue for maintaining themselves, but of which the conveniency is nearly confined to some particular place or district, are always better maintained by a local or provincial revenue, under the management of a local or provincial administration, than by the general revenue of the state, of which the executive power must always have the management.

The principle of minimal intervention in country road maintenance

11th principle:
Decentralized maintenance of country roads is always the better choice, even if road-tax revenues are too minimal to have much impact.

Were the streets of London to be lighted and paved at the expense of the treasury, is there any probability that they would be so well lighted and paved as they are at present, or even at so small an expense? The expense, besides, instead of being raised by a local tax upon the inhabitants of each particular street, parish, or district in London, would, in this case, be defrayed out of the general revenue of the state, and would consequently be raised by a tax upon all the inhabitants of the kingdom, of whom the greater part derive no sort of benefit from the lighting and paving of the streets of London.

The principle of urban administrative autonomy

12th principle:
The demands of economic efficiency require that city streets be paid for by their immediate local beneficiaries — not by drawing on general treasury funds.

The abuses which sometimes creep into the local and provincial administration of a local and provincial revenue, how enormous soever they may appear, are in reality, however, almost always very trifling in comparison of those which commonly take place in the administration and expenditure of the revenue of a great empire. They are, besides, much more easily corrected.

Incidentally:

While decentralization does increase the danger of corruption, the consequences remain both tolerable and corrigible

Under the local or provincial administration of the justices of the peace in Great Britain, the six days' labour which the country people are obliged to give to the reparation of the highways is not always perhaps very judiciously applied, but it is scarce ever exacted with any circumstances of cruelty or oppression.

In France, under the administration of the intendants, the application is not always more judicious, and the exaction is frequently the most cruel and oppressive. Such Corvees, as they are called, make one of the principal instruments of tyranny by which those officers chastise any parish or communaute which has had the misfortune to fall under their displeasure.

Political conclusions

Even the compulsory, statute labor for public works expected of country people in the devolved British system is still somehow sufferable, but in the French centralized system, it was ruthlessly implemented as a prime instrument of tyrranical suppression.

(written by Adam Smith thriteen years before the French Revolution)