

On the Execution of Public Works, Particularly Concessions

By Claude-Louis NAVIER

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On the object of public works, and the main goal that must be proposed in their execution

The work that falls under the responsibility of the road and bridge administration is mainly concerned with movement and communications. The roads, bridges, navigation of rivers, canals, ponds, ports, and railways are to facilitate the transportation of goods.

The first point to which attention should be made seems to be *the importance of the easy and cheap transportation*. It would be superfluous to reproduce the principles of economic policy which have been long exposed in several works. Few people today are unaware that the progress of a state's wealth depends mainly on two causes, the division of labor and the employment of natural forces in the execution of the work of the arts. In effect by the division of labor and the use of natural forces, it manages to produce at low cost, and therefore multiply more and put within reach of a greater number of people, the objects necessary or useful in life and welfare of humans, this is to say, the objects that have value and which constitute social wealth. But the action of these two causes depend, in one part on the abundance of capital which farmers and manufacturers can have, and of the extent of the market, this is to say of the territory over which each producer can buy raw materials and sell manufactured products. The more considerable is this market territory, the more possible it is to apply capital, the establishment of machines, or in general the processes suitable for manufacturing, more extensively and with greater economy, all items of consumption. But the extent of the market itself is obviously regulated by the condition that the expenses of manufacturing plus the cost of transport not exceed the current price of the merchandise. It is therefore essential to make the costs of transport as small as possible.

Here is a remark important to give these ideas precision. Generally, the costs of transport for goods are composed of two parts: 1° the expenses to establish and maintain the road or route, that are ordinarily the charge of the state or the communes; 2° the costs of transport, whether paid by the freight forwarder or the carter. These two elements of expense finally fall back as a charge to the society, and it is essential to diminish both. But from the principles above, one must focus primarily to reduce the latter. In fact, although any economy is advantageous to society, in that it allows a greater consumption, or favors the accumulation of capital, the private economy which pays transport expenses is much more important than any other, since it has an immediate effect on the price of the commodity, and consequently on the size of the market.¹

¹ These principles are not entirely consistent with those admitted by various engineers, for example by the commission that presented the *Rapport sur la police du roulage*, 22 April 1828. (Printing Royal. - December 1828, page 11.) In differing in opinion on this point we do not believe in lack of respect due to the members of the commission.

We admit to the principle that the main purpose we should propose in the administration of public works to support transportation is decreasing as much as is possible the cost of transport for the freight forwarder or carter.

Of the means of executing public works.

We can distinguish the execution of public works mainly by the following financial means:

1° Local taxes or levys;

2° The payment of expenses on state funds, these expenses being taken immediately from budgeted funds, or well with funds provided by loans, so interest and reimbursement are taken from budgets in future years.

3° Covering expenses with state funds, with the imposition of a toll to reimburse the money spent and to support maintenance costs,

4° Execution by way of concession, which requires establishing a toll.

We examine these various means, each in turn.

On local taxes and levys.

This is the simplest, most effective way, which appears first for the execution of public works. A road is bad, transportation will be interrupted, it is for the inhabitants that this transportation is immediately necessary and which benefit inhabitants by their selling food to passers-by.

Local levys made the roads in France, and it is the roads that have made France what it is today. Where would we be if taxes were needed for the road construction expenses required, or wait for entrepreneurs to establish these routes based on speculation?

The execution of roads by local taxes, in labor or money, presented some important advantages, which cannot be denied today. It rested on this principle, which still exists in force in other parts of Europe, that the inhabitants of each commune are obliged to maintain their roads in good condition. It followed from there: 1° that there was a way to arrive at the desired result,

In the report, when one wants to appreciate the results of several measures relating to the administration of roads, one combines the expenses which in each case will be borne by the government and those which will be borne by trade, and the results are compared. But this comparison does little, in our opinion, to give a just idea of the influence of these measures on public prosperity because we think that expenses charged to trade are much more harmful than others.

We add that after having established in this way that the proposed reduction in transportation price will cause an annual loss of three million (*Rapport précité*, page 14), one nevertheless concluded it is appropriate to adopt this measure. But it seems that one has not given a consideration that should perhaps not be neglected; it is that after the reduced weight of vehicles, and the improvement which results in road conditions, a horse would be able to transport a greater quantity of goods than it does today. Since, out of the approximately 276 million to which the totality of the expenditure is estimated, it is supposed that there are 250 charged to trade, it would be enough to a very small diminution on this part of the expenses to compensate, and beyond, the three million increase that would result from the weight reduction of cars. If this remark has been made, the result of a calculation presented as a main element of the examination of the question would have been better with the definitive opinion given to the Government.

that is, to have good roads; 2° that there could be a responsibility in this respect, that one knew who to go after when a road was bad. Today with roads being maintained with public taxes, there is no guarantee that one will expend the necessary funds, and the responsibility of the bad state of roads does not rest on anybody. This last circumstance alone suffices to give rise to the fear that it will henceforth be impossible to bring the roads of France to the state desired.

The necessity of an obligation and a personal responsibility, relative to the object in question, is an obvious consequence of the effects of the last law on local roads. This law having prescribed that the communes could tax themselves for the maintenance of these routes, but not that they must tax themselves, no result occurred. We never get, it seems, at least positive prescriptions unless we organize a responsibility, so that the municipality has a representative who can be brought before the courts when the roads are not maintained in the manner prescribed by law. It is by provisions of this nature that we have in England major routes in good condition, and local roads as good or better.

Removing local levys has been a popular measure. It seems to us a misfortune in the sense that it made the principle appear in France that each commune was obliged to maintain its roads. We have often heard M. Gauthey, who had for a long time directed the administration of levys in the province of Burgundy, assure that it gave rise to no complaint. In most provinces it was less the imposition itself than the injustices and exceptions which excited complaints from the people.

There are people who see the levy and taxes to maintain roads as an unjust thing, and to whom it seems that justice requires that the maintenance of roads is paid by those who frequent them. These questions seem to us to be better resolved by consideration of the interests of society than by ideas of justice. But if we wish to examine this question, we will admit that, on the contrary, it is the establishment of a toll which seems unfair. Indeed, the natural right is that everyone is free to go everywhere with what he can carry, or get carried by animals. If, for the benefit of the society, the land has been appropriated, so that one can no longer pass on the roads, at least the freedom to use roads must be preserved. But, it will be said, the use of the roads will soon make them impracticable: this is true, and it may engage those who frequent a path to impose a further contribution as a toll or other means to maintain the road. But it does not result that we have the right to stop others moving, or to force payment for passage, as such a man who today finds the right road, and does not think he has any interest in making it better.

The establishment of a toll has been seem sometimes, in some respects more suitable to procure the funds necessary; but it does not seem to us more just: on the contrary.

The means of providing suitably for the maintenance of roads in France have now fairly large difficulties, we will think not that the solution is in the general establishment of tolls. It seems to us detrimental to the development of the industry and production to impose any new charge in commerce. The establishment of a toll cannot be admitted unless it is used to reduce the cost of transport at least as much as the toll.

The execution of works public with state funds.

Public works in France are usually this way. This process has been almost exclusively used for large structures before the revolution, and since that time for such works and roads. The administration and the body of the key engineers and bridges and roads were created and organized accordingly. Several reasons justify this method which appear to be of great weight.

Public transportation works execution using state funds does not imply the necessity of establishing a toll, and it is the only way of doing without it. But in returning to the principles set out at the beginning, and in recalling that the key object is to reduce as much as possible the portion of transportation costs paid by trade, we may consider that the absence of any toll is the only way to get the state the benefits that can result from the construction of large works.

Consider what happens today when one establishes a canal. The substitution of a waterway for a road of earth reduces the costs of transportation about in the amount of 8 to 1; producing a very large economy for commerce². But, because of the rights imposed on the channels, the transportation costs are all the more reduced in the proportion of 3 to 1, or even 2 to 1; and it often happens in reason of delays and the other inconveniences that transport by water is less advantageous and trade prefers to expedite its goods by road. It follows from this that the construction of the canal becomes almost useless for commerce. And, in general, we can say that the usefulness of existing canals in France is not as large as commonly believed. We spent considerable capital to create a new element of prosperity; but, by the effect of the toll found that the proposed goal was not reached.

This leads to a vicious circle, that a toll paid by commerce does not reimburse the capital the government spent, without considering that the same toll hinders commerce on this new path, and puts obstacles to development that was sought for production, opposing establishing on the canal sufficient use to create the product sought.

As for people who, seeing that traffic is not established on the canals sufficient for the duties imposed to reimburse the expenses of construction, would like to remedy them by putting so much tolls on the roads to force commerce to abandon roads and preferentially go to canals³, we think that their opinion does not conform with the true interests of the state. The result of this measure would obviously be to hinder trade by preventing it from doing what it deems appropriate to its interests, and to increase transport costs which are now incumbent on it and which form part of price of goods at the place of consumption. Now we must focus, in our opinion, on reducing expenses. Far from proposing to increase them, we should rather inquire whether, for want of other means, it would not be expedient to reduce them by premiums, and thus to favor that particular kind of industry which consists in operating the transport of goods. A similar favor has sometimes been granted to some branches of maritime navigation.

² This proportion of 8 to 1 is very different from that admitted by various authors, for example by Defer de la Nouerre, who claims that the cost of land and water transport is in the range of 150 to 1 (*La Science des canaux navigables*, Volume 1, page 53). We will see later that we take, with M. Dutens, 1 fr. and 0 fr,13 per league for the respective expenses of the transportation by land and water of a barrel of goods. These evaluations, being average terms from experience alone deserve some confidence.

³ This proposal, reproduced in recent times, had been made in 1786 by Defer de la Nouerre.

Suppose that the government built a canal and then imposed a toll which reimburses the capital and pays maintenance costs, but which makes the transportation expense equal to that which previously by the road of earth. No advantage will evidently result from this operation for the development of trade and industry: the country remains exactly in this respect as it was before. The government has shed its money: it has not lost anything or won anything. The same is true of the state: a revenue equivalent to expenditure has been created, and consequently there will be no increase or diminution in public taxes. The only result we have obtained is therefore only a part of the horses; and men previously engaged in the transport of goods, are now unemployed. Now, it is by no means proved that this is generally advantageous. It is at least conceivable that one could not congratulate oneself for thus rendering efforts useless, that as far as the progress of the industrialist would have immediately procured another occupation. But, as this progress will not occur in the hypothesis which we have admitted, it seems certain not only that we will have worked in vain, and that a real evil for society will have resulted.

On the contrary, let us admit that after the construction of a canal, no toll is imposed on it. The key capital, which has been provided by the taxpayers, has come out of government hands, and is not coming back. But the taxpayers benefit from the whole economy on the cost of transport resulting from the substitution of a waterway for a dirt road. It is sufficient for the operation to be advantageous, that this economy compensates the costs of construction and maintenance. Moreover, and this is, according to us, the most important circumstance, the transport costs being reduced to a lesser extent than is possible, the channel then gives commerce and industry all the advantages that can be hoped for.

But, it will be said, in acting in this manner, the government is deprived of the sum employed in the construction of the canal, a sum which was in its hands, and is now gone and will not return. We reply to this observation that either the government can do without the sum of money for the general needs of the state, or it cannot. If it can, it is useless to try to draw a second time this sum from the hands of the taxpayers; if it cannot, it is better to obtain it in any other manner, by distributing it over all taxes, than to seek to draw it from a toll. Indeed, and we cannot repeat it too often, this toll tends to annihilate, or greatly diminish, the utility arising from the expense.

We emphasize these notions because they seem fundamental. In France, immense capital is being used to establish inland navigation. These canals will have toll charges such that transport costs on trade are reduced, for a large number of goods, about half. Now, if commerce could not expect further advantage from the construction of canals, it would have been easy to obtain it at much less expense. It was sufficient to improve the construction of the roads to ensure that a horse had carried twice as much freight: the expense would have been infinitely less, and the operation would not have required the same time or encountered the same obstacles.

There are reasons according to which it may seem appropriate in some cases to establish moderate tolls. For example, it can be said that a toll on a canal is the most certain means of providing for maintenance costs and ensuring conservation of the structure. Yet this would be true only so long as the proceeds of the toll would not enter the coffers of the government and would designated to a special fund. Otherwise maintenance is not more secure than all other public expenses.

These ideas on the administration of public works do not agree with recent practice; but it appears nevertheless that is not always far. Effectively soldiers made the canal of Briare, and the government has provided the greater part of the expenditure for the canal of Midi, without seeking to recoup these funds⁴. Tolls were considered primarily on this last canal for ensuring maintenance, and it has left the administration and operation to the Riquet family.

In short, the absence of any toll, or the reduction of the toll at the lowest possible rate, and for providing at most maintenance costs, is necessary for establishing transportation to produce the benefits expected. This condition can be met when expenses are taken from public funds, and can only be so in this case, the result is a powerful motive for preferring this mode of execution to any other.

To these considerations that seem to us of great importance, one could add other remarks which lead to the same conclusions.

When the execution, and by consequence the direction of public works, is in the hands of the government, it is possible to embrace a grand ensemble, to direct them according to general views, to bind lines of communications to each other so as to increase their usefulness.

It is possible above all, and this seems to be essential, to choose points at which the expenses will be carried a way that favors parts of the realm where help is most needed. Let us suppose that the establishment of transportation never takes place except by private investment and speculation. It is evident that these speculations will be preferred in places where industry and wealth already have made great progress; and these places are even the only places where the speculations in question can take place. Thus we saw the first railroad companies executed near Saint Etienne and Lyon; and if we have proposed some other, only in the directions where there are already communications, imperfect indeed, but which, at the present time, give rise to considerable transport. Consequently, by abandoning entirely the execution of works to private speculations, two inconveniences would result: 1°. this work could only be carried out after the country has already reached a very high degree of wealth; 2°. the wealth tends to concentrate in points where local circumstances are most favorable. It is, however, in the public interest, on the one hand, not to abandon the country to itself while waiting for the spontaneous effects of the progress of wealth, but rather to excite this progress by every means possible and, on the other hand, to remedy the natural obstacles presented by the poorest countries. By doing so, these areas will enjoy the advantage of belonging to a great nation, whose wealth offers immense resources. Otherwise, they would languish for a long time in a state of poverty and inaction, which they cannot escape by their own efforts today: it would be as valid for them and for the whole kingdom that they would cease to be part of it, because the state would not help them, and their poverty would prevent them from contributing and participating in general prosperity.

The reconciliation of what happened in France and England confirms these principles. In France, by means of aid granted from public funds, there have been for a long time several great canals, as well as very expensive and very useful bridges, which today even could not run by way of concession. In England, on the other hand, where the government did not have the power

⁴ Riquet has only provided two million on fifteen. The king and the province of Languedoc have given the rest.

to execute such enterprises, these occur only very late. It was possible to do this only after the time when foreign trade had procured considerable wealth, and the abundance of capital gave rise to the private speculations in question. It was after giving itself the whole world for a market that England found herself rich enough to perfect her internal communications, without any effort on the part of the state, and by this natural effect the movement of the industry was left to itself. Since then, wealth has continued to make rapid progress, to which these speculations have contributed: we are therefore far from wanting to exclude them. But France finds herself in other circumstances: she has not reached the same degree of prosperity. Entrepreneurship and speculation are not developed to the same point. It is hardly outside that it must seek a market capable of giving to its industry the impulse necessary, and which it is ready to receive. It must focus on creating this market inside itself; This can only be done so long as the necessary means are taken to increase the population, and to reduce poverty in the parts of the kingdom which have contributed least to general progress.

We shall place here a last remark, which has already been presented with more development by a clever engineer, M. Vallee: it is that by executing the public works with the funds of the state, by means of an organized administration, as is the administration of bridges and roads, the expense of this work must generally be less. Material expenses are the same in all cases, and with regard to operating expenses, which are only a small part of the expenses, experience shows that companies grant engineers and other agents higher salaries than the government does. In addition, the organization and management of great affairs of this nature gives rise to chances of loss, the partners of which must be compensated, and require painful care which must be rewarded. Considerable sums are used for this purpose, or remain in the hands of the bankers, as bonuses to facilitate the placement of the shares. The resulting increase in expenditure is borne by the state, and there is every reason to believe that incidental expenses of this nature are much higher than the collection and administration costs of work done by the government. It will not be said, moreover, that private fortunes, which would be created in this manner, are a wealth acquired by the country; because these fortunes are not the result of new production, they come from capital released from the hands of private individuals.

Lastly, as to the advantages which, according to some people, result from the intervention of private interest, the advantages which would consist of the fact that the works directed by companies would necessarily be executed with more economy and rapidity than works submitted to public administration, we do not fear to advance that this opinion has no real foundation. **In France it suffices for the public administration to want.** It can have the use, more than any company whatsoever, of all the elements of success: experience, superior luminaries, power, wealth, credit, and dedication.

On the execution of work by public funds, with reimbursement of expenses using a toll.

On the basis of the considerations set out above, there is little left to say in order to appreciate this way of proceeding. The government, by means of funds raised from the taxpayers, pays the expense of work, and moreover it will be obliged to take on these same funds needed for maintenance. It imposes a toll to pay the expenses it made, and new expenses it is charged with. It is easy to see that, for this operation to be not onerous for taxpayers, the annual saving on transportation must at least equal the interest on capital expended, plus maintenance costs. This

remark establishes a limit for tonnage, below which we could not run without disadvantage to the enterprise.

We will try to apply these notions to the establishment of the canals, to give them more precision and we will adopt the following data:

Expenditure needed for the construction of a league of a great navigation canal, 590,000 francs, and, taking into account the cost of operation and loss of interest, 700,000 francs; the annual interest is 35,000 francs.⁵

Annual maintenance, expenses of conduct and administration for a league of the same canal, 10,000 fr.

Expenses paid by the trade for the transport of a barrel of goods, for a league on the roads, 1 fr.; on canals, 0fr, 13⁶. Economy of this last mode of transport, 0fr.,87.

According to these data, a canal can be undertaken without loss to the state in any direction, where the quantity of goods transported annually by this canal might be equal to 45,000/0.87, or 52,000 tons. If the tonnage is greater, the state will earn a yearly sum equal to the product of 0fr.,87 by the number of barrels transported exceeding 52,000⁷

The consideration of the interest of the state provides no absolute condition for fixing the toll, which is received and paid for by the state itself. It is obvious, moreover, that this toll can not surpass the economy obtained on the cost of transport, so that it must necessarily be understood, in the example we consider, between the 0 and 0fr,87 limits. If the toll is nil, the favorite canal produce the most development: if the toll approaches 0fr.,87, it will not favor production at all; it will leave the country in the state where it was.

The rate of tolls established by the last laws varies much according to the nature of the merchandise. The average term seems to be about 0fr.,16⁸. If we wanted the duties collected to reimburse the expenses, that would require an annual transport of 45,000 / 0,16, or 281,000 tons, a quantity much higher than the tonnage which takes place today in France on the most frequented canals.

Transporting 52,000 tons, sufficient for the enterprise to be useful to the state, would give

⁵ This assessment results from the calculations presented by Mr. Brisson. The expense of 2225 kilometers of 1st class canal is 329,557,000 f. which amounts to 148,000 francs per kilometer, or 592,000 francs per league. Operating fees and interest losses have been reduced to 1/5, which may seem a little weak. (*Essai sur le système général de la navigation intérieure de la France*, pp. 127 and 129)

⁶ What are the accepted results about transport prices, by M. Dutens (*Histoire de la Navigation intérieure de la France*, tom. II, Introduction, p. Xxv and x x v i), It is superfluous to remark that the price of 0fr,13 does not include the toll.

⁷ We neglect here the economy that the canal can provide on maintenance of roads which it replaces. This consideration decreases a little tonnage indicated.

⁸ M. Dutens achieves this by considering the totality of transport which may have place in France; 0fr.,196 by distance of 5000 meters, or 0fr.,157 per league. For manufactured goods and goods imported at the beginning, the average duty is 0fr,386 per distance, or 0fr,31 per league.

annually, at the rate of 0fr,16 for each, only a product of 8,320 francs, which would not be sufficient in general to pay the expenses, maintenance, and administration costs.

Perhaps it will be said that the toll of 0fr.,16 can be increased, since it seems rather far from the limit 0fr.,87. But if we consider the inconveniences of water transport, the excess of length which we are generally obliged to give to the navigable lines, and that in many cases trade prefers the track of earth in spite of the excess expense it entails, it will be judged, on the contrary, that the rights are as high as possible, and we might lose in seeking to make them more productive.

We see that enterprises of this kind give very different results according to the point of view under which they are considered. If it is only a question of doing a useful thing for society, a very mediocre tonnage, which can be counted on in a great number of routes, will suffice to justify the expenses; but if it is claimed that funds expended must return to the state by means of a toll, most projects become impossible. Moreover, the very establishment of the toll, as we have said before, greatly diminishes their utility.

It appears, moreover, that the Government has no motive for seeking to withdraw its funds by means of a toll, rather than in any other way. As soon as one is assured that the project is useful to the country, there can be no objection to charging the expenses on all taxes. On the contrary, it will be judged that it is very advantageous to take this last course, if we take care that, the more economic the transport, and the more the development in production and circulation, which results from the canal, will increase public revenues based on indirect taxes. It seems, then, that the idea of recovering expended funds from a toll is a false view, which can only induce errors very harmful to the good of the state.

On the execution of public works by way of temporary or permanent concession.

The advantage of this method is that it requires no sacrifice from the state. The work is done without any new expenditure coming to increase public taxes.

The main drawbacks are: 1°. that the execution of this work requires conditions which are difficult to meet, which prevents the enterprises in question from taking developments which would be desirable for public prosperity; 2°. that the establishment of tolls diminishes the usefulness of these projects.

For the establishment of a new route by concession to be useful to the country, it is necessary, and it is sufficient, as in the previous cases, that the economy obtained on the transport is at least equal to the interest of the capital spent and increased maintenance costs. It would therefore be found that, in the case of a large shipping canal, it is sufficient if the annual transport exceeds 52,000 tons.

For this arrangement to be possible, it is necessary that the product of duties imposed repay with earnings the interest of funds spent and maintenance costs. Therefore in admitting rates established in the last canals, and assuming only 10 p. 100 of benefit, it would be necessary that tonnage should rise moderately to $49500/0.16 = 309000$ tons. It can be judged from this that there is perhaps no route in France where the execution of a canal, by way of concession to shareholders who rely solely on the toll, is possible; or at least it can be done only in some

localities, where the expenses would be much lower than the average term which serves as a basis for calculation, and where the transport would be very considerable. The experience of recent years only confirms the truth of this conclusion too much, since only a very small number of canal concessions have been made, some of which have remained without result, and others do not give shareholders an income proportionate to expenses.

From this it is recognized that the establishment of a new route may be useful to the country long before it is possible to carry out this establishment by means of a concession; so that one would do great wrong to adopt this means exclusively. On the contrary, it must be resorted to only in so far as the state of public affairs is absolutely opposed to taking the necessary funds out of the mass of taxes.

We will never tire of noticing the difference in the results obtained in these two cases. If the canal is made by the Government, and if no toll is imposed, the cost of transport is reduced moderately 1 fr. to 0 fr. 13 per barrel per league. If the same job is done by a company concessionaire, the expense of transport is reduced by 1 fr. to 0 fr. 29. Consequently, if, as seems appropriate, we look at the distance which regulates the extent of the market as being proportional to the expense of the transport, we see that this distance will increase in the first case in ratio 100:13, and in the second case in the ratio 100:29. The geographic extent of the market being proportional to the square of these numbers, we see that it will be five times greater in the first case than in the second⁹. Now, there is every reason to think that the influence of enterprises of this nature on public prosperity is at least proportional to the extent of the market they procure; perhaps it is much larger, because the various parts of the market react to one another.

It seems that there is less difficulty in concessioning bridges and railways than canals. Note also that it never happens that a state does all that it could and what it should do for his own good. When taxes are already very considerable, it is difficult to increase them to obtain a distant advantage, however secure. Nations are rather disposed to postpone sacrifices imposed from the present to the future, than to submit to present privations to become richer afterwards. So, although it is quite certain to our eyes that the true interest of the state would require that all the expenses necessary for improving transportation be paid for with public taxes, we do not think that it is advisable to exclude concessions. We consider to the contrary that there are many genuinely helpful enterprises which can still be executed by way of concessions; these will always enough to use the funds the state can spend on these items. As for enterprises which can be the object of a profitable speculation, provided that it results in a benefit for the public, although this advantage is much less than it could be, it is obvious that one must not oppose any obstacle, and that they should instead be promoted.

But it seems to us that it would be desirable, or that concessions should not be perpetual, or at least that, after a time sufficient for reimbursing expenses at a profit, the duties collected should be reduced to that necessary for maintenance. This provision would remedy the

⁹ For manufactured goods, or imported goods, the duty is 0fr.,31, the cost of water transport is 0fr.,44, or nearly half that of land transport. By the effect of that duty the distance at which the goods can be transported diminishes only in the ratio 100:44., instead of 100:13. Thus the extent of the market for goods of this kind, is about 12 times less than it would be if we did not put any rights on the channel.

inconveniences inherent in this mode of executing public works, as far as it is possible without rendering it impracticable. It would not stop speculators, and would have a considerable influence, albeit remote, on the progress of wealth.

On administrative measures which can be adopted for public works concessions.

The concessions system has been developing in France for only a few years, and there has been some hesitation as to how it should proceed.

The first concessions were granted by order of the king after a preparatory review, and a discussion with the bidders. It was then considered appropriate, after receiving proposals, to look at them somehow as non-avenues, and to make the company the subject of a public tender, so that the people who had the idea of this company after having made the necessary studies to recognize and demonstrate to the government the utility, and to make sure that it should be profitable for themselves, are found exposed to competition from any other speculator.

It was not considered elsewhere that the concessions which in general are a special subject of law, according to the principle that a law is needed only as new loads are imposed on the state. An article inserted annually in the budget law prevents difficulties which could arise relative to the establishing tolls. An order of the king is, in all cases, regarded as sufficient, to comply with the law of 8 March 1810, to declare the public utility, and authorize the acquisition of land and other specific properties.

When the administration was asked against the use of public tenders, citing the example of the concessions which had not been subjected to it, it was simply replied that the government had thought fit to favor the first speculations of this kind. This result would have not been enough if our laws included a barrier to this submission from proceeding. There is really no such thing, and the government is perfectly free to grant concessions without subjecting them or to compete with them. The only consideration on which need to focus here is therefore the interest public.

In the cases in question, what is called the public interest relates to three objects: 1) the interest of the state, as for the company considered in *the canal of the Rhone*; 2) the interest of the trade in the proper fixing of the rate of tolls; 3). the interest of the shareholders who will take part in the company.

The interest of the state mainly requires two things: first, that the enterprise is really useful (for example, by admitting the data exposed above, it would be necessary to be certain, before allowing the establishment of a grand navigation canal, that the transport on the canal will be at least 52,000 tons per year); in the second place, that the execution of this enterprise is sufficiently assured. In fact, the utility of the enterprise can only commit the government to authorize the acquisition of particular properties¹⁰; and it would not be proper to let work begin, and to

¹⁰ Some people, educated and enlightened on other points, have difficulty in admitting this imperative necessity, we shall even say this sacred duty imposed on the government which watches over the public interests, to make sure as much as it is possible, before allowing the execution of a business, that it is useful in the sense that we are stating here; that is to say, the economy that it will provide to trade on the cost of transport is less equal to the expenses that the work will cause. Some people claim that, provided the trade has grown as a result, there is no need to worry

denature property, without having a very firm assurance of the certainty that this work will be completed.

For the interest of trade to be guaranteed, it must be recognized that the proposed toll is as moderate as possible, that is, the profit obtained by the concessionaires does not exceed the term necessary to admit for the companies of this nature, with due regard to the uncertainties and chances of loss that will always be unavoidable.

Finally, with regard to the interests of the shareholders, it may be rightly said that the government must not allow the public to be misled by speculation of this nature, which would expose those who would be involved to losses. But as, in the end, it would not result from this error (provided that the enterprise was useful in itself) that a displacement of capital, something that happens every day without us trying to prevent it, we do not think that the government should be compelled to oppose shareholders who, if they wish, place their funds at a very low interest. But it seems to us that it is its duty to make public the information it possesses, which could serve to enlighten them.

From this we think that we must reduce the obligations of the government in three main points: 1°. *ensure that the business is useful to the state*, i.e., the savings on transportation will be at least equal to the construction and maintenance costs; 2°, *obtain a guarantee that the business begun will be brought to an end*; 3°. *recognize that the toll rate is properly established*.

The examination of the value of an undertaking, which must consist in an exact comparison between the expenditure and the economy obtained from the transport, and especially the appreciation of the terms proposed for setting the tolls, necessarily require the production of detailed and complete reports on all the works, as well as the information collected on the quantity and price of transportation. We therefore believe that it is a duty for the government to order, as is done in England, the presentation these projects and information, and have them checked and discussed with care.

As to the certainty that the enterprise begun will be completed, the sureties which are demanded today for this purpose may not be a sufficient guarantee; and besides, this measure has the disadvantage of engaging and rendering less productive the capital of the persons who are most disposed to employ them in a manner profitable to society. The means which experience

whether this benefit will be due to excessive and disproportionate expenditure; because, they say, the money spent not leaving the country, the company's dealers can lose, but the state does not suffer. We answer that indeed some ill conceived that is a speculation, the money even given by the shareholders to pay the workers is not ?????????? found in the hands of those who provided the workers food and clothing. But the loss borne by the state is none the less real: it consists in the work done by the workmen, the value of which is a subsisting bond, since the workers exchange it for money, and we let us suppose here not to have created an annual income proportionate to the sum by which it has been paid. To recognize without a doubt that the state has made a real loss, it is sufficient to suppose that the same workers, paid in the same manner, have been employed to cultivate new lands which will give the proprietors an adequate annual income. It is obvious that the same work, and the same passage of money which has served to pay it from one to another, will have given rise in this second case to the production of a value which does not exist in the first. Thus a work badly applied necessarily causes a true loss to the society. These notions are very familiar to all who have studied the principles of political economy, and it would have seemed useless to recall them if experience had taught us otherwise.

has devoted to England, to obtain certitude on this question, seems to us much preferable; perhaps it is the only one which is assured. This means that bidders are required to submit a list of creditworthy persons or commit themselves to provide sufficient funds to cover a considerable portion of the alleged expense, such as 3/4 or 4/5. In this way, false and hazardous speculations are naturally excluded, without any obstacle being brought to a wise and useful enterprise.

No doubt the preliminary and in-depth discussion of a big company, as well as the debate about the rate of tolls between the conflicting interests of trade and bidders, are obligations which are difficult to satisfy. Here, moreover, the question of competition arises. While one is considering a proposal, there may be others who are more prone to trade because they will have lower tolls. The determination of the party that the government should take on for these opportunities is not without difficulties.

These difficulties have lately received a very simple solution, which consists in putting such enterprises to public auction. But one can not help but find a shocking injustice to those who first present a project. The first idea of a grand project, or the possibility of a grand project; the work of mind, the care, the time, the expense of recognizing this opportunity, and of having it recognized by capitalists and the government, are obviously a right that must not be violated. Moreover, admitting any competitor without a real guarantee of performance, brings much exposure, as has happened, to putting the affairs in the hands of people incapable of driving them to an end. Entrepreneurship is completely discouraged, since the persons most capable of engaging in business of this nature will certainly, when they have a very great chance of seeing them removed after much care, by every man who, having perhaps little to lose, will find himself bolder or less prudent than themselves. Finally, this process gives no real assurance that the interests of commerce will be guaranteed, since it is easy for the competitors, on occasions where they can never be in small numbers, to bid only at prices as high as they wish¹¹.

We think that it is not advisable to put in public auction concessions for great works for improving transportation. It remains to be seen how we can reconcile justice with the first bidders and the interest of trade.

It seems at first sight that in all cases, at the same price, the first tenderer (assuming the guaranteed execution as stated above) should be preferred.

But it may happen that the first bidder does not want to lower its price to the rate offered by those who came last. We believe it is then necessary, if there is a significant difference between the proposed prices, that the government itself judge, by comparing the expenses to the products, what is the appropriate toll rate to give the profit which enterprises of this kind must include. If the first tenderer adopts it, the concession must be granted. In the opposite case, it belongs naturally to those who wish to conform to it. It also should consider ways and performance guarantees to allow, if necessary, a little advantage to those which present more.

¹¹ Another downside of auctions is that they necessarily take place on the specifications agreed in advance, which the official who presides over the operation can not change. The slightest difficulty, on which it would be easy to get along with each other, hinders business, or causes long delays.

An examination similar to that which we are discussing is made in England by the committees of the Houses of Parliament, and the business is then debated before the Chambers themselves. As in France the legislature does not take part, in general, in administration properly called, and they intervene only for issues that must be settled by law, it does not follow exactly the same method. It may also be inappropriate for us to rely entirely on government-dependent persons to examine the cases in question, although we would be convinced that this could be done without danger to the public interests. But it would seem that any objection would be avoided by forming numerous commissions, from fifteen to twenty members, for example, in which the engineers belonging to the first grades, and personally disinterested in the question, would be joined by administrators and other independent persons, such as deputies or peers from France. If the results of the examinations are made public, it seems that the government will have fulfilled all the duties imposed upon it, and prevented all objections.

It is easy to foresee, moreover, that cases of competition will become very rare in France, when the obligation to submit detailed and complete projects and lists of subscribers who are solvent for the greater part of the expenses will be imposed. We do not fear that it is objected here that the conditions in question will render speculations of this kind too difficult. It is evident that they will not stop those who have in view a truly good and useful business, and who will possess the necessary means to complete the project; more than they will be assured, by presenting themselves first, of obtaining the concession on reasonable terms, and since they are asked only for the production of information whose existence is indispensable to them. As for those who are not afraid to engage in businesses without having examined and discussed to have examined and discussed the bases, and without assured means of providing for the expenses, there is no inconvenience in dismissing them. In general the interest of the state will be better guaranteed, if one makes the business less easy and at the same time safer¹².

It seems to us from the foregoing that public tenders should be abandoned, and that a right of preference should be given to the company which first asked for permission to have the projects drawn up by making a commitment to them. submit within a specified period, supported by a list of subscribers for 3/4 of the alleged expenditure at least. If other companies make the same application, and also produce projects and lists of subscribers before the decision has been given, their competition would be treated in the manner indicated above. The examinations and discussions necessary to strike a fair balance between the interests of the bidders and those of commerce would be entrusted to commissions which would consult directly, if they deem it appropriate, the local administrations, which would obtain by inquiry or otherwise the necessary information, and whose reports would be published.

Summary.

We will review here the principal proposals from the preceding:

1°. The value of public works, aimed at establishing transportation, mainly consists in

¹² The obligation to present detailed projects, when one sees oneself in concession, is so natural, that in one of the first cases of this kind which one is occupied, that of the Ship Canal Seine, speculators have not hesitated to prepare these projects, which required much care and expense.

reducing the part of transportation costs charged to commerce. The decrease in this part of transportation expenses is much more important to the progress of agriculture and industry, the decrease of this portion of expenses is generally supported by the state.

2°. It would be desirable that the expenditure on the works in question should be from tax payments, which would make it possible not to establish tolls, or to establish only very modest ones intended to pay only the expenses of maintenance. This work would then provide all the utility that can be expected. This would accelerate the progress of wealth, and the resources of the state could be brought to those parts where they are most needed.

3°. The execution of public works by concession must not be excluded; on the contrary, it must be welcomed and encouraged, because the results are useful, albeit in a much lesser degree.

4°. In granting concessions for the works, the government, the protector of public interests, has duties to fulfill, which consist principally in verifying the general utility of the enterprises, in guaranteeing the interests of commerce by the proper establishment of toll rates, and to ensure the completion of the works.

5°. These conditions can not be fulfilled without obliging bidders to submit detailed projects of works, and without subjecting the elements of the enterprise to an in-depth discussion, which may be entrusted to commissions composed in part of independent persons. It is not enough to put companies at a discount in a public tender.