The EC Context for Private Forestry Incentive Evaluation

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A brief overview of forestry in the European Community (EC) of the 9 is presented. Forestry incentives seem necessary for increasing timber production on private ownership in order to avoid possible price inflation.

In the economic analysis of the program evaluation method proposed here to assess the efficiency of such incentives, a broad EC perspective is recommended to avoid erroneous conclusion. The evaluation made from the prospect of a member country only is artificial and is influenced by EC policies anyway. The evaluation changes depending on whether these EC policies are considered given and immutable or not.

Keywords: forestry incentives, European Community, evaluation

Introduction

Before the accession in the European Community of Greece, Spain and Portugal, which have not been included in our evaluation study, the forest area covered 31 million hectares, or about 20 percent of the total land area. This area is not distributed evenly among the member states. France alone has about 50 percent of this total area. The forest area per capita in France is 0.28 hectare which is twice as much as in any other member state except for Luxembourg (0.24 ha. per capita). Compared with that of countries outside of the E.C., 2.4 hectares per capita in Sweden or 1.3 in the United States, the forest endowment looks poor.

The commercial or productive high forest covers 19 million hectares, 12 million of which are in coniferous type. Of the 12 million less productive hectares, mostly broadleaved, at least 3 million hectares in France and 1 million in Italy are potentially productive. The remaining 8 million are less suitable for timber production but important from an ecological standpoint especially in the central mountainous area and also from a social standpoint as recreation forest in urban area. The forest area has been yielding an average of 80 million m^3 of wood annually during the last two decades. The average annual yield approximates 2.5 m^3 per hectare over the total forest area and 4.0 m^3 for the commercial forest area. This harvest supplies mostly sawmills (50 percent). Sixteen percent goes to pulp mills, 9 percent to particle board factories, 10 percent is used for fuel, and the rest is taken by pole, mining, and other industries. This production however covers only 40 percent of total EC wood consumption. It is estimated that under present policies, annual removals will rise to slightly over 100 million m^3 by the year 2000 but the EC will still have to import close to half the wood it will consume at that time.

To meet the challenge of increasing wood demand, the private owners who managed 18.75 million of the total forest area will have to be brought into the scene for any production policies to be credible. The problem in the implementation of policies geared towards the private landowners is the pronounced fragmentation of their holdings. The average size of private holdings is 4.5 hectares, while for state-owned forests the EC average is 910 hectares, and the other communal and municipal forests average 119 hectares. Further background on the forestry sector of the EC can be found elsewhere (EC 1979, Harou 1981, EC 1985).

Forest policies

One of the important aims of EC forest policies is surely to confront the problem of trade deficit in the sector. Based on a mild scenario, the community will have to import an extra 30 million cubic meters of wood and wood products by the year 2000. This should be done by increasing the production of timber and at the same time maintaining production in some areas threatened with "Waldsterben". While conservation and social outputs from the forest are more of the relevance of the EC members and regions, except maybe for the increasing concern about the wrongly named "acid rain" problem, the increase of production, specifically from the private ownership, seems to be a problem that should be attacked in a global fashion. The reason for the EC involvement is the necessity of redistributing productive investments based on comparative advantages mainly geographical ones in this case. Another reason is, the need to reallocate EC funds from the oversubsidized agricultural sector to other rural sectors. Forestry seems particularly appropriate in this respect.

If a need of EC guidance is felt appropriate, the inexistence of any real forestry direction is to be deplored (Baillet 1983). Two years after the treaty of Rome, in 1959, a European forestry conference took place in Brussels where it was decided to create a forestry division in the general Direction of Agriculture of the EC Commission and to establish a Committee of forest policies coordination in which the Forest Service chief of the member states would sit. Since then, mostly because of the lack of political will, only sporadic actions mostly integrated in regional agricultural development programs have been implemented. In 1978, a global EC forest policies plan was forwarded to the commission but stayed without response until today. Lately a series of possible punctual actions in the forestry sector have been proposed (EC 1986).

At the Brussels Forestry Conference of June 1959, another important decision was made not to consider forest products as agriculture products, and so, not to submit the forestry sector to EC control and regulations. This decision was reached after 2 years of bitter debate in which Germany won the last word in arguing for a free market for wood and wood products. The German position was explained by a previous negative experience with 2 decades of price fixing (1934–1953) and a fear of not benefiting enough from the proposed regulations (Zulpich 1976).

Considering the lack of forestry direction in the EC and the present situation of agriculture surplus and wood deficit, one cannot refrain from thinking that some kind of general line of forestry actions should be agreed upon in order to change this unfortunate situation.

Forestry budgets

Having no official forest policies, the EC has no definite budget neither. It is only through the contribution of the European Agricultural Guidance and Guarantee Fund that the EC finances definite forestry interventions in the framework of the restructuration of the agricultural sector. These actions consist mainly in the conversion of marginal agricultural land into forest. This contribu-

Table 1. Forestry Budgets in the EC.

	1975	1976	1977	1978	1979	1980	NOTES (1)	(2)
FEDERAL REPUBLIC OF GERMANY	5 826	5 884	6 360	8 400	21 309	28 479		1.9 %
	(100)	(93)	(95)	(121)	(302)	(403)	247	
FRANCE	n.d.	n.d.	n.d.	n.d.	65 551	76 469	n.d.	2.8 %
ITALY	54 578	39 904	51 614	97 216	104 739	131 375		4.6 %
	(100)	(84)	(117)	(236)	(269)	(349)	156	
NETHERLANDS	(3 544.3)	2 032.4	6 390.1	6 683.1	7 159.2	7 013.5		3.1 %
	(100)	(57)	(180)	(189)	(202)	(198)	148	
BELGIUM	745,7	782,5	986,3	1 173,0	1 385	1 032,2		0.4 %
	(100)	(99)	(119)	(139)	(163)	(123)	94	
LUXEMBOURG	48.3	46.2	56.4	44.7	39.2	41.4		0.2 %
	(100)	(91)	(105)	(81)	(72)	(76)	55	
UNITED KINGDOM	98 704	96 368	66 544	75 329	107 049	117 581		11.2 %
	(100)	(108)	(79)	(90)	(126)	(129)	67	
IRELAND	14 570	15 194	15 932	19 439	21 115	29 134		7.9 %
	(100)	(116)	(128)	(158)	(173)	(239)	124	
DENMARK	1 042.0	1 180.3	1 426.2	1 648.6	2 833.2	2 082.6		1.3 %
	(100)	(107)	(131)	(156)	(271)	(218)	143	

(1) 1980 GNP (1975 = 100)   Source: EC 1984
(2) % of the agriculture budget

Table 2. Systems of aid for nonstate-owned forests in the EC.

Purpose	France	Federal Republic of Germany	Italy	Denmark	Belgium	U.K	Netherlands	Luxembourg	Ireland
Increase of timber production									
First afforestation	S-D-L	S	S-D-L	S	S	S	S	S	S
Conversion or improvement	S-D-L	S	S-D-L	S	S			S	
Reafforestation after disasters	S-D-L	S	S-D-L		S		S	S	
Normal reafforestation					(S)	S	S	(S)	S
Planting outside forest areas	S-D-L	S	(S-D)				S	S	
Soil preparation, clearance of vegetation	(S-D-L)	S	(S-D-L)	S-D	S	S			S
Opening up and maintaining existing forest areas									
Construction of roads and tracks	S-D-L	S-D	S-D	(S)	S		(S)	S	
Fire protection	S-D-L		S-D	(S)	S				
Protection (insects, diseases, game)	S	S	S					(S)	
Assisting forestry associations									
Aid in forming associations	S	S	(S)	S					
Supplying special equipment	D	S	(S)						
Other measures									
Recreational forest		S	D		S	S	S		
Drawing up economic plans	S-D	S	S		S				
Aid after disasters		S			S			S	
Owners retention of forests, land purchase	D	S-D	D						
Fire insurance		S							
Day-to-day expenditures		(S)					(S)	(S)	
Improvement of forest- or meadowland	(S-D-L)		S						
Conferences, research, & other projects	S	S	S	S	S	S			

Source: European Community 1976.
S = nonrepayable grant; D = cash loan; L = loan in form of service contracts; ( ) = contingent and not an aid measure on its own.

tion rose from a modest 1.7 percent in 1973 to around 7 percent in 1980.

The means put at the disposition of national forest policies has thus to be examined through the national forestry budgets included in Table 1.

This table reveals that these budgets are low compared to agriculture and vary widely from 0.4 % of the agriculture budget in 1980 for Belgium to 11.2 % for the United Kingdom. Spending in forestry activities has increased substantially in Germany, 2.5 times in real value, but decreased in real terms in U.K., Belgium and Luxembourg. Italy has the largest budget with around 131 million ECU in 1980 followed by the U.K. (118 M. ECU) and France (76 M. ECU). From these budgets the exact share directed toward private forestry incentives is not known by the author at this stage but is thought to vary widely.

Forestry incentives

The administration and legislation of most EC countries form a satisfactory basis for the implementation of forest policies aimed at increasing production on private lands in the absence of an EC initiative.

First of all non-financial incentives exist. The legislation of most EC members makes planting after harvest compulsory and the size of clearcuts is strictly defined. Extension programs provide owners with information that includes simple technical advice, prices and other market news and details about aid programs. Often the extension is targeted toward the creation of owner cooperatives and the establishment of enterprises that contract for the harvest or the entire management of woodlands.

Indirect fiscal incentives are also provided. Taxes may be reduced or waived entirely. The various states adapt their taxation in different ways. For the property tax, the valuation method can be altered or the tax rates

lowered or suppressed entirely for a period of time as in Belgium. Forestry income taxes give some provisions to offset losses against income. In one country no income taxes are paid on timber. On transfer of property, a low rate is generally established, or else a high treshold below which no tax is payable. In some cases, payment can be deferred if the new owner continues to manage acceptably for a minimum period. In general, taxes are lowered if the owner complies with certain standards of management.

The direct financial incentives for which we want to discuss the evaluation, are summarized in Table 2 for the different members. They are of several types:

– Non-repayable grants in kind
– Cash loans with interest rebate or deferred repayment
– Cash loans similar to the previous ones but only to contract state services

Non-repayable financial incentives serve mostly to increase timber production. But opening private forest areas for recreationists, recovery after disasters and fire insurance may also be funded through these incentives.

There are three principal purposes for the more production oriented types of subsidies. One common aim is to increase timber production through afforestation of marginally productive and waste land, reafforestation after disaster, and conversion, improvement and enrichment of low yield stands. Considerations of soil improvement and the improvement of agriculture structure, especially the orderly conversion into forest of agricultural fallow land and waste land, are always present. The percentages of national aid funds spent on these measures in 1978 are Ireland and U.K. 100, France 71, Belgium 42, Federal Republic of Germany 35, Italy 32, Luxembourg, the Netherlands, and Denmark around 15 percent. For the EC as a whole, 50 percent of the subsidies have been paid for increasing timber production. The annual average grants per hectare of afforestation vary from ECU 100 to 1000 and are high by US standards.

A second use of direct subsidy is improving access and maintenance. Three primary measures are construction of forest roads and trails, protection against fire, and protection against disease. Averaged throughout the EC, 26 percent of the total amount of subsidies was allocated in 1976 for access improvement and maintenance and this is not thought to have changed much today. In Luxembourg, 80 percent of all forestry incentives are paid for this purpose. In Germany, the percentage is 40, in Italy 30, Belgium 26 and France 20. Germany paid up to ECU 4000 per km., France 2650, Belgium 1766 and Luxembourg 1598 for road construction.

The third principal use of subsidy is to aid the formation of forestry associations to increase timber production on small and medium sized holdings. The EC unlike the Scandinavian countries is just starting this type of assistance. At present, Germany and France are the only countries with a comprehensive promotion programs for forestry associations.

Lately, important subventions have been given for protection, especially in Germany to compensate the owners hit by the "waldsterben".

Incentives evaluation

There has not been a conscientious and systematic evaluation of these national incentives. Some practical recommendations have been made on which incentives are easier to administer or could have the most profound impact on the long run production or the competitivity of the timber markets. But there has been no systematic analysis of the efficiency of these incentives given the objective of increased timber production on private ownership.

An evaluation method applicable to the direct financial incentives aimed at increasing production of private forests in the EC has been discussed elsewhere (Harou 1986). Such evaluation should try to quantify the marginal net timber yield induced by the incentive in financial (private) and economic (social) values. It is only when the private forestry investment does not break even in financial terms without the incentive that the marginal net benefit of the silvicultural improvement can be included in the benefit generated by the public intervention. The net benefit from a participant that successfully passes the financial analysis test should then be calculated in economic terms, i.e. in terms relevant for the society at large. The net economic benefit of the participants who passed the financial test are aggregated in the form of a B/C ratio to present the final measure of a public intervention efficiency.

While it is intended to discuss in this paper the problems posed by translating the private values in social ones, we will let that for the following section. Now we would like to clarify briefly what the financial analysis test entails. It is essentially a double with-without analysis involving first a comparison of the profitability of a forestry investment (eg. Spruce Plantation) with and without a certain silvicultural treatment e.g. with and without precommercial thinning, a road construction, a subsidized loan or any other activities object of a public intervention. It is expected that a production benefit ensues from that activity, but we want to know whether the investment is profitable enough for the individual undertaking the investment in terms of his real or perceived benefits and costs. In case it is perceived as a profitable operation by the forest owners, they would

not need any subventions to undertake them but rather technical advice.

When the financial analysis is negative however, a subvention may be necessary depending on the outcome of the economic analysis. Before analyzing the investment from a society standpoint, another analysis with and without the proposed subvention is required. For the subvention to be cost effective, the financial analysis including the subsidy has to be as close as possible to the break-even point. This is the second with-without analysis.

Economic analysis

That the financial test was passed successfully i.e. demonstrates the need for a public intervention from the participant's point of view, is a necessary but not sufficient condition to concede public financing. The analysis must also show that such a public investment will be beneficial to the society financing it.

For the evaluation of forestry incentives in the EC, it may seem appropriate to consider the EC member as the society which point of view is to be followed in the economic analysis. At first glance, this may seem justifiable in light of the absence of any real forest policies at the EC level and because all these incentives where paid from EC member budgets. However, this approach can be challenged.

A forestry activity, conversion of marginal agricultural land, is often financed through the EC agricultural fund because it fits in the general EC agricultural policy. The evaluation in this case should clearly consider all the EC members as one society and the evaluation should be made from the EC point of view. There is not always such a clear cut situation where the EC member or the EC itself is the society within the boundary of which the economic evaluation has to be made. The interrelationship between agriculture and forestry is such that the EC agriculture policies will influence the social value of many forestry inputs and outputs in a member country. We will return to this point later after clarifying what the economic analysis entails.

The economic test in the evaluation methodology is not very different from the financial test in its profitability calculation mechanism. Both rely essentially on a scheduling of the physical inputs and outputs of a forestry activity and then on a valuation of these inputs and outputs before using some criteria of project worth. The essential difference lies in the valuation of the inputs and outputs, the choice of a discount rate, and the transfer payments.

For the latter, it seems logical to neglect the legitimately considered private costs of the financial analysis such as taxes, subsidies or interest on a loan. The property and income taxes are considered a transfer of wealth from one group of citizens to another without altering the total wealth of that society. Likewise, subsidies are a real use of resources and so a real input of production for society. While a private owner will consider tax a very real cost, and a subsidized seedlings a no-cost, this is not so for the community at large.

The social discount rate is another variable of the economic analysis which will bring a substantial difference with the outcome of the financial analysis. A forest owner would discount his costs and benefits at his best alternative of capital investment which depends on his investment opportunities. Society needs to discount the net benefit of projects, forestry and others, taking into consideration the real cost of capital of the funds invested and the weight put by society on future versus present consumption (Harou 1985).

Finally, the valuation of a forestry activity inputs and outputs is different in an economy which is far from competitive. The discrepancy between the private (financial) and social (economic) values of goods is more accentuated the less competitive the market is. In a perfectly competitive economy the market prices used in the financial analysis are the same as the shadow or social prices used in the economic analysis. For all practical purposes, the economy is generally assumed to be competitive and the market prices used in both analyses. But this is not always so for all the inputs and outputs. An uncompetitive situation may derive from other public interventions.

If shadow prices have to be used for some of the investment inputs or outputs, the principle to follow is simple enough. For an input,

the opportunity cost of using it in a forestry activity can be approximated by a correct valuation of the benefits forgone by its use. The willingness to pay for a project output can be estimated by reference to more competitive markets such as the international markets of traded goods.

The EC political context

The differences between the financial and economic analysis just outlined in the previous section depend on how the political boundaries of society are defined: the region, the member state or the EC itself. They depend also on which EC and member country policies are assumed as given and immutable and which are not.

Transfer payments correspond to flows of wealth within a society. Payments made outside of that society are considered a cost while payments received from outside are a benefit. The forestry incentives being given and received so far in the framework of national policies, the different EC countries are the logical political boundaries of the economic analysis. Yet the case may not be so obvious when we consider the pricing of forestry inputs or outputs for which a certain percentage of the value added tax is levied to finance the EC budget, more particularly the EC agriculture budget. In this case, the assumption that all the member states benefit equally in the long run from these mutually agreed policies can be readily accepted. Consequently, we are forced to agreed that the evaluation has to take place in the broader EC context.

In the case of a joint investment by several EC members in an integrated forest-product firm, the return on equity leaving the country where the plant is located could be considered a cost for that country and not a transfer if the broader perspective englobing the whole EC was not adopted. For industrial policies affecting forestry investments it is important to choose the EC in defining the political boundary of the analysis. Transfer payments may thus affect evaluation depending on the political boundaries of the analysis. As it will be shown later, transfers within the EC will also influence considerably the

shadow prices of many agriculture, and so forestry, inputs.

Concerning the establishment of a social discount rate it could be said that the definition of "society" will have a minimal impact on the evaluation if we assumed the free move of capital in the EC, permitting to establish a unique opportunity cost of capital for forestry investments. Assuming further that the social rate of time preference is equal for all the EC members, a unique social rate of discount could be used to evaluate the performance of forestry policies made at the country level. However, if these two assumptions do not hold, and we believe there is a discrepancy in the opportunity cost of capital between EC countries, different discounting parameters would have to be used to evaluate forestry incentive programs and also to appraise forestry investments in different member countries. This could cause the evaluation of a same foresty incentive to be quite different throughout the EC.

The pricing of forestry inputs and outputs could be made by reference to the market prices if their markets were close to competitive, i.e. characterised by minor public interventions (Harou 1984). In this eventuality, the prices of inputs and outputs would be the same for the entire EC and should be equal to international prices. We know however that because of the EC interventions in the agriculture sector many forestry inputs, and the most important ones for that matter, land and labor, will have to be rectified in an economic analysis. Forestry output values are not influenced by any direct EC or country policies and the timber market prices may be used in the economic analysis.

The opportunity cost of agricultural land and other inputs can be estimated in two different ways. In one case, the political context may be considered as given and immutable. In another case the policy itself is the object of the evaluation, and the analyst is not constrained by it but has to judge the efficiency of the policy itself. Depending on the framework of evaluation adopted, the measure of efficiency of a forestry program can be quite different. Let's discuss the evaluation of forestry programs in the EC countries under these two contexts.

First, the evaluator is asked to analyse forestry programs in the context of the pre-

sent EC agricultural policies. Let's discuss the value of marginal agricultural lands to be converted into forestry under these circumstances. As the agricultural price subsidies are assumed to subsist for some more time they have to be incorporated in the forest land opportunity cost calculation. This land opportunity cost including agricultural subsidies can be entered as an economic rent in the yearly forestry cash flows for as long as the subsidy will exist. If it is foreseen that these agricultural subsidies will decrease slowly over time, such decrease will be reflected in a progressively lower economic agricultural rent.

Now, imagine that the analyst is asked to evaluate forestry programs challenging the necessity of any existing subsidy policies. In other words, the present EC agricultural policies are not considered as given but the real opportunity cost in terms of efficiency has to be considered. Under this context, the shadow price of agricultural land will be influenced by lower farm products. From this will result a much lower opportunity cost of land for forestry, and so the economic evaluation is more susceptible of showing a positive result than otherwise. If the policies were given, as in the previous case, the shadow price of land is increasd by the amount of the discounted farm product subsidies which under present agricultural policies are substantial.

When we use the agricultural rent to establish the social cost of forest land, it is the economic rent that we used. All the inputs and outputs entering in its calculation will have to be valued in economic terms i.e. using shadow prices also. As said previously for the government analysts in charge of evaluating a forestry incentive program, they will have to make realistic assumptions about the real opportunity costs of the inputs and value of the outputs under present EC policies. This means that for these evaluators, the agricultural subsidies should be considered the result of conscientious efforts to insure a better quality of life, and shadow prices calculated accordingly. These social prices in turn will produce an agricultural rent value higher than it would be if the free market forces were at work. Under another context, we have discussed the consequences of agricultural policies on forestry and take the point of view
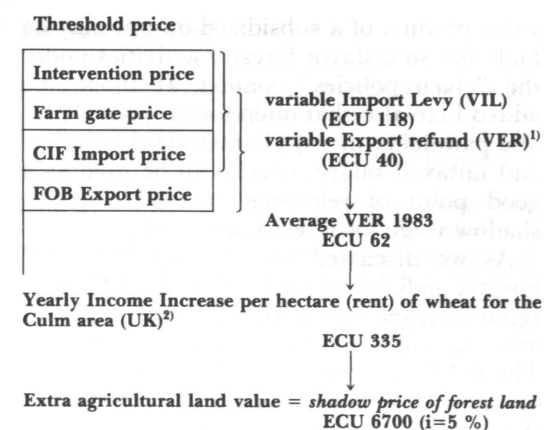
Figure 1. Schematic price structure for wheat and its repercussion on agriculture land value.

of a policy evaluator, calculating the agricultural rent using outputs shadow priced without considering political constraints. These shadow prices are usually established by direct reference to international prices. The agricultural rent will be quite different under these 2 different contexts.

To illustrate the influence of these two different contexts in establishing the shadow price of agricultural land to be converted into forestry, imagine an hectare of wheat producing 5.4 metric tons. The difference in the rent and the price of that land corresponding only to the price subsidy of wheat calculated for 1983 in the Culm region of the U.K. is given in Figure 1 and amounts to ECU 335 et 6700 respectively. The extra rent for other subsidized farm products in the same region was calculated at ECU 253 for barley, ECU 143 for oats, ECU 107 for potatoes, ECU 922 for vegetables and ECU 693 for fruits to cite a few agricultural alternatives.

The opportunity cost of labor should theoretically be lower than the market wage as farmers undertaken forestry activities, typically at low peak season. However, depending on the regions, dairy regions for instance, the shadow wage, expressed as the marginal

value product of a subsidized output may be high and so disfavor forestry activities under the "given policies" context. It should be added here also that often forest work is part of a parallel economy characterized by a low and untaxed salary, which can be used as a good point of reference in establishing a shadow wage for forestry activities.

As we discussed above, even if no EC forestry policies as such exist, the EC environment is the one in which forestry program analysts will have to carry their evaluations. The political boundary of the whole EC, not of one of its member, should be preferred for the economic test of the proposed evaluation method if suboptimality has to be avoided. Furthermore, the market and shadow prices in the financial and economic analysis used in this methodology will invariably be affected by EC agricultural policies. The evaluation of national forestry programs cannot escape the EC political realities.

Conclusions

After discussing the general context of the forestry financial incentives in the EC of the nine, we describe a possible evaluation methodology in which the economic analysis test may end up substantially more difficult than it would appear at first sight. Even if the funds for forestry incentives in the EC are provided directly by its members to their forest owners, and despite the fact that the EC has no officially articulated forest policies of its own, it seems difficult not to evaluate production type of incentives directed at the private forest owners in an EC context. This remark is important for, if individual EC members are defined as the society from which point of view the economic analysis has to be made, the outcome of the evaluation may be quite different. Imagine an incentive forestry program evaluated in an EC country for which the opportunity cost of capital is higher than the average and which pay to the EC a high TVA contribution on the program outputs. The economic evaluation may recommend against this program when in fact that country may have a distinct comparative advantage in initiating the forestry program.

Not to consider forestry program evaluation in the broad context of the free economic area of the EC may result in suboptimal economic decision.

It would be illusory for an EC member to make the economic analysis of a forestry production program in isolation from the rest of the community. The interrelationships between the forestry and agriculture sectors are too tight. The economic analysis of forestry programs must use shadow prices which take into consideration technical as well as socio-political realities. When the political context is given, the evaluators of forestry programs must accept the present agriculture policies that will not change and that they cannot change in the short run. Taking this point of view, the evaluator is forced to include high agricultural output prices that will be responsible for a higher shadow agricultural rent. This high rent becomes then the opportunity cost of land for forestry and may render forestry programs inefficient.

Taking the standpoint of an EC policy evaluator and abandoning our low key role of a passive forestry program evaluator, we are now allowed to include shadow prices by reference to a situation as close to perfect competition as possible i.e. without public intervention. The subsidized agricultural prices can best be corrected by reference to their lower international prices. The agricultural rent would then be lowered and so would the forest land opportunity cost. Taking this view point, many forestry investments on marginal agriculture land would now become economically profitable. This should change the resource allocation from agriculture to forestry and agriculture surplus would diminish. While this scenario may not be as simple, it illustrates clearly the need to plan any agricultural policies concomitantly with forestry and in the broader perspective of the EC.

Some have argued that the forestry sector had been lucky to escape EC directives. Yet it will be illusory to think that the market forces could direct a sector of the economy, namely the forestry sector, should non-competitive conditions prevail in other sectors of the economy especially in the closely related agricultural sector. This is known in economic jargon as the second-best problem. Economic optimality in any one sector might require a

price greater or less than marginal cost to counter such inefficiencies. In that respect, timber price will have to be artificially elevated before any conversion of marginal agriculture land takes place. Meanwhile import will continue in order to avoid wood products price inflation. The wood trade deficit will not end shortly if this scenario is maintained.

A temporary measure could be to slightly decrease agriculture subsidies while providing some forestry subventions until the appropriate area of marginal agriculture land has been converted and the free market forces reestablished in both sectors. Such intervention in favor of the forestry sector could be for example the provision of incentives channeled through the forest industry to provide technical help in the management of groups of private forests to insure better and more secure wood supply to the firms. It could also be long term subsidized loans for alleviating private owners cash flow problems when they intensify the management of their forests.

The economic test of the proposed forestry incentive evaluation method has to be made in a broad context and taking the whole socio-political environment of the EC into consideration. Not doing so would generate suboptimal economic decision that would impact negatively on the forestry sector and its balance of trade. It results from this consideration that the EC should take a more assertive role in setting forest policies for its member countries.

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