Cost Analysis of Renewable Biomass

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Abstract: Private interest rates in attempting to save shooting biomass and sustainable fishing in the optimal case are reviewed. These variables determine the optimal total cost function depends on fishing. Fishing costs are independent of biomass and save only the amount of effort to comply. In general, the cost function of the amount of fishing effort and biomass is stored. Much biomass as a foreign agent and external costs of their fishing appears and the increase in costs to reduce the cost function with respect to fishing in both the desired variables in the optimal benefit system are set for private operation.

Key words: Biomass · Renewable · Environment · Competitive

INTRODUCTION

Balance to Take Advantage of Private Ownership:
Biomass storage volume as determined by the private industry is controlled and takes advantage of the industry in selling it in a competitive market. Price per unit of fishing with the p is equal for all buyers and no changes occur. In the technical function of the fishing if $H = H(E, X)$ we assume that each of the variables to try to save the biomass are effective. Fishing versus technical function, cost, technical fishing are there [1-3]. Thus in both cases, to determine the cost of fishing technical condition of the balance of private property to levels of fishing effort in direct costs and increasing its fishing is expensive if the rate of fishing effort E is the cost function as $C = C(E)$. Derived C to E as $C_E = dC/dE$ is a positive sign that the effort to increase the costs is effective. Function as a fishing $H = H(E, X)$ we express where X is the biomass volume and size with increasing E and X amount of fishing will increase the derived H X than is marked as positive,

$$H_x = dH/dE \tag{1}$$

Fishing as a function $H = H(E, X)$, we express where X is the biomass volume and size with increasing E and X amount of fishing will increase the derived HX then is marked as positive. Prices are caught in the competitive set which is (P) and we assume the person, firm or private company involved in fishing activities and seeks optimal

effort level is partly the maximum benefit to gain from their sales activities [3-4]. Private firms also operate in conditions of economic equilibrium that environmental biology at any time and in any circumstance is established hence the biological growth function $W = F(X)$ is shown. Industry in terms of gross income takes advantage as private $R = PH(EX)$ is the total cost of fishing and writing the deducted from our earnings as a result of the industry will be written as follows:

$$\Pi = P.H(E, X) - C(E) \tag{2}$$

The difference between gross income and total cost of fishing is achieved per private enterprise and is going to determine the optimal amount of fishing effort required or the amount subject to maximum profit but maximum profit firms perceive the economic environment must be balanced-in time maintaining the environmental so that generations from extinction and prevent the destruction.

$$\Pi = P.H(E, X(E)) - C(E) \tag{3}$$

To determine optimal effort, a private firm trying to profit function (3) than to E max II for this purpose than the derived function E is summarized as follows is:

$$d\Pi/dE = P(dH/dE + (dH/dX)(dX/dE)) = dC/dE \tag{4}$$

Where the derivative is then with $H_x = dH/dX$. This derivative has been shown to effect sustainable biomass

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in the fishing and shows a technical function to the value of the volume of biomass sustained by dX/dH. Measure of the relationship is (3) the balance requirement to take advantage follows comes to hand.

$$MR_E = C_E \qquad (5)$$

Final income per additional unit of effort,

$$MR_E = dR/dE = P (H_E + H_x dX/dE) \qquad (6)$$

Advantage of additional productivity per unit effort,

$$H_E = dH/dE \qquad (7)$$

Final cost of each additional unit of effort,

$$C_E = dC/dE \qquad (8)$$

Firms with private ownership of biomass use in nature so that taken as the final cost per unit of extra effort from the final income earned is equal to the extra effort but in this case not only the optimal amount of effort which cannot be sustainable biomass volume over the time to come.

Relationship (4) the environmental condition for economic equilibrium is determined. E derivative than for the relationship of the parties shall complete the form below differential lies [3-6].

$$F_x dX = H_E d_E + H_X d_X \qquad (9)$$

Final biomass yields in their growth $F_X = dF/dX$.

Relationships (9) then to be under achieved:

$$dX/dE = H_E/(F_X - H_X) \qquad (10)$$

Relationship (10) in relation (7) replaces private property and then balances the requirement to write the following:

$$PH_E + P (H_X H_E/ (F_X - H_X)) \qquad (11)$$

According to relationship (11), increase per additional unit of effort have two different effects: the direct effect of increasing the size of the extra hunting shows; if the indirect effect of increased income from fishing to the ultimate size of the second term is left. Under this term, first save the extra effort of sustainable biomass can affect

change and then save the final value of the said fishing creates. Thus, in relation (11) final revenue from each additional unit of effort is defined as follows:

$$MR_E = PH_E (1 + (H_X)/(F_X - H_X)) \qquad (12)$$

In condition (11) we use the Lagrange method. For this function (a) to balance the economic environment are the maximum and the Lagrange function, we form the following:

$$L = PH(E,X) - C(E) + \beta (F(X) - H(X,E)) \qquad (13)$$

Lagrange function coefficients in the above shadow prices per unit of stored biomass shows that still has not been captured. The coefficient for the evaluation of the environmental balance of economic use, so the balance based on the value of the shadow will be assessed. Derivative of the function L to X, E and is determined as follows:

$$dL/dE = 0 \quad PH_E - C_E - \beta H_E = 0 \qquad (14)$$

$$dL/dE = 0 \quad PH_x + \beta (F_x - H_{x)} = 0 \qquad (15)$$

To determine X, E optimization levels are necessary in relationships (13), (14) and (15) must together to be solved in each of these variables as a function of P will be mentioned. The relations (13) and (14) balance and (11) is obtained. For this purpose the relation (14) to bring about (13) we replace the equilibrium relationship and hence (11) is obtained. Relationship (11) shows that if a unit amount of extra effort is added, the total cost of lobbying as fishing and the other comes in the final size, increases. Thus, private enterprise with so much effort is set equal. As in relation (11) it is observed that it consists of two components. First they increase the value of increased fishing effort is an $PH_x/(Fx-Hx)$ additional unit that is measured. The second component. The total revenue effect of changes in biomass storage stable states that. Should be noted that the change in biomass storage of a unit increase for effort is due.

Biomass stored in the cost of fishing can affect and hang on as a foreign agent and a foreign agent can be external effects and the effect of load, which has reversed the cost of fishing. Savings with increasing biomass and reducing fishing costs by reducing the cost of increased fishing; hence, in general, the cost function is written as $C = C (E, X)$, where amount of effort and biomass is stored. Increasing efforts to reduce costs and increase its cost is

reduced so derived C to E is positive, i.e. $dC/dE = C_E$. In addition, its second derivative to E is positive, i.e., increasing the final cost of work effort increases. Derived C to the negative X. ie $dC/dE = C_X$

Considering the biomass storage total cost of fishing in the function, equilibrium condition (11) is obtained as follows:

$$PH_E + H_E \left((PH_X - C_X)/(F_X - H_X) \right) = C_E \qquad (16)$$

If in relation (16) is the value in relation to this case (11) will be achieved.

Shadow Price per Unit of Biomass Storage: Biomass per unit of storage has two types of prices. When fishing unit is exposed to market and sales are placed and if fishing is not the same unit as the price and remains protected storage there will be a shadow. A shadow price is measured by the relations (13) and (14) and can be calculated.

Each of these relationships yield s different concept of the shadow price of which they are in equal balance. First, from the concept of relationship (13) the following is obtained:

$$(P - C_E/H_E \beta =) \qquad (17)$$

where the additional cost per unit of effort and productivity of each additional, because both are positive, then there is much less of a competitive market price. Final cost of fishing indirectly changes the amount of effort that can be achieved. If a unit is added on the amount of effort, followed costs will increase and there will be much more fishing.

Firm or industry performance as a fraction is expressed. If the profit per unit of fishing makes up the difference and there are fishing the final cost. The denominator is price competitive. In fact, the performance indicator is the percentage gain in unit production cost per unit sold to be specified with different concepts of equal price to put a shadow connection means private enterprise performance, which is obtained as follows:

$$L = (P - MC)/P = 1/ (h-1) \qquad (18)$$

Relationship (18) shows performance in the competitive private enterprise. The difference between price and cost per unit sold as the ultimate fishing profits, shows that the share price performance of firms can be achieved. Performance shows the percentage of profit per unit production cost made up. If 20 percent of sales price

profit per unit of production to form, the performance is less than private firms are. The amount of profit per share in the production unit price performance is more firm in industry and will increase. Controlled firms increased their profitability in a competitive market, which will be up. If a private firm is to operate in a competitive situation, the yield is calculated as 1/ (h-1) that h depends on the firm performance. If h is one of the larger then it will grow. In this case, increasing the size of a single fishing additional biological then growth rate increases. In these conditions, biological growth of biomass not only helps to reduce the effect of additional compensation to fishing but also adds mass size. In this mode of power and control, are the reduced enterprise market and private enterprise cannot be as strength in the market experience [5-9].

Take Advantage of a Competitive System: We assume the fishing industry has competitive activities and that in the storage resource there is a natural growth. Also, growth in industrial control not normally seen in stored biomass fertility and mortality. Industrial fishing levels in competitive markets sell to earn gross income. One cannot benefit in terms of competitive prices to control for fishing; the industry has endured a cost of the function of the affected fishing and saving the amount of biomass can be a competitive industry subject to interest rate product at competitive prices with fishing earned and it follows that we can write:

$$B^c = PH \qquad (19)$$

A competitive advantage in the system taking fishing stores and then selling them can thus give the final income of fishing the following relationship (19) be determined:

$$Mr^c = P \qquad (20)$$

Fishing industry to determine the optimal objective function that accounts for calculated gross income from the difference between the total costs of fishing so the following is to become:

$$\Pi^c = P.H - C(H, X) \qquad (21)$$

The ultimate benefit of competitive prices and the cost difference between the final hands comes to fishing. Based on this relationship based on the value of a shadow determined competitive market price because the final cost of the fishing industry is controlled.

Take Advantage of Proprietary Systems: We assume sole industry in terms of biomass resources can take advantage of biomass birth and natural mortality, which have a growth rate and because of the hunting population is always sustainable biomass, which remains. Technology does not control the biomass growth; only in terms of its sole interest is, so that its population is stable forever. Total cost function, such as fishing, takes advantage of the system in general and with the amount of prey biomass stored as a foreign agent in the total cost of the past events [9].

Industry, in terms of gross written exclusively is:

$$B^m = P(H).H \qquad (22)$$

In addition, the final income of the above function becomes:

$$MR^n = P + HP' \qquad (23)$$

CONCLUSION

On private property to achieve maximum cost benefit is a proportion of the total amount of fishing effort and thus the ultimate cost and average cost of fishing effort than with an equal amount and a fixed amount are equal, secondly, the technical function as a multiplier of the fishing amount of product in the amount of fishing effort is, Much less effort to exploit the private operation and shared so much more than fishing on private property comes to the collectivity and therefore stored in the system of private property is more biomass and less effort to determine the most fishing is done, If the shared ownership system storage is less biomass and fishing effort to get more done.

Two types of shadow prices for each additional unit of biomass or derived. The first price a shade of difference between cost and benefit of the ultimate result will be fishing. If the second price increase in the shadow of the effect of natural growth in the total cost comes to fishing. The shadow price of the systems studied is the same concept because the total cost function is the same prey systems. If the shadow price of the first type of operating systems are different because the final benefit is the same. The ultimate benefit of the social system with reverse function, market demand and the system is equal to the ultimate personal desirability. Balance in each of these systems is obtained when the concepts of shadow prices are equal with ¬. Any balance in the final cost of the two types appears: the first type of fishing is that the final cost of increasing the total cost per unit increase is the result of excess fishing. The second type of cost growth in the total cost is achieved. Total cost of the two final competitive price system, the patent system was the ultimate in social systems and the inverse demand function in the final income of the patent system, social system and the inverse demand function in compliance with the Personal System finals hunt equal [10-16].

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