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Financing Methods Utilized in New Vehicle Investments of Logistics Companies

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***Abstract* –** Companies in logistics sector aim to provide better services and to increase their profits by enlarging their carriage capacities. Therefore, companies expand their fleets by making new commercial vehicle investments. In this study, a general evaluation is conducted within the scope of literature review regarding the vehicle investment process and financing methods of logistics companies.

Keywords– *Logistics, Vehicle Investment, Financing*

I. INTRODUCTION

As world trade develops, transportation and distribution operations gain importance. Companies aiming to give successful logistics services analyze needs of their customers. A well-structured service process involves management of issues like planning, customer relations, marketing, deciding price policies, distribution etc (1). Investment for required equipments is as important as management of operation process. Vehicle renewal and increasing the number of vehicles in the fleet are among the first investments of logistics companies. In terms of road transportation, unless logistics companies manage their vehicles in "smart purchase, manage and sell" way, vehicle investment and management costs increase and performance decreases (2). Logistics operation manager frequently struggles in fields like marketing for capital of a company. Manager is required to explain why budget is needed for his/her field rather than another kind of investment (3). Therefore, number of vehicles to be invested, their size, operations in which they will be utilized, economic life, financial technique to acquire them, duration of repayment for the investment, cash flow and management costs etc. should be clarified.

II. BASIC BUSINESS AND SERVICE PROCESSES IN VEHICLE INVESTMENT

Investment is the part of financial planning and plays important role for logistics companies in the long and short run growth. Logistic companies decide for new vehicle investments by considering their financial structures, market share, geography in which the vehicle will be used and load characteristics of their present and potential customers. Also, age and depreciation rate of vehicles of the fleet affect investment decision because new investment is required since the time income is negatively affected by increase in repair and maintenance costs (4).

Companies want to use their vehicles as long as possible but economic life of a vehicle varies due to characteristics of transportation operations in which it is utilized (5).

Vehicle sales are usually made from dealers. Generally the customer is contacted first by the factory or headquarters for vehicle demand. This first meeting provides an agreement on the general conditions. At the next stage, the authorized person at the factory or headquarters provides the opportunity to negotiate between the customer and the dealer, and to make the two parties negotiate. After this, all transactions related to the sale are made by the dealer and the sales contract is established by the dealer. This process is shown in Figure 1.

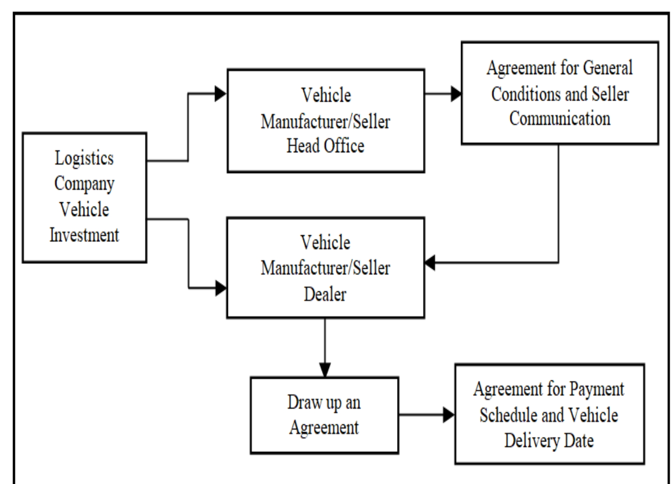

Fig. 1 Example for work flow process between logistics company and vehicle manufacturer

In general, vehicle sales are made with 24, 36 and 48 monthly terms. Among these terms, 36 months is the most preferred. A company that purchases vehicles with a 36 month-term usually renews the vehicle by lending it when the

loan is finished. Although there can be sales of several vehicles, higher number of vehicles, as much as 100, can also be sold. The companies that make purchases using credit buy vehicles over the loan interest rate determined by the government. In the case of multiple vehicle sales, certain amounts of discount can be applied on this interest rate. Interest rates may vary on a monthly basis. Due to this change, the price of sales made using credit also changes.

III. Vehicle Investment And Financing Methods

The logistics companies meet the investment costs of the trucks through the operation revenues obtained by operating the trucks efficiently. In particular, it is important to determine the return on investment (ROI) for the net cash inflows to be provided by the investment. The general definition of ROI analysis, often called a cost-benefit analysis, seeks to estimate and compare costs and benefits of an undertaking (6) and in the simplest form, the calculation method is shown in Figure 2. In simple terms,

$$ROI = \frac{\text{Return - Investment}}{\text{Investment}}$$

Fig. 2 Return on investment calculation

'Return' means the changes that the investment makes to the life-cycle cost of the system. It includes net cash flow that the investment provides. It is a combination of revenue increase and avoided cost. (7). After all, total life-cycle cost of a truck includes more detailed elements like fixed and running costs (8, 9).

In general, a company provides required funds to buy a vehicle basically from two sources: Liability and equity capital. While liability (debt) is provided outside the company, equity capital can either be created by the company (undistributed profit, contingency reserves etc.) or outside the company (capital increase, acquiring new shareholders, share register to saving owners, participation dividend certificate etc.) (10).

A. Financing Vehicles by Equity Capital

Sum and compound of capital depend on various factors. Industry of the company plays a great role regarding the capital compound. Size of the company, type of the organization, behaviours of the managers and development level of management activities affect the sum of capital. Also, condition of money and capital markets, degree of external loan floating depending on those markets is related with amount of equity capital (11).

For a vehicle that is purchased for cash, operational costs are undertaken by the user. Also, because of vehicle ownership, company can put vehicles to amortization process. Purchase of vehicle for cash leads to a loss of interest/investment income. All taxes, insurances, inspection and maintenance costs are paid by the company

Vehicle can be amortized since the time of purchase and all cost can be shown as expenditure within a five year period. Second hand sale of the vehicles lead to declaration of income as much as amortisement sum. Later, the income is taxed in accordance with corporate tax. Also, value added tax (VAT) is calculated.

B. Financing Vehicles by Bank Credit

In purchasing vehicle via bank credit, not only expenditures included in purchase by cash but also expenditure of interest to bank is paid. While the vehicle is amortised, only the interest to be paid to the bank can be declared as expenditure. Banks demand filing cost that varies from bank to bank and it is cut back from total amount of credit. Banks demand security deposit, hypothec and guarantor according to the size of the investment (12).

Purchase of vehicle via equity capital may decrease trade volume and profitability. Purchasing vehicle by credit can make it difficult to utilize other credit types. Also, it is seen as debt in balance sheets.

C. Financing Vehicles by Leasing

Leasing becomes widespread rapidly under increased competitive conditions as a new and effective management view, an alternative financing model and as a different activity field.

A lease is a written agreement by which one party agrees to let another party have the use of specified assets for a fixed amount of money during a period of time. In leasing method, leasing company holds the ownership of the investment property and the right of use of the goods to the tenant in return for the rents determined by the contract, and at the end of the contract period, the property is transferred to the lessee through the purchase option specified in the contract (13).

Leasing options are divided as external and internal: In external leasing options, the ownership could remain with the leasing company or entity. However, the rights for use are passed on to the lessee for the period of the lease; in other cases, at the expiry of the lease, the ownership is transferred to the lessee but depending on negotiations, management of some aspects such as maintenance, could remain with the leasing company. However, Internal leasing is different from the external one. The organisation itself owns the vehicles which are centrally managed and issued to programs on a cost recovery basis. Organisations therefore budget only for leasing costs (14).

According to tax procedure law (TPL), leasing is conveying of a property with all risks and benefits by one party to another party for a certain period of time in exchange for something of value without considering transfer of the property to the lessee at the end of leasing period (15).

Leasing companies collect interest and value added tax (VAT) in addition to the cost of the vehicle from the company in return for vehicle financing. Companies abide cost of interest for vehicle financing. In leasing operations, VAT rate is 18%. However, there might be a discount for VAT paid for vehicles acquired by leasing or rented from vehicle rental companies. Also, VAT for expenses of the leased vehicle can be cut down (16).

D. Financing Vehicles by Manufacturer/Seller Opportunities

Vehicle manufacturer can apply various subsidies while selling the vehicles. These are in general services like providing financing opportunities, exchange, maintenance, comprehensive insurance and compulsory traffic insurance. In financing, manufacturer or distributor can provide credit to the logistics company through its own financing company and/or financing companies with which they have contract. Depending on the vehicle manufacturer's financial structure, the authorized dealer can offer various payment plans, including standard, seasonal, superstructure model and different payment plan, in line with the needs and requirements of the customer who wants to purchase the vehicle. Also, the customer can exchange his old truck and have these payment plans for the remaining amount of his new truck. These payment plan alternatives can be offered to customers who want to buy second hand vehicles as well as customers who will buy new vehicles. The standard payment plan is generally preferred by customers with fixed and regular revenue. During the selected period, the monthly fixed amount can be reimbursed. Seasonal payment plan can be offered for customers with seasonal income; while low consistency payment options can be planned during periods of lower income and high consistency payment options for higher income periods. The superstructure model provides various financial support for the superstructure together with the truck that will provide the highest efficiency to the customer in accordance with the field of activity. The financing model different payment plan is a method in which the amount and maturity of payments are determined in accordance with the income of the customer. After a period of low-consistency payments, payments can be made at the end of the period by a cumulative payment or by crediting final payment amount at the end of maturity. With regard to exchange operations, second hand vehicle is replaced by a new one. In maintenance services, depending on the number and type of vehicles, maintenance is done by authorized services for a period of time. Vehicles can be insured by distributors in purchase of new vehicles.

IV. CONCLUSION

Financial providers can offer different prices and payment schedules to different companies, depending on their vehicle purchasing or leasing characteristics. The basic factors are the economic strength of the company, whether the vehicle purchase has regular intervals or not, number of vehicles planned to be included in the fleet, obtaining finance from the same corporate resource and repayment of previous debt regularly.

Companies generally prefer purchasing vehicles via bank credit. In this way, vehicle can be renewed by exchange when the credit is over and company can receive various subsidies (suitable financing conditions, exchange support, maintenance, insurance services) while purchasing the vehicle.

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