PROPOSALS AND IMPLEMENTATION OF AN ADEQUATE COST SYSTEM FOR THE COMPANY AGROBUR S.L.

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"Many of the things that can be told do not count. Many of the things that cannot be counted are the ones that count. "

-Albert Einstein

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1. ABSTRACT.

This project is based on a real case of the company Agrobur SL. This company, located in the province of Castellón, is dedicated to the sale and repair of agricultural machinery. With this project, various cost models that could be implemented in the company have been known.

Therefore, the company and its products have been described, as well as a brief history of it. An organizational chart has also been created to make the company's departments better known.

Finally, we have chosen a particular model of the proposed costs because it is the system most suited to make decisions correctly.

2. INTRODUCTION.

Current private companies, within the different sectors that exist, have a high degree of competition due to the similarity of existing products, the margins that derive from purchases and the position in which they are. In these conditions they induce the businessmen to obtain very adjusted benefits. That is why I decided to focus on the study of cost accounting, because through this accounting can help the company to optimize its costs and, thus, to achieve greater benefits or to grow in a percentage.

Cost and management accounting seeks to provide information on the internal movement of values that takes place in the company and is aimed at guiding the decision making of the different managers. With this instrument, the company can make available to the management the corresponding information for decision making and, in this way, decide the future of the same, as well as the probability that it will continue successfully or that it may fail.

The main objective of this work is to develop, through the calculation tool of internal costs of the company, a cost system appropriate to the operation of the same, with which you can try to achieve a percentage growth to your current benefit, all this from the information obtained from the annual accounts and the overall costs of the company.

As secondary objectives, this work highlights different fields:

- Know the activity and the company.
- Provide information on different concepts in the field of cost accounting.
- Differentiate between cost and expense.
- Provide knowledge of the different cost models, as well as their advantages and disadvantages.
- Know how to calculate the cost calculation.

The scope of this end-of-degree project is that a private company or a particular user, in my case the company Agrobur SL, can know the different methods of existing costs and, ultimately, can apply them in order to make appropriate decisions. In this way they can also know the margins of the products / services they are working on and modify them if they consider it appropriate.

This analysis is made up of several sections among which the conceptual framework corresponding to cost accounting is described, indicating the different terms and concepts that make up this accounting and the main difference of this with financial accounting and the most relevant aspects of both accounting in a comparative way.

Next, a description of the company has been made, indicating the functions of the company, the products it offers and the organization chart it forms with the current staff.

In order to find the most appropriate cost system for the company, an analysis of the characteristics of the company has been carried out. All products repaired or sold by the organization follow the same production process. In this way, the relevant calculations have been made in order to establish an adequate cost system and that is why cost models have been compared and described in order to observe what happens in each of these.

Finally, the penultimate section describes which cost model of the previously proposed should be implemented for the company and, in this way, how this model could help the decision making that the company considers.

In the last section we can observe the elaboration of a budget that makes up the realization of this work and a brief conclusion of it.

3. CONCEPTUAL FRAMEWORK.

3.1. ORIGINS OF COST ACCOUNTING.

The emergence of cost accounting goes back to the ancient civilizations of the Middle East. In Egypt the priests and scribes of the temples already made notes of amounts to get to know what the cost of certain projects was (Ulaemminch, 1961). On the other hand, Vázquez (1978) argues that the beginnings of cost accounting are due to the Florentine manufacturers of silk and wool fabrics of the twelfth century, thanks to groupings in guilds or brotherhoods that were held in the Italy of the Age Half. By then the manufacturing processes were controlled independently, through a system of registration and bookkeeping. Garner (1947) considers that the development of English, Italian and Flemish merchants that occurred in the fourteenth century caused the need to increase the control of transactions and the cost of producing in order to have information that would allow prices to be set more correct way.

With the emergence of competition among the different manufacturers, cost accounting has undergone a great impulse in order to know more precisely and thoroughly both the cost of the product being manufactured, and register the process that would allow accountability to their superiors.

Two distinct periods are established in the history of cost accounting, as pointed out by several studies (Gutiérrez, 1991). The first of these periods would comprise from the beginning of the 14th century until the end of the 19th century, while the second period would go from the 19th century to the present day, the turning point being the Industrial Revolution. In the first period cited, before the Industrial Revolution, the production process had different characteristics than the current ones. The person who performed the role of entrepreneur did not carry out the productive activity by himself but acquired the raw material and ordered it to be made in small workshops. These workshops carried out the work in exchange for a set price, and later it was the entrepreneur who sold the manufactured products on the market.

Therefore, cost accounting was more than enough, because information provided allowed to manage the company efficiently, since it was only necessary the control and registration of external activities and internal costs were minimal. However, there are some examples of this era of companies and entrepreneurs trying to know and calculate manufacturing costs, as Gutiérrez (1991) quotes.

3.2. IMPULSE OF COST ACCOUNTING.

The definitive impulse to the introduction of cost accounting came as a consequence of the need to respond to the effects provoked by the Industrial Revolution in the business world at the beginning of the 19th century. This fact coincides with the beginning of the second period previously mentioned and cited by Gutiérrez (1991). Until then, the only instruments available to the managers of a company to help in their management were the balance sheet and the income statement. Until that moment the business fabric was based on domestic crafts, in which the simplicity of the production process did not need a level of information greater than that of financial accounting.

The Industrial Revolution, with the significant change suffered by the production process, caused cost accounting to be clearly driven. Rosanas and Ballarin (1994) argue that the first cost calculations were made by the sons of Watt (who, in 1764, invented the steam engine), and by Boulton, who subsequently perfected them. Thanks to the steam engine, and to the mechanization that it supposed, the companies began to invest in their own workshops and to hire labour.

In this way we go from an industry in which there was no work centre, because it was organized in small craft workshops or doing work in one's own homes, to a new form of concentrated industry, with the exclusive dedication of the workers, what supposes a greater security of the manpower and it is dispensed with the multiple transactions that were produced with the craft workshops that supplied the product.

These changes in the productive system involve heavy investments in capital with the consequent risk for the entrepreneur. With the previous system, the risk was obviously lower, but so was the profit margin. These changes require a hierarchy and a strong division and specialization of work. This new industrial landscape will have great consequences in the development of internal accounting or cost, since it was not as easy as when the company did not perform productive activity and was based on buying workshops at a known price.

This new situation led to important changes in business reality throughout the nineteenth century and early twentieth century, changes that were chronologically (Sáez, Fernández and Gutiérrez, 1993):

- Creation of companies that carry out their activities in very wide geographical areas, as a consequence of the progress of communications, both rail and telegraph, which caused new expectations that favored the expansion of productive activity.

- Implementation in the companies of the «scientific administration of production», which was launched as a result of the contribution made by the engineers. It was intended to apply a series of techniques and procedures that would allow analyzing the productive systems in order to improve efficiency and profitability.

- Tendency to diversify the activities of the company, since it does not manufacture only one product, but it also manufactures different products with very different characteristics. It is for this reason that in the companies appear different management and organization systems that allow to face this new situation.

Until this time the managers had never had the need to control costs in order to set a better price in the market. Before the Industrial Revolution, the small size of the companies and the simplicity of the production process allowed a small group of partners to directly control the operations.

As previously mentioned, they only had to worry about buying the raw material, supplying it to the small workshops, buying it back at a stipulated price after handling it, and then placing it on the market. Due to technological changes, the increased complexity of operations and the application of the principles of division of labour, companies are forced both to improve methods of internal accounting to know and to reduce costs, and to study their internal organization to supervise the productive processes correctly.

3.3 DISTINCTION BETWEEN COST AND EXPENDITURE

The cost is an economic magnitude and the internal accounting deals with its capture, representation and measurement. On the contrary, the concept of expenditure is a term that financial accounting deals with and, as such, its determination and quantification depends, to a large extent, on accounting regulations.

From an economic point of view, expenditure is understood as the monetary equivalent of any acquisition of goods and services made by the company during a certain period of time. Therefore, the act of acquisition is the inherent characteristic of spending.

If we compare the economic concept of expenditure with the definition of cost, we can conclude that cost is the incorporation of economic expenditure to the productive process, which is, to the extent that the goods and services acquired are consumed in the process productive, they become cost.

The part of the expenditure not consumed is configured as an investment which is about goods and services that can be used in the production process and generate added value in the future.

3.4. GENERAL OR FINANCIAL ACCOUNTING VS ANALYTICAL OR COST ACCOUNTING

In financial accounting we consider the total income of the period, while in analytical or cost accounting we only consider the income derived from sales. In financial accounting we calculate the result as difference of the sum of the revenues with the sum of the expenses, while in analytical or cost accounting to calculate the result we consider the difference between the sales income and the costs, therefore, they will arise differences between both results. There are four differences:

1st. In external accounting we consider as income all the concepts that we recognize in Group 7 accounts, while in internal accounting we only consider income from sales, and in some cases, financial income. You do not have to match the income in both results (example: we have an industrial warehouse that we do not use and rent it, what we charge for the lease is an income (752) and it will be an income in financial accounting, but not in accounting of costs, because it is not an income derived from the exploitation cycle of the company).

2nd. There will be costs that are not expenses, such as the opportunity cost. In external accounting, the financing of an investment with debt, a loan, implies an additional cost, which is interest. If the source of financing is own (with own capital), no additional expense associated with this funding source is considered. In internal accounting, however, use own capital as a source of financing materialized in a specific investment if it implies a cost (opportunity cost or cost of own capital). Due to the difficulty in calculating the true magnitude represented by the cost of own capital, the amount of

dividends that the company distributes to shareholders can be used in a first approximation to this concept.

3rd. There will be expenses that are not costs. They appear in group 6, but they are not considered as a cost in internal accounting, such as: extraordinary expenses (678), losses from fixed assets (671) and amortization of settlement expenses (680), etc.

4th. Expenses that are cost, but do not coincide in amount, as is the depreciation of property, plant and equipment. Maximum and minimum amortization coefficients can be established, which vary depending on the element, for financial accounting. But in cost accounting what we reflect is the real effective depreciation that has occurred in the fixed assets due to their contribution to the productive process. This amount is a real amount and may be different from the one indicated by the coefficients used by financial accounting. (IVAN LOPEZ, 2015).

According to José Alcarria Jaime, although financial accounting and cost accounting focus on the study of two different areas of action, there are important interrelationships between them. In fact, External Accounting and Internal Accounting should be considered as integral parts of a single information system on the economic-financial circulation of companies.

In the first place, it should be noted that most of the economic information that cost accounting processes comes from the external scope of the company (from financial accounting), so that all relevant external information is analysed together with the one obtained internally.

As we will see throughout this text, the calculation of costs requires information of an internal, non-financial nature and of very diverse type: physical units of materials consumed, electrical consumption, hours of work of employees, hours of work of machinery, units of manufactured products etc.

Secondly, one of the fundamental roles attributed to Cost Accounting is that, by monitoring the costs of the internal production cycle, it allows to know the cost of the company's inventoried assets (finished products, semi-finished products, products in the process of transformation, and even services). This information will be reflected for the purposes of the Financial Accounting, either in the Profit and Loss Account, as costs of the goods and services sold, or in the Balance, as the cost of goods in storage that have not been sold.

Table 1.Characteristics of the information provided to internal and external users.

	External users	**Internal users**	
	Financial accounting	**Financial accounting**	**Cost accounting**
Object of study	External scope	External scope	Internal scope
Reports	Annual accounts	Internal Reports	
Type of information	Historical	Historical and social security	
Processing standards	Mercantile regulations, P.G.C. and other rules.	They do not exist. The management sets its own standards.	
Accounting principles and criteria	Those fixed in accounting regulations. Basically, the acquisition price.	Any measure considered useful, monetary or non-monetary	
Periodicity	Generally annual	When necessary	
Structure, content, level of aggregation	Aggregate information of the entire company in official formats.	Content with level of disaggregation or desired detail and with the most useful structure for decision making	
		MANAGEMENT ACCOUNTING	

Source: José Alcarria Jaime, "*Manual del alumno*", 2012.

3.5. COSTS IN COMPANIES.

3.5.1 DEFINITION OF COSTS.

We can define the cost as the monetary equivalent of the goods or services applied or consumed in the production process (PRIETO, SANTIDRIÁN Y AGUILAR, 2006).

According to José Alcarria Jaime, the concept of cost refers to the value "sacrificed" to achieve a specific objective. In the scope of the company can be considered as the amount to be met for the acquisition of goods or services. When you buy raw materials to incorporate into production, there is a cost and also when you buy a building, or when workers are paid, or water and electricity, etc.

The value sacrificed to incur a cost is materialized in the reduction of assets (cash if paid) or the increase of liabilities (if not paid) that occurs at the time of acquisition of them.

The cost is the measure and valuation of the consumption realized or foreseen by the use of productive factors for the obtaining of a product or service.

The cost should not be understood as a loss, but as the necessary step to obtain a profit, an added value.

It is the best use of a resource to obtain the highest profitability output. This is so, since what matters is the potentiality of the resource.

3.5.2 CLASSIFICATION OF COSTS.

In general, we can define three fundamental elements of the Industrial Cost of any product or service. The 3 elements will appear in industrial companies. In companies of a commercial or service nature, these components must be qualified by virtue of the characteristics of their exploitation cycle.

According to Carmen Fullana and José Luis Paredes, the elements that make up the industrial cost are the following:

Cost of Materials (M)

The material costs are those referred to the factors transformed in the productive process to obtain the finished product. For an element to be considered a raw material, it has to meet a double requirement:

- It must be physically part of the finished product, it must be able to be identified in it, as, for example: the wood to make a table (objective criterion).

- It must compensate its control, from an economic point of view, that is to say, that the benefit that its control provides us is greater than the cost of establishing a control device that allows to measure and value that consumption (subjective criterion).

Salary costs (MO).

Labour is the work applied to the productive process. It includes all the expenses borne by the company for this concept (640, 642, etc.). It is distinguished between:

- Direct Labour (MOD), which is the value of work directly incorporated into the product. It is controlled individually.

- Indirect labour (MOI), which is the value of work not immediately related to the product. It is controlled globally and assigned to the products subjectively, as, for example, the salary of the security guard in a furniture factory.

Other manufacturing overhead (GGF ó CIF)

Indirect costs are all those costs that are not technically or economically controllable individually but caused by the production process. Its control occurs globally.

Along with indirect labour, we can point out the following as GGF: depreciation of machinery used in manufacturing, consumption of electricity, fuels, auxiliary materials... In short, anything that is not M or MOD.

According to Felipe Blanco Ibarra (2000) we can classify the costs according to:

a) The manufacturing relationship of the costs:

Operating costs: Are those linked to the functions of provisioning and transformation.

Non-operational costs: They are linked to commercial and administrative functions

b) The origin of financial accounting or cost accounting:

External costs: they are those that come from financial or external accounting and they are communicated to cost accounting through external control.

Calculated costs: they are calculated in the specific field of cost accounting and they are reported to financial accounting through analytical control.

c) Identification with a specific cost object:

Direct costs (CD): Those that can be imputed immediately to the cost object, that is, to what the cost will be calculated. It is possible to calculate its technical measure (physical units) and economic measure (monetary units) in conditions of certainty. Example: in a furniture manufacturing company, the cost of the wood consumed is a direct cost with respect to the furniture it manufactures.

Indirect costs (CI): They constitute a factor consumption that corresponds to several cost objects. The consumption that corresponds to each cost object can not be identified immediately. Example: in the previous company, if tables, chairs and shelves are manufactured, the cost of the workshop manager will be an indirect cost of production with respect to the three products. But we have to find a key to share the cost between the objects. One such key, for example, may be the number of hours spent on each object.

It is important to specify that a cost is not direct or indirect in itself, but it depends on:

- What is the cost object.

- The existence or not of a system of individualized measurement of consumption with respect to the cost object that is being considered.

d) The function of the company to which they correspond:

Production costs: Those generated in the transformation processes of the factors in finished products. Production costs are both the costs of materials and the costs of labor, but only of the labor that intervenes directly in the production of the

product. We can also consider production costs to the indirect costs of manufacturing, those that are indirectly involved, such as depreciation.

Distribution costs: Distribution or sales costs are those that are generated in the department responsible for taking the product from the company to the consumer.

Administration costs: Administration costs are those that originate in the administrative area as its own name indicates.

e) According to its temporary or physical effects:

Period costs: Period costs are identified with time intervals and not with the goods produced (rental of office space, etc.)

Product costs: These are the costs of the factors that have contributed directly to the manufacture of the product or its distribution and sale, regardless of whether it has been made in cash or has been made on credit.

f) The moment in which they are calculated:

Historical costs: They are identified with the monetary sacrifice in which they incurred to obtain said product. What a product has cost us in the past broken down by concepts.

Future costs: They are identified with the estimated monetary sacrifice in which they will incur to get the proposed product. What the product can cost us in a near future.

g) The unit:

Unitary: Cost of a product.

Total: Cost of all the manufacture of a period, of an order.

According to Alcarria Jaime, José, the cost reports usually present information about the total costs incurred for the manufacture of the products as well as the cost per unit of product or unit cost of production (obtained by dividing the total cost by the number of units manufactured):

Unit cost = Total cost of production / No. of units manufactured.

For decision making it is important to understand the meaning of each of the two previous concepts, being convenient the use of the total costs before the unit costs if part of the total cost is composed of fixed costs.

h) Behaviour when varying the level of activity:

Fixed cost: A fixed cost is defined as one that does not change when there are variations in the level of production. The term fixed should not be understood as an invariable monetary amount from one year to another. The fixed cost is constant, but the unit fixed cost is decreasing. Fixed costs or structure charges are generally indirect costs, and among them can be mentioned: rents, maintenance expenses, insurance, amortizations... Some authors distinguish between fixed costs of unemployed, inactivity or structure that always exist, although the total inactivity such as depreciation and fixed costs of start-up or preparation of production, which correspond to those needed to start manufacturing.

Variable cost: A variable cost is one that varies with changes in the volume of production. Variable costs are generally direct, and some examples could be: direct labor, consumption of raw materials. Variable costs, depending on the factor being analyzed, can fluctuate in different ways so they will be classified as:

Proportional variable costs: those that vary in the same proportion as the level of production. The unit variable cost is constant.

Progressive variable costs: those that vary more than proportionally to variations in the level of production. The unit variable cost is increasing.

Degressive variable costs: those that vary less than proportionally to variations in the level of production. The unit variable cost is decreasing.

i) With authority over cost generation:

Controllable costs: The controllable costs are, with reference to the manager responsible for a certain cost analytical center, those about whose existence and amount can be decided by said manager.

Non-controllable costs: The non-controllable costs are those that are beyond the scope of action of the manager of a certain cost analytical center and are not under his responsibility.

j) With the cost disbursement:

Disbursable costs: Are those that involve a cash outflow sooner or later.

Opportunity costs: They do not imply any cash outflow in principle and are originated, by taking a certain decision, by waiving another different decision.

K) With its importance for a certain decision:

Relevant costs: The relevant costs will vary depending on the decision that is adopted. They are also known as differential costs. Example: in situation of subactivity upon receipt of a special order, the costs that will change if the order is accepted are those of raw materials, energy, freight, etc. The depreciation of the building remains constant so that the first costs are relevant, and the second irrelevant to make the decision.

Irrelevant costs. They are those that do not vary depending on the chosen alternative.

l) According to their behaviour in a decrease of activities:

Avoidable costs: Avoidable costs are those that are eliminated if the decision to eliminate a cost centre, a product, etc. is adopted.

Unavoidable costs: They are not deleted, even if the cost centre or product in question is eliminated.

3.5.3 TECHNICAL CONCEPTS.

3.5.3.1 Factor

The factor is each of the economic resources used in the function of economic transformation, be it in the primary, secondary or tertiary sector.

Every factor has as an objective to become an input of the transformation process, and can be classified as fixed or capital, circulating or current.

3.5.3.2 Process

The process is a set of operations that, using a given technology and under a given structure, transform some factors (inputs) into some products (outputs).

3.5.3.3 Yield

It is defined as yield of an economic process to the amount of product that is obtained in a certain time of transformation.

The comparison of the potential capacity of performance with what actually produced will serve to define the degree of technical efficiency of the process.

$$Yield = \frac{Product\ (t)}{Factors\ (t)} = Efficiency$$

Being t the temporary unit to which both concepts refer.

3.5.3.4 Effectiveness

The effectiveness is the degree of compliance with the objectives planned in a period of time.While efficiency is a quantitative concept, effectiveness is a qualitative concept. It is necessary to be efficient and effective.

3.5.3.5 Cost centre

We understand by cost centre a grouping of means that serve for the same purpose, and that ultimately are subsets of the large functions of the company (procurement, transformation, commercial and administration).

3.5.3.6 Economicity

It is the parameter that relates the cost of the resources used with those budgeted, referring to the rationality in the consumption of resources.

3.5.4. BASIC CONCEPTS.

3.5.4.1 Finished product

Finished products are those ones manufactured by the company that are intended for final consumption or use by other companies.

3.5.4.2 Product in progress

They are products in the manufacturing or transformation phase in a centre of activity at the end of the year. Example: unpainted furniture. If there are 10 phases and 7 are finished, the product is not in progress, but semi-finished, because there are 3 more phases to finish the product.

3.5.4.3 Semi finished product

They are manufactured products, not intended for sale until they are subject to further processing. Example: shelves to mount.

3.5.5 ECONOMIC CONCEPTS.

3.5.5.1 Income

The income will occur at the time of the sale of the product or at the time of providing the service at 100%, regardless of whether it is charged or not.

3.5.5.2 The margin

The margin is the difference between income and a certain type of cost.

Table 2.Margin calculation

- **Industrial cost**
= Industrial margin
- **Commercial cost**
= Commercial margin

Source: Own elaboration

3.5.5.3 The result

The final result will be the difference between the income and the total cost. The external result of the general and internal accounts of the analytical accounts will not coincide in principle, since not all the expenses constitute costs, nor all the costs have been or will be expenses for the general accounting.

3.6. SYSTEMS AND COST MODELS.

A cost system can be defined as a set of rules and procedures that make it possible to accumulate accounting data and allocate costs to its objects. Accumulation refers to the collection of cost information in an organized way, through an accounting system (HORNGREN, C.T., FOSTER, G. AND DATAR, S. (2002).

Cost models are part of the various alternatives that a company has to obtain the necessary information for decision making.

The choice of a cost system depends on numerous variables, such as the characteristics of the company, the type of information available and the cost that the organization is willing to support with the chosen system. The peculiar characteristics of each company will make it necessary to adapt the cost systems.

In general, we can identify three essential parameters that help companies opt for a specific cost system.

3.6.1 COST SYSTEMS BASED ON THE COST PORTION THAT ACCUMULATES THE PRODUCT.

3.6.1.1 Full-costing:

This system defends that all costs incurred by the company to produce or sell must be incorporated into the final cost of the product. This model proposes to analyze the nature of costs and classify them into direct and indirect costs in order to determine the final cost.

This method uses all the costs of the company, whether fixed or variable, operative or non-operative, direct or indirect for the calculation of the final cost. Thus, the prices calculated with this system allow covering all costs of the company, regardless of its nature. (Castelló, 1998).

The defenders of this system argue that all the expenses of the factory are part of the total cost of the product, and therefore should be included in its calculation. In addition, they recognize that production could not be carried out without the indirect fixed production costs, hence the need to include them, and they defend with all this that this system avoids reporting fictitious losses.

The complete cost system provides higher quality information, although it is much more complex and expensive than the variable cost system.

The following table summarizes the advantages and disadvantages of this cost system.

This system is the most used since the beginning of the century, since it is the model required for the presentation of the annual accounts. However, given the limitations of this system for purposes other than valuation, new methods have emerged, such as the variable cost system.

Table 3 Advantages and disadvantages of Full Costing.

Advantages of the complete cost system	Disadvantages of the complete cost system
It allows to compare the final cost with the price and, consequently, measure the profitability of the products	It does not offer useful information for making certain strategic decisions, such as the decision to manufacture or buy
It gives the possibility of studying in detail the accounting processes in terms of cost	It does not provide the information for pricing policies
It offers a real assessment of the inventories of finished products and products in progress	It uses averages for the costing of a particular product

Source: *"Control de gestión en las empresas privadas"*, María del Mar Rodríguez Muro

3.6.1.2 Direct costing:

This system proposes to use only the variable costs, both direct and indirect, to calculate the cost of the product, considering the fixed costs as costs of the period. In this way, operating margin would be calculated based on prices and variable costs.

Variable cost systems seek to obtain relevant information about the relationships that exist between the level of production, the volume of sales, the costs and the benefit of each product.

The defenders of this system argue that:

- The costs of the product must necessarily be related to the volume of production.

- Indirect fixed manufacturing costs are a cost of the period related to time, do not have a future benefit, and it is not an inventory cost.

- This system eliminates from the benefit the effects of the possible changes given in the inventory and makes it possible to eliminate the capitalization of the fixed costs in the inventories not sold.

- Indirect manufacturing costs will be incurred, regardless of whether there is production or not.

The variable cost system is very useful for companies in which variable costs represent a significant percentage of total costs.

This system has many advantages, which are shown in the following table together with the limitations it presents.

Table 4. Advantages and disadvantages of the variable cost system.

Advantages of the variable cost system	Disadvantages of the variable cost system
It allows to calculate pension benefits instantaneously	It is not suitable for the calculation of costs in farms with differentiated production systems
It allows to calculate the contribution of each product to the results of the company	It makes it difficult to assign joint costs
It allows to calculate the deadlock and plan the pricing policy	It can lead to a distortion of costs in different work centers by not taking into account the structural costs
It facilitates decisions related to cost optimization	Stocks are underestimated
It allows calculating the limit prices from which the product does not interest to manufacture	
It allows the selection of products and markets based on profitability	

Source: *"Control de gestión en las empresas privadas"*, María del Mar Rodríguez Muro

In short, the main difference between both systems lies in the treatment given to fixed costs. While the complete cost system assigns an aliquot part of the fixed costs to the product, the variable cost system allocates them directly to the result of the operation.

The use of one or the other system can produce important differences in the company's results figure. These differences are due to the unsold production, therefore, if the inventories are reduced or non-existent, the use of one or the other system will be indifferent. Therefore, the company must take into account the level of fixed costs and inventoried production when selecting the cost system that will be used.

3.6.1.3 The rational imputation model

The rational imputation model supposes a correction of the full cost model. It consists in including in the cost and final cost of a part, the variable costs (direct and indirect) and, on the other hand, the fixed costs but calculated according to the relation between the real volume of production and the volume of production defined as normal of exploitation.

That is, we know that some costs vary depending on the production of the company, while others are independent of that volume. Well, in these considerations the rational allocation cost method is based, according to which, the variable costs (direct and indirect) must intervene in the calculation of the final cost by its effective use, that is, by its totality, while the fixed costs must be incorporated, not by their totality, but by their corrected amount, taking into account the percentage of real production with respect to which, previously, it has been defined as a percentage of normal production.

This method is based on the difference between direct and indirect costs, the latter related to the activities that take place in the company. The final cost, based on this method, will be formed with the direct and indirect costs associated with certain activities, precisely those that are considered to add value. The activities are proposed in such a way that all the indirect costs related to the product appear as direct costs of the activities from where they are transferred to the products according to the amount consumed of that activity, properly measured.

The mission of structural loads is to give the company the ability to manufacture and sell a certain number of products; consequently, it has an existence independent of the number of activity developed.

Now, if the market absorbs at normal prices, all the goods and services that the plant and equipment can generate, we say that the company works at full capacity, which implies an optimal use of its fixed capital; but yes, as it usually happens, the economic unit works in 80 or 90% of its possibilities, the unit cost is higher, since the fixed charges are imputed among fewer units.

To avoid that the unit cost depends on the volume of activity achieved, we can use the rational allocation method with regard to the fixed costs, which are imputed in the relation:

$$\frac{Real\ activity}{Normal\ activity}$$

In this way, if the volume of activity reached is lower than that considered normal, there would be a part of the structure charges not included in the cost, which represents a loss of sub-activity, since they are included in the cost plus fixed costs of those that have been in reality.

3.6.1.4 Activity Based Costing (ABC)

It was in the 1980s, when the ABC cost model, which translated into Spanish as cost management based on activities, began to be implemented as an instrument for controlling and managing costs in some large North American companies.

Professors Thomas Johnson and Robert Kaplan justify their application to try to respond to the limitations that, from a management point of view, raised traditional cost accounting systems as a result of:

- Internationalization of markets, and, therefore, greater competition and also uncertainty.

- Reduction of the life cycle of the products, in the face of continuous changes in the tastes and preferences of the consumers.

- Technological revolution continues, applicable to all business areas.

The cost structures of companies are modified:

- Losing importance of direct costs, and increasing the specific weight of indirect costs, both fixed and variable.

- A process of variabilities of indirect costs is carried out.

- Greater attention, control and in many cases elimination of structural loads.

- Notable increase in research and development expenses, human resources, quality and image of the company.

- Many common resources are used, which are used by different products in different proportions.

- A large number of indirect costs are due to specific transactions or activities and not to the volume of production.

As a consequence of all the above, many authors consider that the classic management accounting systems are inadequate to meet the information needs of companies.

Efficiency, according to these authors, is not based solely on the maximization of production and the minimization of costs. They claim that companies can no longer manage their internal costs, but substantially manage the value that the market

sanctions. Therefore, all those costs that do not create enough value should be eliminated.

The main causes of the loss of relevance of traditional cost systems are, according to these authors:

- In traditional systems, costs are determined when the specifications of the product to be manufactured and the volume to be manufactured have been defined, without paying due attention to the planning and design phases of the product, also measuring the quality and delivery times, innovation, flexibility and the degree of customer satisfaction.

- The traditional systems were designed for simple production environments, in which the cost of direct labour was high in relation to the final cost of the product.

The product is the cause of the consumption of resources and therefore costs vary based on the volume of production achieved.

Under these circumstances, the indirect costs were attributed to the products according to the number of hours of direct labor or according to the cost of the same, not giving due importance to the type of resources that would have been used, even if they were different, for the manufacture of the products.

At present, given that it is intended to offer a product of the highest quality at the lowest possible cost and in the shortest time possible, with a very intensive use of capital, direct work has become a support factor for the machines and represents a very small percentage of total costs.

In this new environment, spreading the indirect costs according to direct work may result in the product that has used the largest proportion of the automated process being the one that supports the least costs of this nature.

The ABC model has two clearly defined objectives that are:

- Calculation and control of the cost of the activities.

- Management of activities.

Therefore, the use of a system based on the products loses significance since the company incurs costs to carry out a series of activities, of which only a part is destined to the manufacture of the product.

It is based on the following premises:

- The activities consume resources.

- The products consume activities.

Therefore, the fundamental characteristics of the ABC can be stated:

- A product or service is born as a result of the realization of a series of successive activities, which determine the consumption of resources; that is why the activities are the direct causes of the consumption of resources or productive factors and not the products or services.

- It is necessary to control and manage the activities, which implies focusing attention on what is done and how it is done, rather than what is spent, that is, moving from cost management to activity management.

- To increase the profitability and competitiveness of companies it is necessary to eliminate superfluous activities that do generate costs but not added value for the product or service offered by the company to its customers, such as the time of inspection of materials, transfers of product and, of course, the storage time.

- The ABC system is not limited to the analysis of the costs of the production area, but its field of action extends from the stage of design and conception of the product to the after-sales service.

- As Professor J. Merlo Sánchez points out, the cost system based on activities, constitutes substantially a management philosophy that must be assumed by all managers and workers of each company.

3.6.2 SYSTEMS OF COSTS DERIVED FROM THE CHARACTERISTICS OF THE PRODUCTIVE SYSTEM.

3.6.2.1 System of costs per process

The process cost system is concerned with the costs generated in the different departments. It is based on the use of averages for the calculation and the allocation of costs to the various products in the different phases of the production system.

The main characteristics of this system are the following:

- Each stage of the production process becomes a cost centre, requiring the separate determination of the costs of each section.

- The units produced in each centre have to be determined in order to determine the unit cost of each centre.

- The determination of the total cost of the product is obtained by adding the unit costs of the various centres through which the product has passed for its transformation.

This system is generally used in companies that produce large volumes of uniform products, using a single production process. (Castelló Taliani, 1998). All products go through the same processes. Each cost centre transfers its costs to the next work centre, as well until the last process.

3.6.2.2 Cost system for orders or work orders

In this case, the cost object is an individual unit, a batch or a defined service, which is called work. In this way, the axis of the system is the manufacturing order and the sections become simply places of cost formation.

This system is applied to those processes where it is necessary to identify the costs related to a specific quantity of production.

Generally, this system is used by companies that offer products or services based on the specifications of their customers. The organizations that implement this system are those in which there are products that contain elements that clearly differentiate some products from others.

Therefore, the objective of this cost system is to accurately identify the costs of the factors used in the production process with the orders that have consumed them. In this case, the costs will not be associated to the place where they were produced but to the work order that causes them.

According to HORNGREN, C.T.; FOSTER, G. AND DATAR, S. (2002), for the determination of the cost these steps must be followed:

1: Identify the cost object.

2: Identify the direct costs of the work.

3: Select the bases of allocation of indirect costs.

4: Identify indirect costs.

5: Calculate the cost rate that is used to apportion the indirect costs.

6: Calculate the prorated indirect costs.

7: Calculate the total cost of work, adding all direct and indirect costs prorated.

3.6.3 SYSTEMS OF COSTS DERIVED FROM THE MOMENT IN WHICH THE ASSESSMENT IS PERFORMED.

If we look at the time of calculation to make the classification of cost systems, we can find two types: real or historical and standard.

Historical systems are those in which the determination is made ex post, once the calculation period has elapsed. This criterion is the most used, since it is based on the generally accepted accounting principles.

In the historical cost system, costs are recorded as they are incurred. In the case of direct costs, this system is not a problem, however, it is difficult to apply for indirect costs.

On the other hand, the standard cost systems are those in which the valuation is made ex ante, using forecasts on the costs. Subsequently, these forecasts are compared with the real data, which allows to analyse the deviations and take corrective measures. These systems are used mainly for control.

The standard cost system makes estimates of both technical and economic variables. This system has two fundamental advantages, on the one hand, it allows the costs to be assessed almost in real time, without the need to know the real data, and on the other hand, it avoids incorporating the possible inefficiencies of the production process as a cost.

Normally the base data of the standard cost system is established from the accumulated experience of the historical cost systems.

3.7.- COMPARISON BETWEEN COST MODELS

Comparing the full cost model and the variable cost model, we can observe substantial differences in the company's figure of results based on the quantitative importance of the production of the unsold exercise, that is, if production inventories are reduced or even they are non-existent, the use of one system or another is indifferent.

However, as the volume of the unsold production increases, greater divergence will show the result of the exercise.

This can be seen in the following comparison tables:

Table 5. Full costing vs Direct costing (1).

	Total industrial cost (full cost)	Direct Costing
Fixed costs	The fixed costs of production are costs, not the period. They can be transferred to the following periods.	All fixed costs are considered period costs.
Results	It depends on the volume of production.	It does not depend on the volume of production.

Source: Esteban González, A. "Desarrollo de una herramienta para el cálculo de costes."

Table 6. Full costing vs Direct costing (2).

	Total industrial cost (full cost)	Direct Costing
Production obtained greater than the one sold (final stocks remain)	Higher result	Minor result
Production obtained lower than the sold (there are final stocks)	Minor result	Higher result
Production obtained equal to the one sold (no stock)	The results match.	

Source: Esteban González, A. "Desarrollo de una herramienta para el cálculo de costes."

In relation to the full cost model and direct costing we can finally observe:

- Neither of the two systems ensures perfect and complete information.
- They offer complementary information.
- Direct costing offers information aimed at short-term decision making.
- The full cost facilitates long-term decision making.

In Table 7 we will compare the full cost, variable cost, and rational imputation in relation to how fixed and variable costs are treated.

Table 7. Comparison of models according to direct and indirect costs.

Complete cost	Direct costs	Indirect costs
Fixed costs	Affected to the product	Charged to the product
Variable costs	Affected to the product	Charged to the product

Variable costs	Direct costs	Indirect costs
Fixed costs	Excluded	Excluded
Variable costs	Affected to the product	Charged to the product

Rational imputation	Direct costs	Indirect costs
Fixed costs	Affected the product according to the activity	Charged to the product according to the activity
Variable costs	Affected the product in its entirety	Charged to the product in its entirety

Source: Felipe Blanco Ibarra (2000).

4. DESCRIPTION OF THE COMPANY.

4.1. HISTORY OF THE COMPANY.

The company Agrobur S.L is located in the town of Burriana, province of Castellón and has extensive experience in the agricultural sector. All this is due to the fact that for more than 20 years this family company, which started its business with another company name, was already carrying out part of the activities that the current company carries out.

It was in 1975 when Comercial Ribera began its commercial work. From that moment Manuel Ribera, current manager of Agrobur S.L., began to develop certain skills in the field of agricultural machinery and its repair. Throughout time he demonstrated these skills to such an extent that he was in charge of all the repairs that the workshop had.

In June 2004, the company Agrobur S.L. was created, located on the outskirts of the city of Burriana, specifically, within the "Carabona" industrial estate, and which had Manuel Ribera as manager. The company was dedicated to the same activities and functions that had been carried out since Comercial Ribera before mentioned and also, began in the commercialization of vehicles without driver's license. Currently, there are more than six workers in charge of different tasks within the same company. The company has more than 13 years of experience of favorable character in this sector as characteristic as it is the agricultural one and for this reason, it is leader in the province of Castellón in this sector.

4.2. FUNCTION OF THE COMPANY

Agrobur S.L. is located in the industrial equipment sector. Its main function is the repair of machinery (CNAE 3312) and, within it, there is a commercial department that is responsible for sales of such agricultural and forestry machinery, as well as vehicles without a license.

The company has a large commercial store where, on the one hand, the accessories for the machinery and, on the other, accessories for the user, such as EPI or different safety material, to be able to perform the tasks in a pleasant, comfortable and especially within the required standards of safety at work.

The company has qualified staff to meet any need in the related field and offer different alternatives depending on this, as well as adequate and personalized advice by professionals located in the repair shop when purchasing new machinery, without forgetting the office staff that will provide their corresponding guarantee.

4.3. PRODUCTS AND SERVICES.

The company Agrobur S.L has a high range and variety of customized products for each of the needs that may arise to different users or customers. First of all, we will highlight the machinery of the STIHL brand, whose main function is forest services for companies and pruning for individuals. Some of these products are:

- Chainsaws
- Brush cutter
- Blowers
- Hedgehog
- Accessories STIHL

Another of the products that the company owns in its commercial store are vehicles without a driving license of the brand "Aixam" that are intended for private use for a specific type of target audience, types of people who cannot drive due to various circumstances and that, with this product, they can reach this need.

It is worth highlighting one of the most relevant products of our company such as turbo-atomizers, products for professional use and whose main function is the maintenance of agricultural fields so that the annual production gives a good result. Agrobur S.L. has an excellent sponsor in this field that has excellent references and that is the company "Mañez y Lozano".

Finally, the commercial department has a very characteristic product, which belongs to a prestigious brand such as "John Deere". The products that this well-known brand has are tractors destined for use in the agricultural sector and although its purpose is to allocate this service to companies or official organizations. There are also individuals that can cover the price of this product.

As already mentioned above, Agrobur S.L. has a mechanical workshop in which each of the machines are revised for further repair and commissioning so that different users can work with them. Therefore, this service that has the company has qualified

personnel and skills certificate through the German company “STIHL” to work with different products.

4.4. PRODUCTIVE PROCESS.

To define the productive process of the company I will focus on the repair and sale service offered. The main feature that has manpower of this workshop is the different training is done on the premises of its major sponsor "STIHL", which provides as additional training courses on electronics and mechanics of their products that operators are forced to go annually. This is why the staff will be properly prepared and qualified to perform functions on said machines and, as a consequence, the different users will be satisfied with the work performed and may continue to give the corresponding use to the products.

Regarding the sales process, Agrobur SL has a person with almost fifteen years of experience at the head of its commercial department, which supports it, and this is why the company obtains much more margin from the sale of the different products previously mentioned that from the part of the repair shop.

4.5. BUSINESS ORGANIZATIONAL CHART

Next, the organization chart of the Agrobur S.L company is shown, in which the manager of the company initially stands out and later, the different departments that it owns are described.

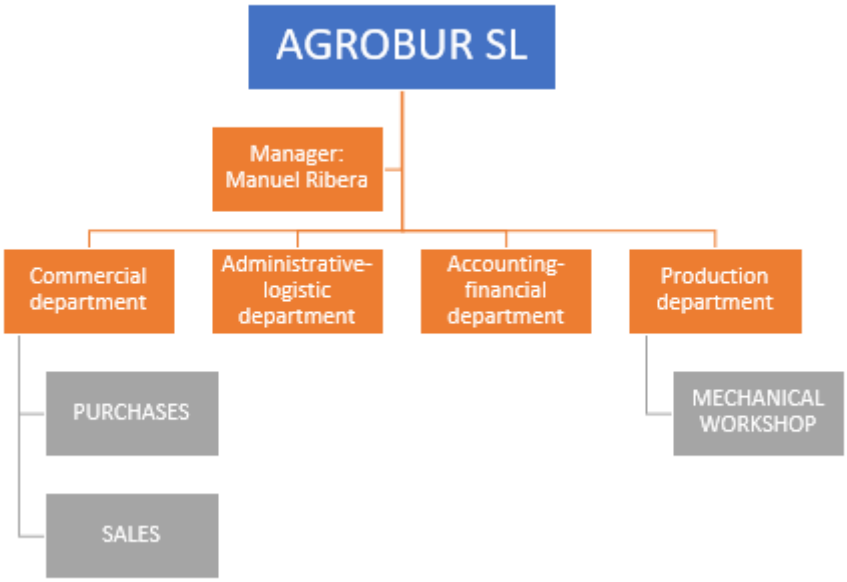
The company has four differentiated departments with different characteristics and that have different purposes.

The commercial department has a responsible person in charge of purchases and sales.

The production department is responsible for the repair workshop, which has a workshop manager and two mechanics.

Finally, there is the administrative and logistics department responsible for billing, as well as the reception and issuance of orders. This department has a technician in administration and finance and, in the finance and accounting department, the person in charge is a university graduate in charge of accounting in general as the main function.

Figure 1. Business organization chart.



Source: Own elaboration

5. METHODOLOGY

In this section we will make the corresponding calculations with the current cost models and we will try to define a cost model suitable for our company.

First, as we have said before, our company needs two areas in which it operates to produce a profit. The first area is called commercial where its responsible sells products already manufactured by suppliers mentioned in the previous section. Next, we find the industrial area. In our case, it is a machine repair workshop in which we have spare parts for all types of agricultural machinery and personnel properly trained to perform the necessary repairs.

5.1. Functional classification of costs

Therefore, as we have defined two important areas in our company, we will perform a functional classification of the costs.

- Production or operational costs: In the case of our company, this type of costs refers to the costs that arise from the repair of machinery, since it is a service provided. These costs correspond to the salaries of the mechanics and the workshop manager.
- Commercial costs: as commercial costs, we have the salary of the person in charge of sales of existing machinery in the company's store or stand.

- Administration costs: in the organization chart of the company described in the previous section, we observed an accounting department and another administration department, both of which are in charge of them. Therefore, in this type of costs would reflect the salary of these people.
- Financial costs: this type of cost refers to financial resources. In the case of our company, we work with a credit policy, because the costs of the same would be charged.

Table 8. Costs according to functional classification.

OPERATING COSTS	COMMERCIAL COSTS	ADMINISTRATION COSTS	FINANCIAL COSTS
Wages: · Workshop manager (€ 1200 / month) · Mechanical (€ 1087.71 / month) Interchange parts.	Distribution expenses: Companies messaging. Vendor expenses. Salary: Commercial	Dept. Accounting: - Salary (€ 500 / month) Dept. of Administration: - Salary (€ 1250 / month)	Credit policy (expenses)

Source: own elaboration

5.2. Classification according to the cost object

This classification is made up of all the costs of the company and which are classified as:

- Direct costs: those costs within the company that are tracked until the sale of the product to the customer and that, therefore, in the case of our company is in the commercial field all costs from the supplier until the final customer, obtaining the company a benefit as an intermediary. On the other hand, in the industrial field, the costs would be those from when the machine is collected to repair it until it is returned to the customer already fixed.
- Indirect costs: these are the corresponding costs in both commercial and industrial areas, which are charged without monitoring, that is, whether there is activity or there are no such costs.

Following the classification of functional costs, it is about distributing these costs in direct and indirect.

Table 9.Costs according to the cost object.

DIRECT COSTS		INDIRECT COSTS	
OPERATING COSTS	**COMMERCIAL COSTS**	**ADMINISTRATION COSTS**	**FINANCIAL COSTS**
Wages: · Workshop manager (€ 1200 / month) · Mechanical (€ 1087.71 / month) Interchange parts.	Distribution expenses: Companies messaging. Vendor expenses. Salary: Commercial	Dept. Accounting: - Salary (€ 500 / month) Dept. of Administration: - Salary (€ 1250 / month)	Credit policy (expenses)

Source: own elaboration

5.3. CALCULATION OF COST MODELS.

To start the calculation of the models of the times we have the account for the two specific concepts in the company.

INDUSTRIAL SCOPE

As mentioned above, this is the average of the repairs that can be made in a month, as well as the parts used, and the expenses generated inside the warehouse that we will describe next. Therefore, let's start from this assumption:

- Average monthly repairs: 330 repairs
- Variable repair costs:
  - Materials or supplies (pieces): € 25 / unit.
  - Labour: € 17 / unit.
  - Indirect costs of variable manufacturing (supplies, material delivery): € 7 / unit.
- Other repair costs:
  - Indirect manufacturing costs fixed: € 1810 / month
  - Administration costs: € 1780 / month
  - Financial costs: € 13 / month

COMMERCIAL SCOPE

As regards the commercial scope, the sales of the products are described in a specific period, in this case, a month, and also to the expenses derived from them that will be described below:

- Sales: 120 units
- Variable marketing costs:
  - Stock: € 22 / unit
  - Indirect marketing costs: € 30 / unit
- Other costs incurred:
  - Commercial costs: € 1200
  - Administration costs: € 1780
  - Indirect manufacturing costs: € 1810

Therefore, we describe a comparison of the models on which the costs that have been studied during this degree are based and calculated with the previous data described.

Therefore, the variable cost or direct costing model is used and compared with the full cost model;

INDUSTRIAL SCOPE

Table 10. Calculation of models according to industrial scope.

TYPE OF COST	AMOUNT (Euros)	TOTAL COSTS		
		VARIABLE COST	FULL INDUSTRIAL COST	FULL COST TOTAL
Materials	25*330=8.250	16.170	17.980	19.773
Workforce	17*330=5.610			
Variable CIF	7*330=2.310			
Fixed CIF	1.810			
Administration costs	1.780			
Financial costs	13			
UNITARY COST (330 Repairs)		€ 49 / unit	€ 54.48 / unit	€ 59.91 / unit

COMMERCIAL SCOPE

Table 11. Calculation of models according to industrial scope.

TYPE OF COST	AMOUNT (Euros)	TOTAL COSTS		
		VARIABLE COST	COSTE COMPLETO INDUSTRIAL	COSTE COMPLETO TOTAL
Materials	120*22=2.640	6.240	8.050	11.043
Variable CIF	30*120=3.600			
Fixed CIF	1.810			
Commercial costs	1.200			
Financial costs	13			
Administration costs	1780			
UNITARY COST (120 units)		€ 52 / unit	€ 67.08 / unit	€ 92.02 / unit

Finally, the calculations made compare three cost models in the different areas in which the company currently operates. Therefore, it should be noted that the first model (variable cost) includes the materials or spare parts and the indirect costs of manufacturing variable as supplies and, on the other hand, the variable labour in the industrial field.

In the second model, it is observed how the indirect costs of fixed manufacturing are added to the costs that are imputed in the first model. In the case of this company may be the rental and insurance of the industrial warehouse where it operates.

And, finally, the total full cost model groups all the costs that appear in both areas, although in the commercial area, some commercial costs derived from the salary of the shop's staff are designated. There are some financial costs derived from the expenses corresponding to the credit policy contracted with a bank and administration costs corresponding to the existing office staff and expenses that are included in it.

6. IMPLEMENTATION AND PROPOSAL ADJUSTABLE COST SYSTEM FOR THE COMPANY AGROBUR S.L.

The following section describes what would be the most appropriate cost model for Agrobur SL based on the data used and calculations made in the previous point.

After comparing the three cost models described, it should be indicated that it is possible to implement all the models in said company because, according to the decisions that upper management may take, it would be convenient to see which costs can be omitted and which cannot.

From my point of view, the top management of the company should choose a cost model that does not omit expenses that actually appear in the repair processes and commercial sales. For this reason, the costs should be charged in full and even if the unit cost is increased, the best proposal for this company is the cost model called Full-Cost Total.

This model groups all the possible costs that our company may have because, as it has a commercial and industrial scope, these costs can modify the sale prices of the products or the repairs made until they are collected by the final customer. In this way, the total full cost would help the senior management to make a more precise decision regarding the maintenance of the company's activity.

7. BUDGET

The objective of this section is to define the economic and temporal cost (hours invested) in the realization of this TFG.

Firstly, the different types of activities carried out along the TFG will be defined along with the number of hours invested in said type of activities.

For the budget, a cost of 20 euros/hour will be considered.

7.1 Previous preparation:

This section takes into account all those processes carried out in order to raise awareness and knowledge about the main theme of the TFG "Proposal and implementation of an adequate cost system".

Most research is based on the study and interpretation of cost models.

7.2 Study and calculations

Table 12. Study, search and calculations.

Budget element	Economic cost (Euros)
Hours used in the study of Research articles and documentation. (96 hours)	1.920€

Budget table: own elaboration.

7.3 Drafting of the different sections of the TFG

In this section, the resources used in the writing of the different sections that make up the end-of-grade project are presented. Here the time invested in search of information, research, interpretation of analysis and writing is taken into account.

Table 13. Drafting of the different sections of the Final Degree Project.

Budget element	Economic cost (Euros)
Hours used in the writing of the different sections of the Final Degree Project (90 Hours)	1.800€

Budget table: own elaboration.

7.4 Writing and adaptation of memory

This part presents the resources used in the writing and adaptation of the report, that is, the final document. Here we take into account the time spent in the assembly of the different parts of the final degree project, correction of errors, format corrections, etc.

Table 14. Writing and adaptation of memory.

Budget element	Economic cost (Euros)
Hours used in the adaptation of memory (10 Hours)	200€

Budget table: own elaboration.

7.5 Support and revision to the translation

Table 15. Support and revision to the translation.

Budget element	Economic cost (Euros)
Translation support and review	**800 €**

Budget table: own elaboration.

7.6 Total

The final budget for the implementation of the Final Project is 4.720 euros.

8. CONCLUSION.

The existence of increasingly dynamic and complex environments requires the incorporation of information systems in companies, which allow them to make decisions. Managers need reliable, timely and continuous information that enables them to plan, control and manage the business and its activity effectively.

The control of management is necessary today in any company, it is a tool to support the management that allows to have a global vision of the operation of the organization. It does not carry out any formal strategic planning process and has no cost system in place.

In a sector as competitive as the agricultural sector, in which the level of price manoeuvring is low, the policy of maximizing profits must be integrated into a strict control of costs. The proposed cost system would be very useful for the company.

The cost system that has been proposed for this company based on the calculations and the information obtained is the total full-cost model.

This company sets its prices based on costs. So far, the costs were attributed to the products based on an average, without taking into account that not all the areas in which it operates consume the same resources. However, the proposed system would allow more accurate cost allocation.

In this way, the company could have a good control of all the costs and margins that each plant contributes to the company.

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