



**KAAMADHENU ARTS AND SCIENCE COLLEGE, SATHYAMANGALAM**  
**DEPARTMENT OF MATHEMATICS**

**Course Name : Data Analytics With Tableau**

**Academic Year : 2023- 2024**

A Project Report Entitled As

**“ESTIMATION OF BUSINESS EXPENSES WITH TABLEAU”**

Work done by

University.Reg.no	Naan Mudhalvan ID	Name	Class
2122A0439	B5B62A4B80BD00DB6D94EC4EBBBF34E9	Jeevitha.R	B.Sc. Mathematics
2122A0445	80CCDEB6BE9EF878DA749E28530D2A06	Poomani .K	B.Sc. Mathematics
2122A0431	42022AA12A6C209A11D4C26C1EC7BB2C	Banumathi .V	B.Sc. Mathematics
2122A0433	3631ABABC7A38B697954C05194C6D122	Dhanushiya .E	B.Sc. Mathematics

**Team ID : NM2023TMID00363**

Under the guidance of

**Ms P. Mythili**

**Assistant Professor**

**Department of Mathematics**

**Kaamadhenu Arts and Science College**

**Sathyamangalam – 638 503**

## INDEX

S.NO	TITLE	PAGE NO
1	Introduction	3
2	Problem definition and thinking	4
3	Result	6
4	Advantages and Disadvantages	17
5	Application	19
6	Conclusion	20
7	Future Scope	22
8	Appendix	24

# ESTIMATION OF BUSINESS EXPENSES

## 1.INTRODUCTION

### 1.1 OVERVIEW

According to the Internal Revenue Service (IRS), business expenses are ordinary and necessary costs incurred to operate your business. Examples include inventory, [payroll](#) and rent. Fixed expenses are regular and don't change much — things like rent and insurance. Variable expenses are expected, but they can change. Some examples include sales commissions, gas for business vehicles and shipping costs. You expect variable expenses each month, but the actual amount will vary. Tracking your business expenses helps you keep an eye on whether you'll see profits or losses

Also referred to as deductions, business expenses are the costs of operating a business. They're recorded on the income statement. These expenses will be subtracted from business revenue to show a company's net profit or loss and taxable income. Guidelines for business expenses can be found in Section 162 of the Internal Revenue Code (IRC). As long as an expense is considered ordinary and necessary, it can be reported to the IRS to help reduce tax liability. According to the IRS, ordinary refers to expenses common to most business owners in the industry or trade. Necessary means your expenses help with your business operations, and they're appropriate to your organization.

### 1.2 PURPOSE

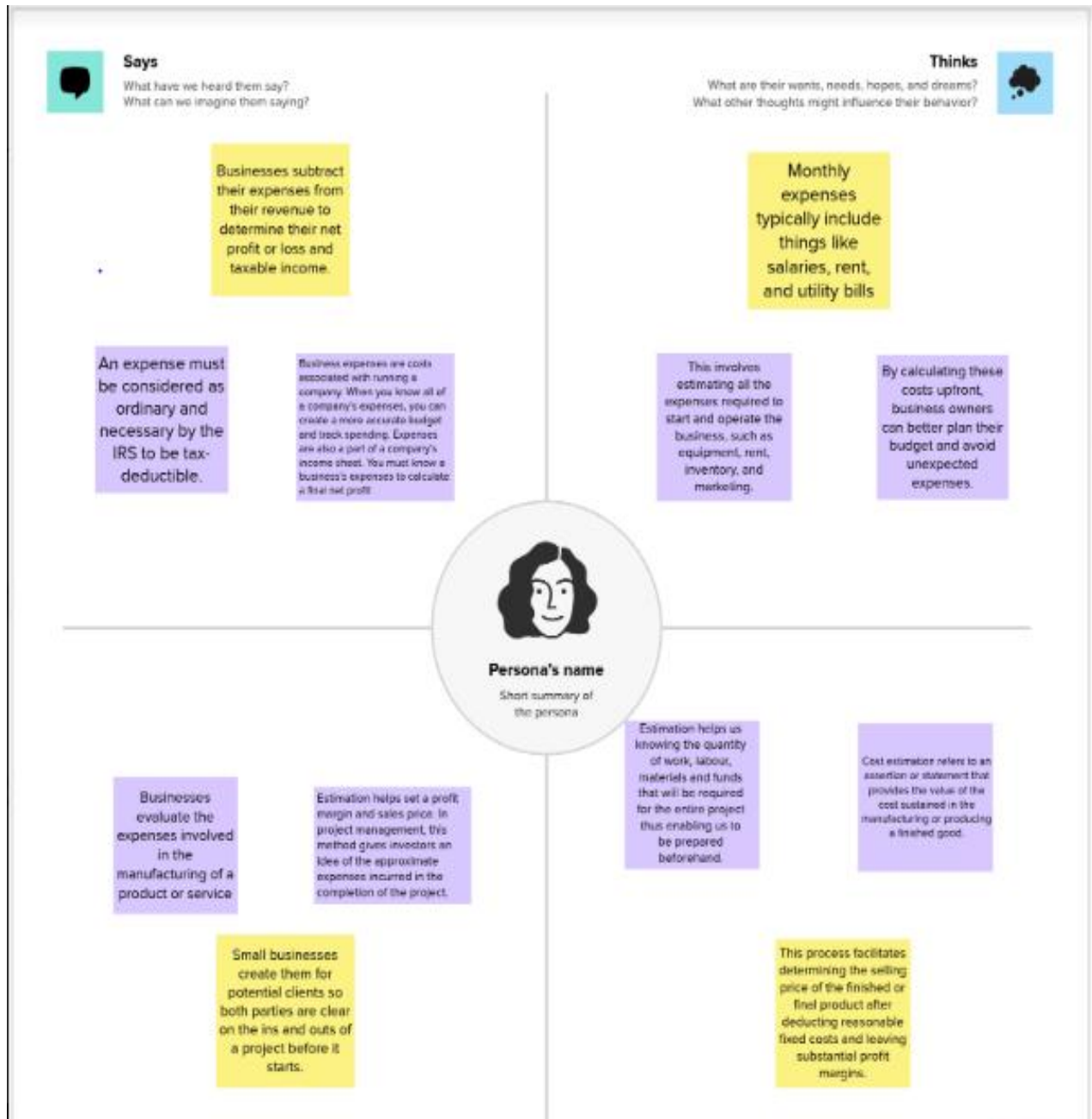
Business expenses need to be considered ordinary and necessary for them to be tax-deductible.

Business expenses are recorded on an income (profit and loss) statement.

Also referred to as deductions, business expenses are the costs of operating a business. They're recorded on the income statement. These expenses will be subtracted from business revenue to show a company's net profit or loss and taxable income.

## 2. PROBLEM DEFINITION AND DESIGN THINKING

### 2.1 EMPATHY MAP



## 2.2 BRAINSTROM

### Brainstorm & idea prioritization

Use this template in your own brainstorming sessions as a group brain map, or with friends. Brainstorming and idea prioritization are essential skills for any team or individual looking to solve problems and create innovative solutions.

- Use this template in your own brainstorming sessions as a group brain map, or with friends.
- Brainstorming and idea prioritization are essential skills for any team or individual looking to solve problems and create innovative solutions.

#### Before you collaborate

Before you collaborate, it's important to set the stage for a successful session. This includes defining the problem, setting ground rules, and ensuring everyone has a chance to contribute.

- Define the problem: Clearly define the problem you're trying to solve. This will help you focus your brainstorming efforts.
- Set ground rules: Establish ground rules for the session, such as no criticism, no self-censoring, and everyone has a chance to contribute.
- Ensure everyone has a chance to contribute: Make sure everyone has a chance to contribute to the session. This can be done by having everyone share their ideas, or by using a round-robin approach.

#### Define your problem statement

Even a good definition based on a good idea, without a clear problem statement, is incomplete. It's important to define the problem clearly, so that everyone is working towards the same goal.

Key notes on problem definition:

- Define the problem: Clearly define the problem you're trying to solve. This will help you focus your brainstorming efforts.
- Set ground rules: Establish ground rules for the session, such as no criticism, no self-censoring, and everyone has a chance to contribute.
- Ensure everyone has a chance to contribute: Make sure everyone has a chance to contribute to the session. This can be done by having everyone share their ideas, or by using a round-robin approach.

#### Brainstorm

Brainstorming is a creative process that involves generating a large number of ideas, without any initial judgment or criticism. This allows you to explore a wide range of possibilities, and to come up with innovative solutions that you might not have otherwise thought of.

Key notes on brainstorming:

- Generate a large number of ideas: The more ideas you generate, the more likely you are to come up with a good solution.
- Don't judge or criticize ideas: It's important to avoid judging or criticizing ideas during the brainstorming session. This can stifle creativity and prevent you from exploring all the possibilities.
- Encourage everyone to contribute: Make sure everyone has a chance to contribute to the session. This can be done by having everyone share their ideas, or by using a round-robin approach.

Sticky notes: Use these to capture ideas and notes during the brainstorming session. They can be used to organize ideas, and to keep track of progress.

#### Group ideas

Take time to group your ideas into clusters, and to identify the most promising ones. This will help you to focus your efforts on the most important ideas, and to avoid getting bogged down by less important ones.

- Identify the most promising ideas: Look for ideas that are novel, feasible, and have a high potential for success.
- Group ideas into clusters: Group similar ideas together, so that you can see the relationships between them.
- Identify the most important ideas: Focus on the ideas that are most important to the problem you're trying to solve.

#### Prioritize

Your team should all be on the same page about what's important. This means that you need to agree on a set of criteria for prioritizing ideas, and to use these criteria to rank the ideas. This will help you to focus your efforts on the most important ideas, and to avoid getting bogged down by less important ones.

Key notes on prioritization:

- Agree on a set of criteria: Identify the criteria that are most important to the problem you're trying to solve. These might include factors like feasibility, impact, and effort.
- Rank the ideas: Use the criteria to rank the ideas, so that you can see which ones are the most important.
- Focus on the most important ideas: Concentrate your efforts on the ideas that are most important to the problem you're trying to solve.

#### After you collaborate

Once you've brainstormed and prioritized your ideas, it's time to start working on them. This involves creating a plan of action, and then implementing that plan. It's important to stay focused and to keep track of progress, so that you can see how far you've come.

Key notes on implementation:

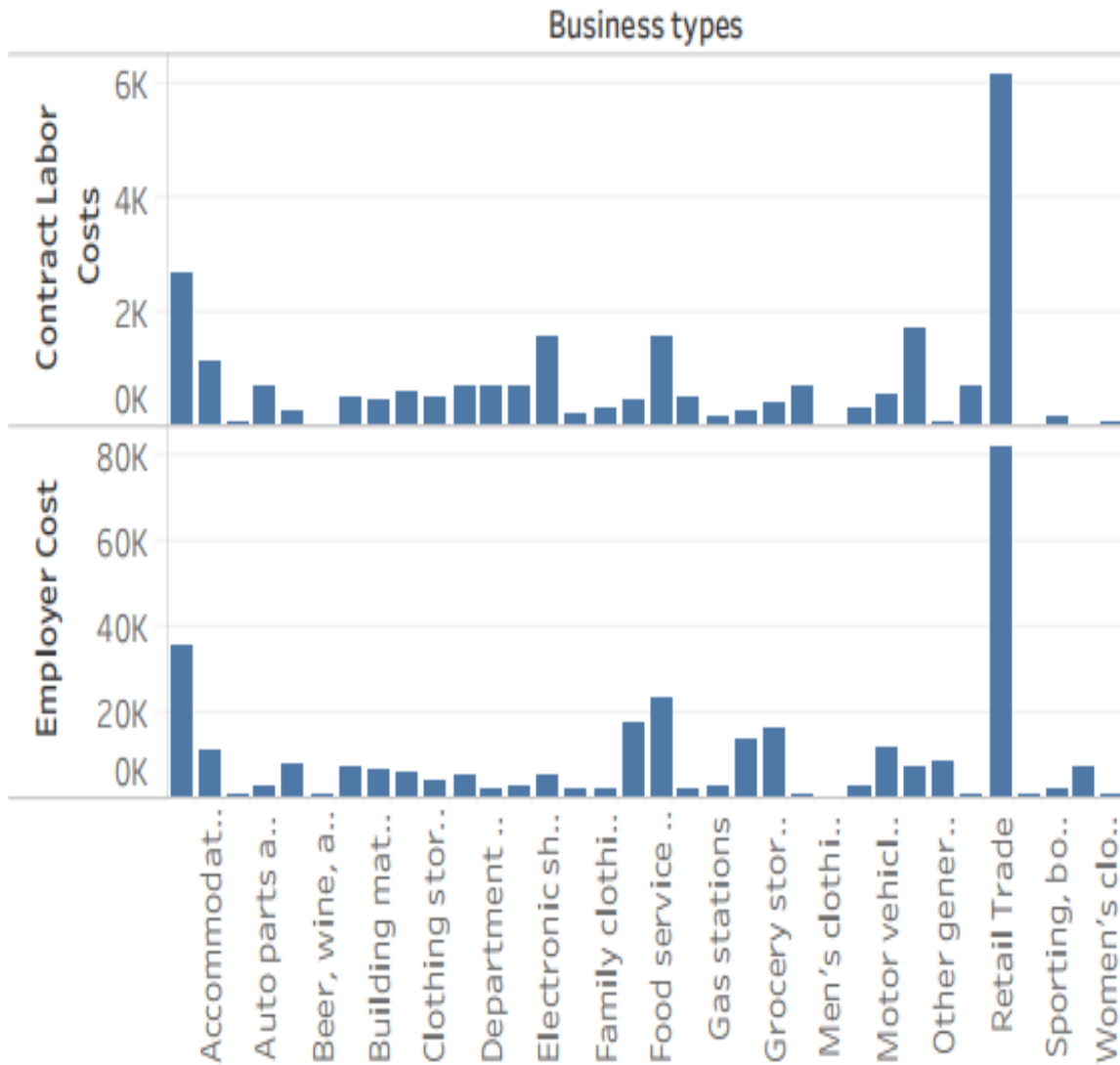
- Create a plan of action: Identify the steps that need to be taken to implement the ideas.
- Implement the plan: Carry out the plan, and keep track of progress.
- Stay focused: Stay focused on the goal, and avoid getting distracted by other tasks.
- Keep track of progress: Regularly check in on progress, so that you can see how far you've come.

Sticky notes: Use these to capture ideas and notes during the brainstorming session. They can be used to organize ideas, and to keep track of progress.

### 3.RESULT

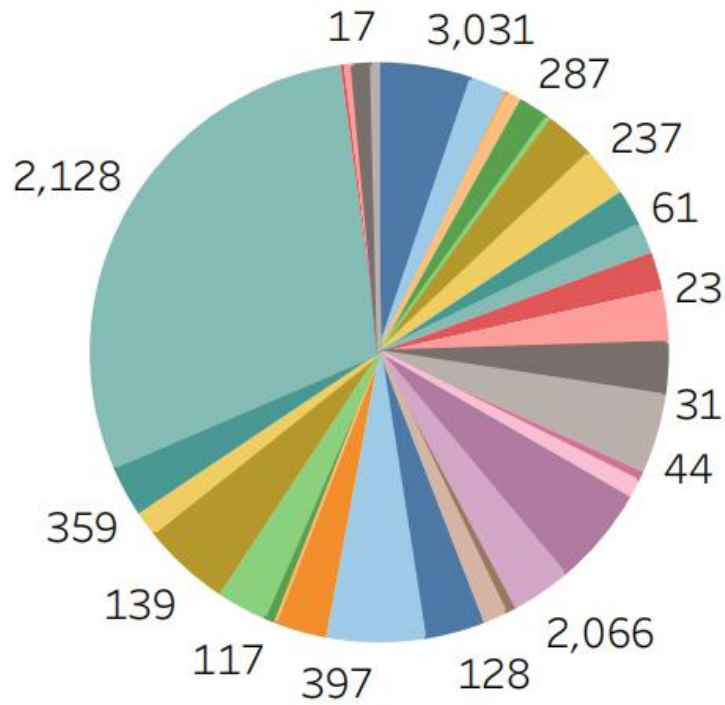
#### DASHBOARD 1

contractLabor vs costs



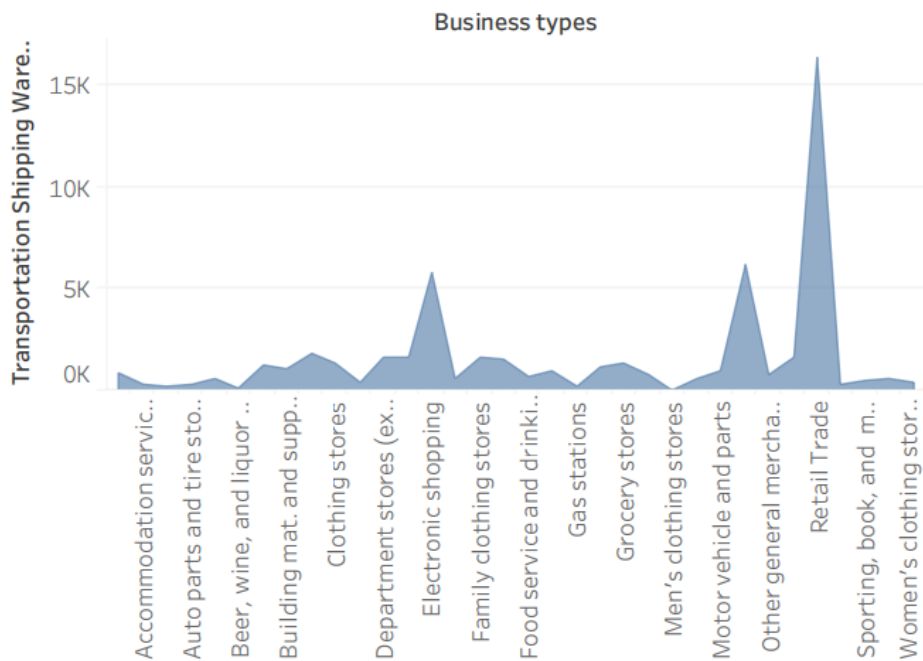
## DASHBOARD 2:

## FUEL



## DASHBOARD 3

### Transportation



# STORY

## STORY 1

Rental payment Machinery	Employee cost ( Insurance vs pension)	contractLabor vs costs	Equipment cost	Advertisement cost	Annual pay roll
-----------------------------	--	------------------------	----------------	--------------------	-----------------





## STORY 2

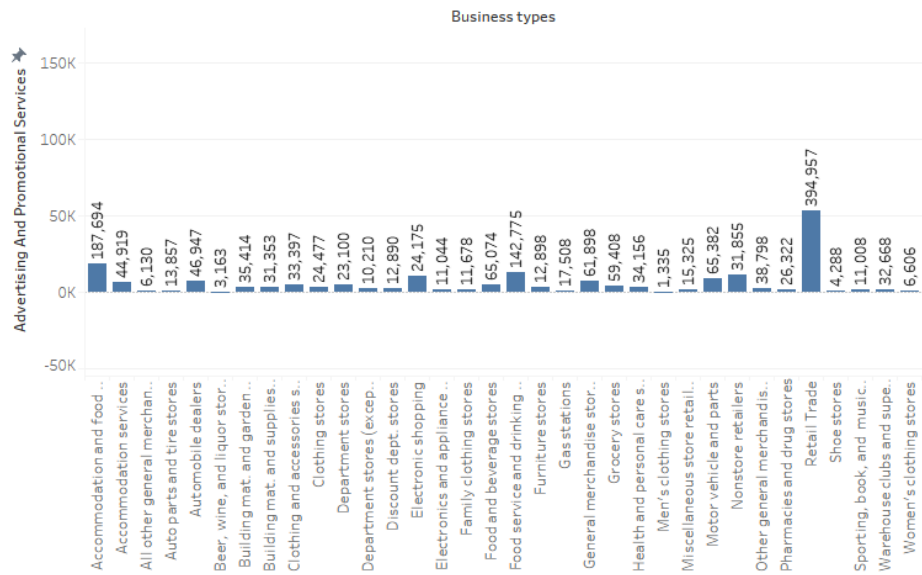
Transportation	Texas Licenses	Employee cost (Insurance vs pension)	Fuel	Maintenance of Buildings	Expenses yoy
----------------	----------------	--------------------------------------	------	--------------------------	--------------



# VISUALIZATION

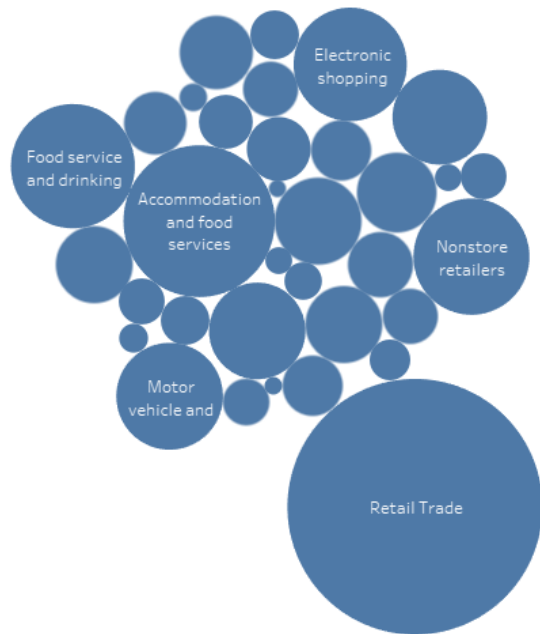
## 1. Annual pay roll

Annual pay roll



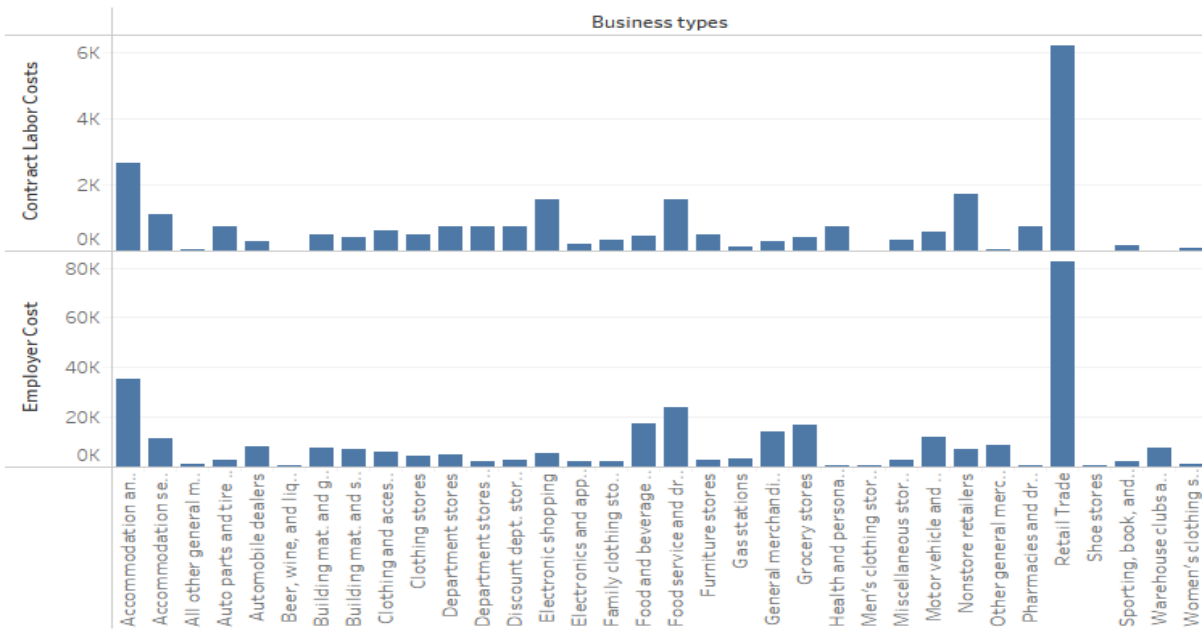
## 2. Advertisement cost

Advertisement cost



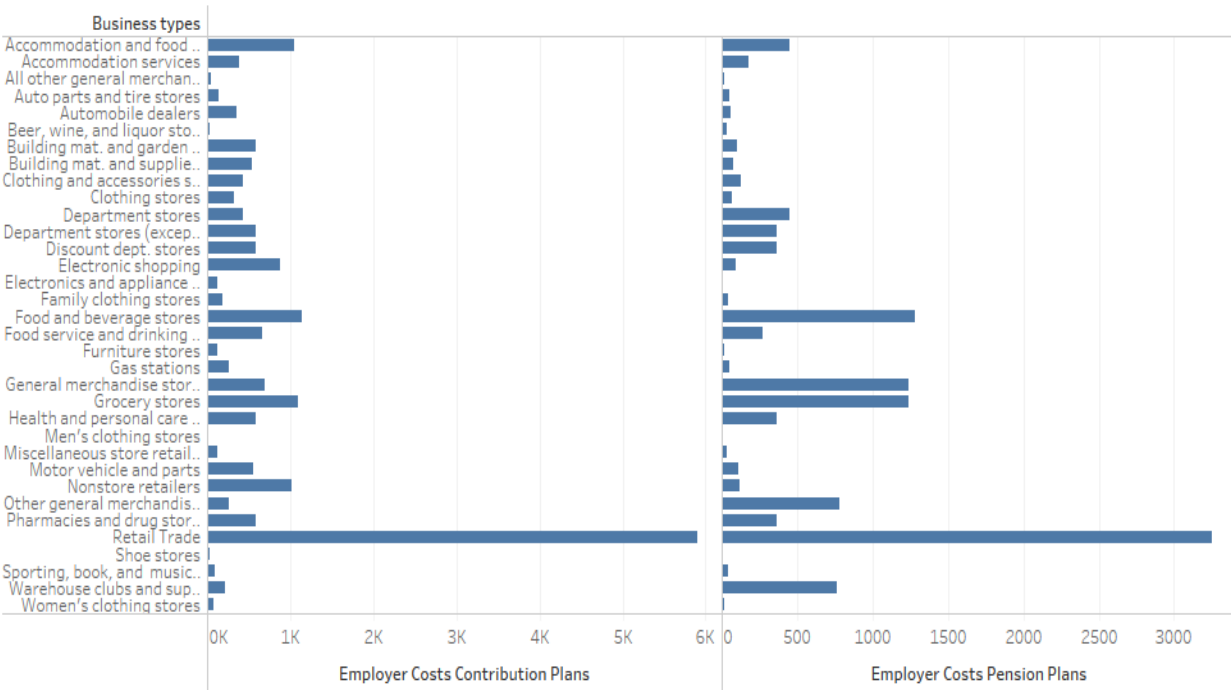
### 3. Contract Labor Vs Costs

contractLabor vs costs

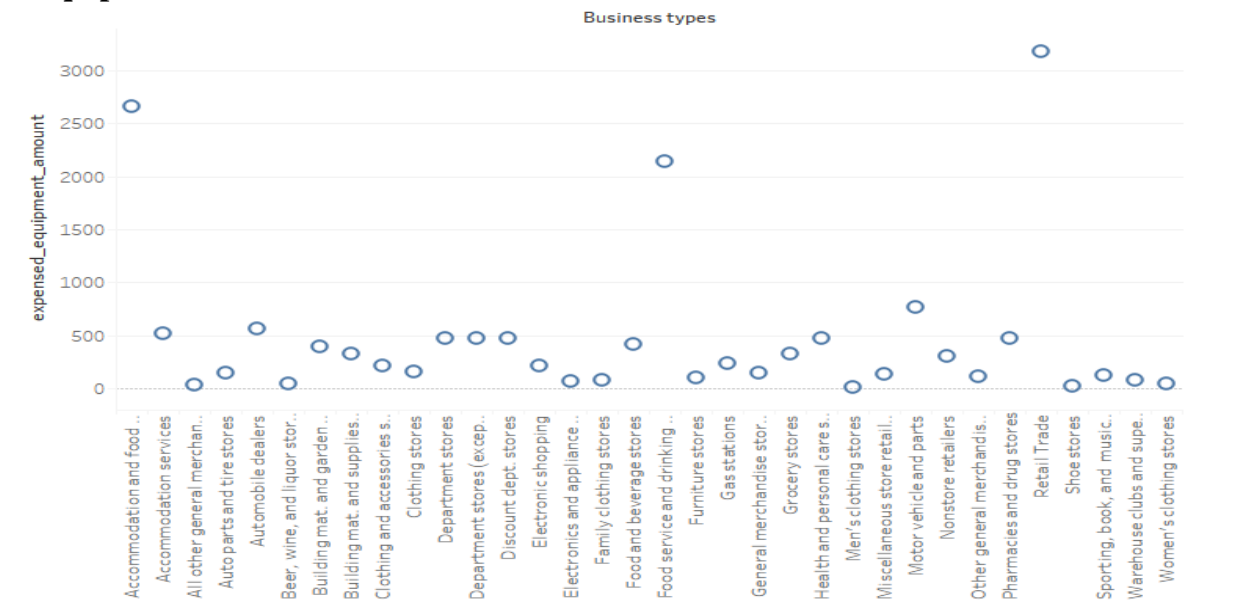


### 4. Employee cost (Insurance vs pension)

Employee cost ( Insurance vs pension)

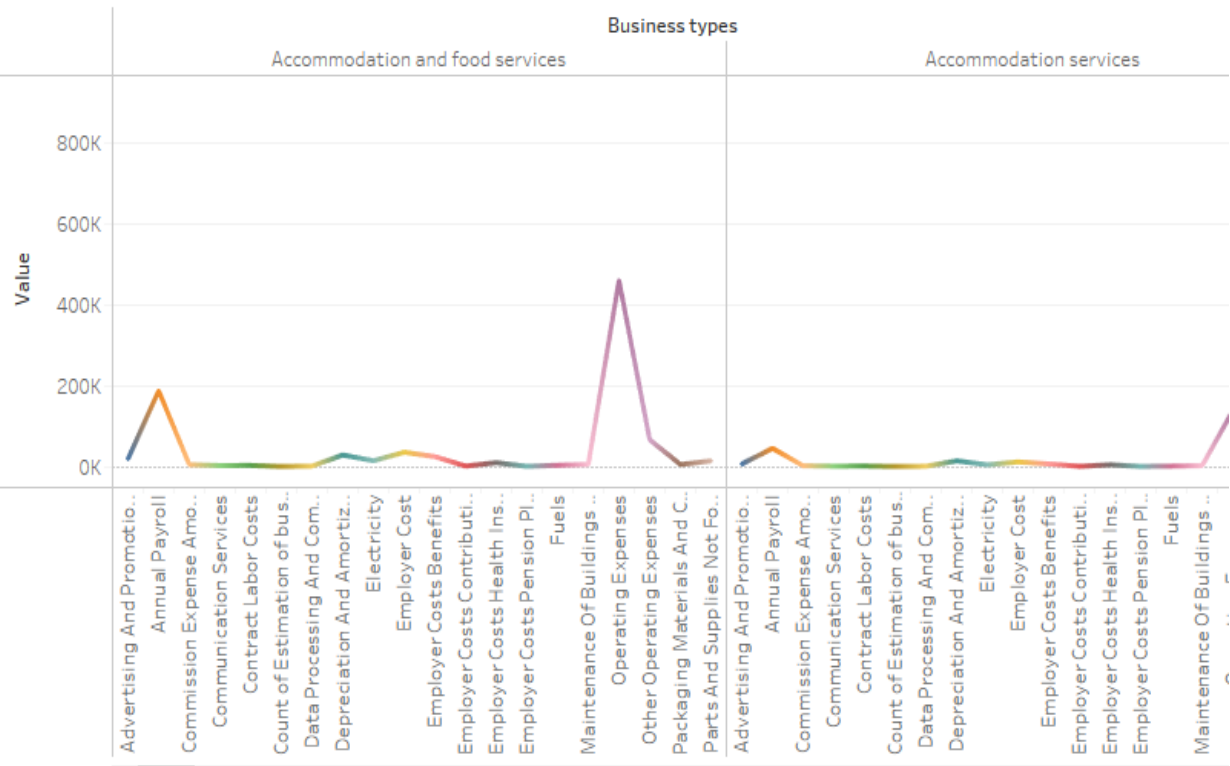


5. Equipement Cost



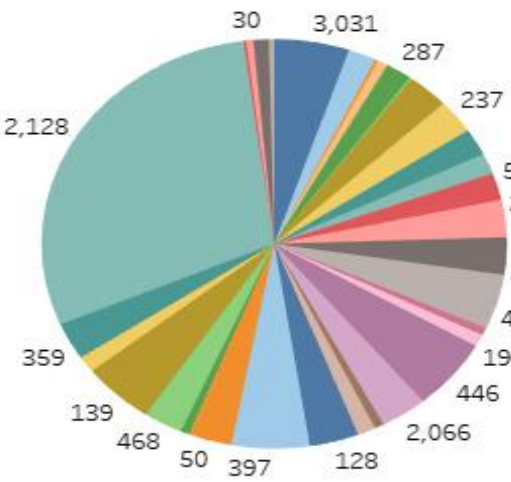
6.Expenses yoy

Expenses yoy



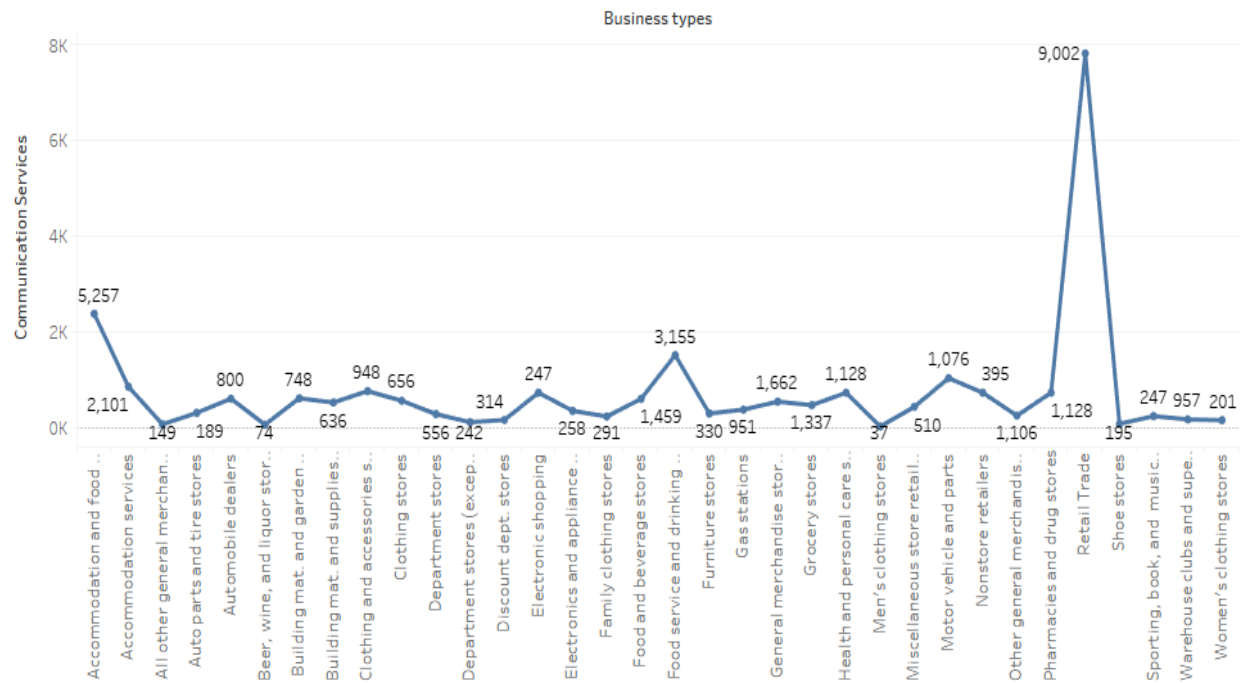
7. Fuel

Fuel



8. Maintenance of Buildings

Maintenance of Buildings



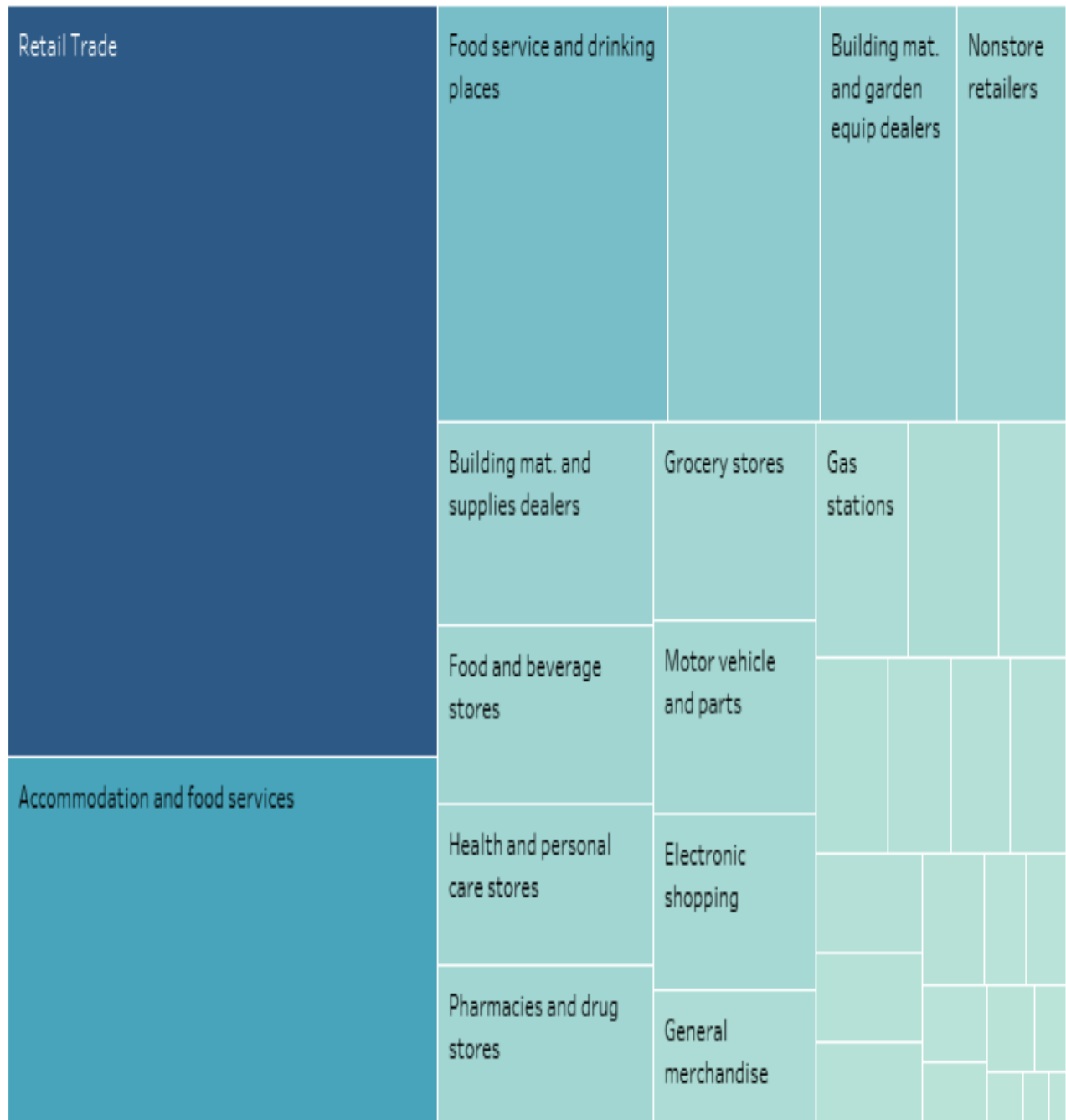
## 9 .Power Expenditure

### Power Expenditure

Business types	
Retail Trade	
Accommodation and food ..	
Food service and drinking ..	
Food and beverage stores	
Grocery stores	
Accommodation services	
General merchandise stor..	
Health and personal care ..	
Pharmacies and drug stor..	
Other general merchandis..	
Gas stations	
Warehouse clubs and sup..	
Motor vehicle and parts	
Clothing and accessories ..	
Building mat. and garden ..	
Building mat. and supplie..	
Department stores	
Clothing stores	
Automobile dealers	
Miscellaneous store retail..	
Nonstore retailers	
Discount dept. stores	
Furniture stores	
Family clothing stores	
Department stores (excep..	
All other general merchan..	
Electronic shopping	
Sporting, book, and musi..	
Auto parts and tire stores	
Electronics and appliance ..	
Women's clothing stores	
Beer, wine, and liquor sto..	
Shoe stores	
Men's clothing stores	

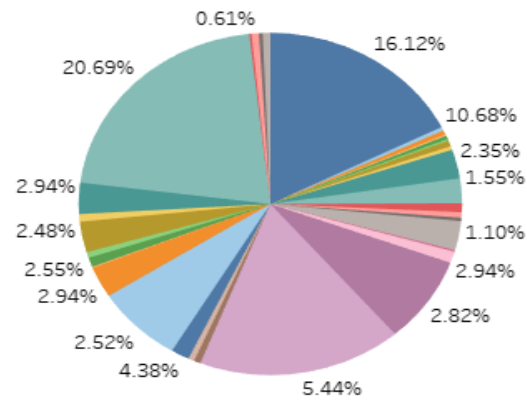
## 10.Rental Payment Machinery

### Rental payment Machinery



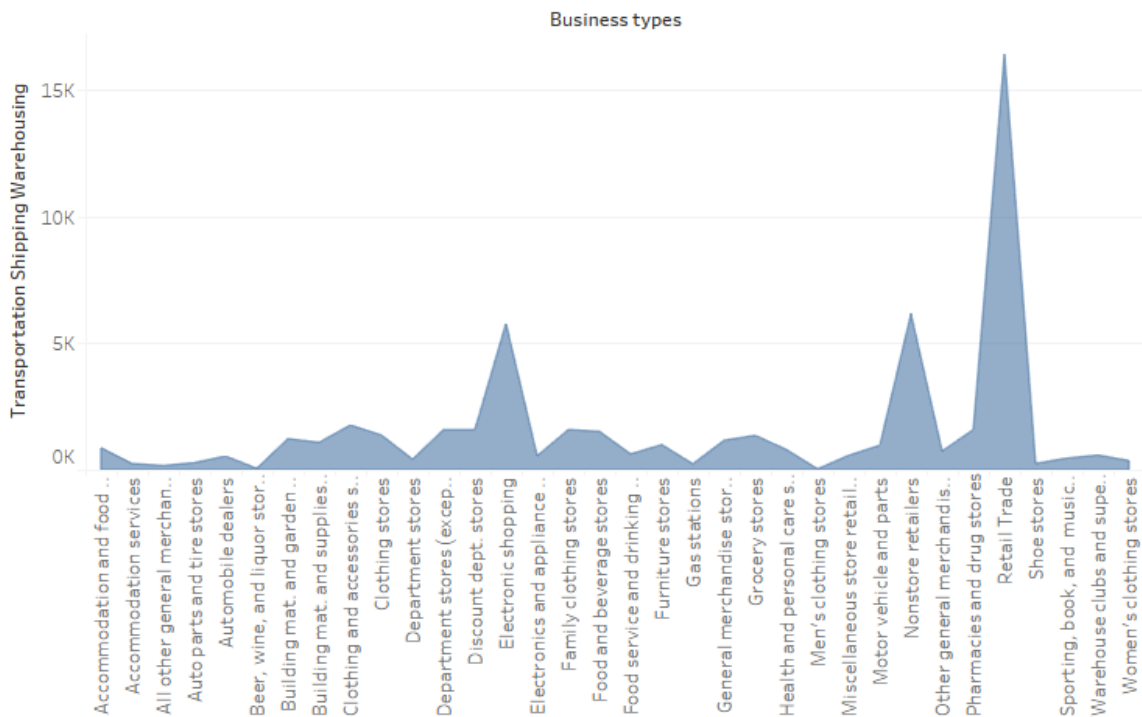
## 11. Texas&Licenss

Texas & Licenses



## 12. Transportation

Transportation





## 4 .ADVANTAGES AND DISADVANTAGES

### 4.1 ADVANTAGES

Cost-benefit analysis is a process that project managers and business executives use to determine the expenses and incentives of a major company project. When companies perform a cost-benefit analysis, they calculate the costs and benefits for the project or decision and determine which calculation is larger. If the benefits exceed the costs, the project or decision is generally a positive one for the company to make. However, if the costs exceed the benefits, the company often evaluates that project's plan and determines if there's a way to adjust it or save money.

Companies and businesses often use a cost-benefit analysis to determine and evaluate all the expenses and revenues that a project might generate. The analysis helps companies examine the feasibility of the project in terms of finances and other important factors, such as opportunity costs. Opportunity costs consider alternative benefits that the company might give up if they proceed with the project or project decision. Once the company understands all of its major costs and benefits, it can better understand the decision's pros and cons. However, it doesn't always make the decision perfectly clear.

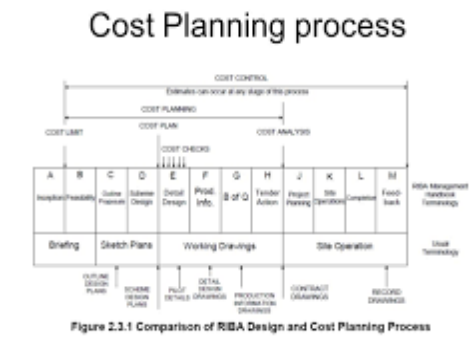


## 4.2 DISADVANTAGES:

Add all the associated fixed and variable costs to determine the total cost of the product or service. Fixed costs don't change with the number of units you produce, whereas variable costs do.

Fixed costs include leasing or rental costs, insurance or interest payments. Variable costs include money spent on things like labor, materials or commissions. Adding all the costs associated with producing a product or delivering a service can determine the total cost.

In these scenarios, cost-plus pricing can provide an effective starting price you can refer to as you grow your knowledge of the market and the customers.



If total benefits outnumber total costs, then there is a business case for you to proceed with the project or decision. If total costs outnumber total benefits, then you may want to reconsider the proposal.

If the costs outweigh the benefits, ask yourself if there are alternatives to the proposal you haven't considered. Additionally, you may be able to identify cost reductions that will allow you to reach your goals more affordably while still being effective.

## 5. APPLICATIONS

Although Application Management consumes up to 80% of the Total Cost of Ownership, estimating and benchmarking the related effort still receives little attention. Apparently, estimating Application Management is not so simple. One of the main reasons for this, is the fact that the scope of Application Management is more diffuse than the scope of a project.

When Application Management is outsourced to an IT service provider both parties need to have a clear understanding what activities will be outsourced and what activities will remain with the outsourcing organisation. For the purpose of that understanding, Ordina has developed the Service Component Model as part of our Service Definition for Application Outsourcing. When we have defined what activities are in scope for an Application Management service offering, we are able to use this model as a basis to estimate the related effort and cost. To be able to do this in a transparent way, based on experience data, we have combined the vision of our Service Component Model with the estimating power and references of SEER for IT.

with Links to PDF's

**Duncan Smith - Expenses for January 2022**


## Business Expenses

**Excel SpreadSheet**

Date	Details	DocLink	Analysis	Value	TaxRate	TaxValue	NetValue
01/01/2022	Telephone Bill	D:\AA - Scans\Tel	Telephone	120.00	20.00%	20.00	100.00
02/01/2022	Travel Lodge - Leeds	D:\AA - Scans\Tel	Hotels	240.00	20.00%	40.00	200.00
03/01/2022	Leeds to Hull	D:\AA - Scans\Tel	Mileage Allowance	25.89		0.00	25.89
04/01/2022	Entertaining	A - Scans\Tel	Entertaining	41.89	10.00%	3.81	38.08
05/01/2022	Telephone	A - Scans\Tel	Postage	15.00		0.00	15.00
06/01/2022	Hotels	A - Scans\Tel	Hotels	158.96	5.00%	7.57	151.39
	Mileage Allowance					0.00	0.00
	Entertaining					0.00	0.00
	Subsistence					0.00	0.00
	Cell/Mobile					0.00	0.00
	Postage					0.00	0.00
	Internet					0.00	0.00
	Printing					0.00	0.00
	Advertising					0.00	0.00
	<b>All Expenses</b>						<b>530.36</b>

TaxRates	Total
20.00%	60.00
15.00%	0.00
10.00%	3.81
5.00%	7.57
<b>All Taxes</b>	<b>71.38</b>

<b>601.74</b>	<b>71.38</b>	<b>530.36</b>
---------------	--------------	---------------



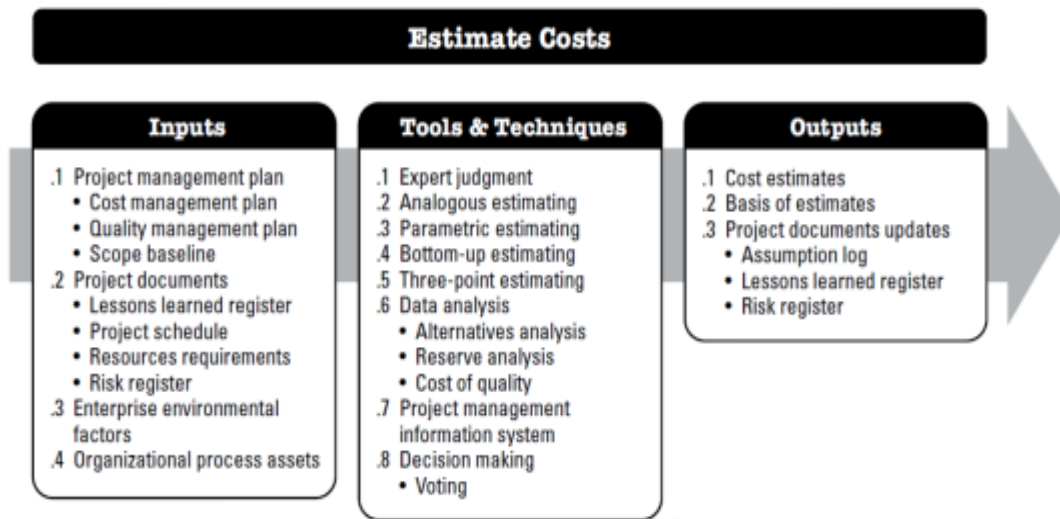
We configured the WBS elements to be able to estimate Application Management for Oracle EBS. The configuration was calibrated using actual data from a number of contracts for Application Management in this domain. To validate the estimation power of this model we have re-estimated a number of service offerings with the knowledge we had at the time of making the proposal estimate.

This model is now ready to be used as a reference estimate in the general approach for estimating and pricing of software services for Application Management in the Oracle EBS domain.

## 6. CONCLUSION

In conclusion, cost estimation is an important component of project management that ensures projects are finished on schedule and within budget. Since inaccurate cost estimates can have serious financial consequences for businesses, accurate cost estimating is crucial for all stakeholders engaged in a project. It is crucial to consider a variety of elements that affect cost build-up, such as the complexity of the project, scale and scope, time, proper project planning, familiarity with essential procedures, and the client's financial status, in order to increase the accuracy of cost estimating. In addition, the cost estimation techniques and practices that can be used can greatly contribute to improving the accuracy of the cost estimate or how it can be build-up, including bottom-up estimating, parametric estimating, analogous estimating, and mixed approaches. Based on the information available, these methodologies use both qualitative and quantitative methods to create estimates of project costs. To increase accuracy, it is crucial to compile all pertinent data regarding the variables affecting cost estimation and to use the appropriate approaches, models, and methodologies. Nevertheless, there are challenges and there is plenty of opportunity for improvement in cost estimation management. These include addressing weaknesses in current techniques and methods, improving the accuracy of cost modeling, and considering human communication when estimating projects. Furthermore, achieving customer-centric profitability depends on a knowledge of the link between expenses and customer pleasure. Overall, accurate cost estimating is essential for project managers to make informed decisions, complete projects efficiently, and prevent cost overruns. Project managers can improve the accuracy of cost estimates and ensure successful project cost management by considering all factors affecting cost build-up and using the right estimating strategies.

1. **Only past performance can be recorded:** Cost accounting does not show the current stature of the company as all the data recorded is a historical valuation of transactions taking place. The structure of decision-making relies on the records of a company. Thus only past performances are recorded.
2. **Costs keep on changing every year:** the cost of the raw material, labour, and other materials keep on changing due to different factors thus only estimation can be made regarding costs, and accordingly managers have to make decisions. There are various other variable factors like government policies, economy that make these changes in the cost.



**3. Proper maintenance is required:** To calculate the cost of the company it is required ethical and proper maintenance is a must. Without maintaining proper books of account like sales books, purchase books no one could properly estimate the actual cost incurred and income generated by the company.

**4. Expertise is required to record:** To record the books of account one should have the proper knowledge and mastery in the recording of transactions, identify and summarize in the best possible way so that the user who requires the information from the account can easily understand it. Therefore no person can easily record the transaction if he/she does not have any proper knowledge of the principles of accounting.

**5. Complex system:** The system to record the transactions is a complex process. No one can easily understand the process if they have not learned the steps or learned about accounting. Even for experts it sometimes gets complex to estimate the correct cost.

**6. Costly to maintain:** It's costly to maintain the books of accounts and requires lots of clerical work to maintain various costing records. For small-scale and medium-sized businesses maintaining the costing account, books become an impossible task.



## 7. FUTURE SCOPE

For a typical project in oil-related industry costing several hundred million dollars or a small building project costing few thousand dollars, the need for actual scope of work and accurate cost estimate is same. Both entities must ensure that the completed project gives them what they need, with minimal change orders and at a cost close to estimated cost. Today's bottom-line-oriented senior project managers define success differently than did their predecessors. So, in order to alleviate the fear of misleading numbers in the corporate world, this short write-up emphasizes the importance of establishing the project scope of work before the start of any estimating related activities. My previous two short posts highlighted the importance of communications and Dilbert's way of showing the importance of scope of work. This write-up provides few more details.



### Scope of Work

As per AACE International, recommended practice 10S-90, “scope is the sum of all that is to be or has been invested in and delivered by the performance of an activity or project. In project planning, the scope is usually documented (i.e., the scope document), but it may be verbally or otherwise communicated and relied upon. It is generally limited to that which has been agreed to by the stakeholders in an activity or project”.

### Verify Scope

This step helps the project team in verifying project scope and deliverables with a sponsor through an established sign-in procedure.

### Monitor Scope Creep

This step is required for constant monitoring to prevent project scope creep from scope baseline. Scope Creep – Gradual progressive change of the project's scope such that it is not noticed by project management team or customer. Typically occurs when the customer identifies additional, sometimes minor, requirements that, when added together, may collectively result in a significant scope change, resulting in cost and schedule overruns.



## **8 . APPENDIX**

### **DASHBOARD 1**

[https://public.tableau.com/views/bussiness\\_16974499719050/Dashboard1?:language=en-US&publish=yes&:display\\_count=n&:origin=viz\\_share\\_link](https://public.tableau.com/views/bussiness_16974499719050/Dashboard1?:language=en-US&publish=yes&:display_count=n&:origin=viz_share_link)

### **DASHBOARD 2**

[https://public.tableau.com/views/bussiness\\_16974499719050/Dashboard2?:language=en-US&publish=yes&:display\\_count=n&:origin=viz\\_share\\_link](https://public.tableau.com/views/bussiness_16974499719050/Dashboard2?:language=en-US&publish=yes&:display_count=n&:origin=viz_share_link)

### **DASHBOARD 3**

[https://public.tableau.com/views/bussiness\\_16974499719050/Dashboard3?:language=en-US&publish=yes&:display\\_count=n&:origin=viz\\_share\\_link](https://public.tableau.com/views/bussiness_16974499719050/Dashboard3?:language=en-US&publish=yes&:display_count=n&:origin=viz_share_link)

### **STORY 1**

[https://public.tableau.com/views/bussiness\\_16974499719050/Story1?:language=en-US&publish=yes&:display\\_count=n&:origin=viz\\_share\\_link](https://public.tableau.com/views/bussiness_16974499719050/Story1?:language=en-US&publish=yes&:display_count=n&:origin=viz_share_link)

### **STORY 2**

[https://public.tableau.com/views/bussiness\\_16974499719050/Story2?:language=en-US&publish=yes&:display\\_count=n&:origin=viz\\_share\\_link](https://public.tableau.com/views/bussiness_16974499719050/Story2?:language=en-US&publish=yes&:display_count=n&:origin=viz_share_link)

## VISUALIZATION

### VISUALIZATION 1:

[https://public.tableau.com/app/profile/banumathi.v/viz/bussiness\\_16974499719050/Sheet1?publi sh=yes](https://public.tableau.com/app/profile/banumathi.v/viz/bussiness_16974499719050/Sheet1?publi sh=yes)

### VISUALIZATION 2:

[https://public.tableau.com/app/profile/banumathi.v/viz/bussiness\\_16974499719050/Sheet2?publi sh=yes](https://public.tableau.com/app/profile/banumathi.v/viz/bussiness_16974499719050/Sheet2?publi sh=yes)

### VISUALIZATION 3:

[https://public.tableau.com/app/profile/banumathi.v/viz/bussiness\\_16974499719050/Sheet3?publi sh=yes](https://public.tableau.com/app/profile/banumathi.v/viz/bussiness_16974499719050/Sheet3?publi sh=yes)

### VISUALIZATION 4:

[https://public.tableau.com/app/profile/banumathi.v/viz/bussiness\\_16974499719050/Sheet4?publi sh=yes](https://public.tableau.com/app/profile/banumathi.v/viz/bussiness_16974499719050/Sheet4?publi sh=yes)

### VISUALIZATION 5:

[https://public.tableau.com/app/profile/banumathi.v/viz/bussiness\\_16974499719050/Sheet5?publi sh=yes](https://public.tableau.com/app/profile/banumathi.v/viz/bussiness_16974499719050/Sheet5?publi sh=yes)

### VISUALIZATION 6:

[https://public.tableau.com/app/profile/banumathi.v/viz/bussiness\\_16974499719050/Sheet6?publi sh=yes](https://public.tableau.com/app/profile/banumathi.v/viz/bussiness_16974499719050/Sheet6?publi sh=yes)

### VISUALIZATION 7:

[https://public.tableau.com/app/profile/banumathi.v/viz/bussiness\\_16974499719050/Sheet7?publi sh=yes](https://public.tableau.com/app/profile/banumathi.v/viz/bussiness_16974499719050/Sheet7?publi sh=yes)

### VISUALIZATION 8:

[https://public.tableau.com/app/profile/banumathi.v/viz/bussiness\\_16974499719050/Sheet8?publi sh=yes](https://public.tableau.com/app/profile/banumathi.v/viz/bussiness_16974499719050/Sheet8?publi sh=yes)

VISUALIZATION 9:

[https://public.tableau.com/app/profile/banumathi.v/viz/bussiness\\_16974499719050/Sheet9?publish=yes](https://public.tableau.com/app/profile/banumathi.v/viz/bussiness_16974499719050/Sheet9?publish=yes)

VISUALIZATION 10:

[https://public.tableau.com/app/profile/banumathi.v/viz/bussiness\\_16974499719050/Sheet10?publish=yes](https://public.tableau.com/app/profile/banumathi.v/viz/bussiness_16974499719050/Sheet10?publish=yes)

VISUALIZATION 11:

[https://public.tableau.com/app/profile/banumathi.v/viz/bussiness\\_16974499719050/Sheet11?publish=yes](https://public.tableau.com/app/profile/banumathi.v/viz/bussiness_16974499719050/Sheet11?publish=yes)

VISUALIZATION 12:

[https://public.tableau.com/app/profile/banumathi.v/viz/bussiness\\_16974499719050/Sheet12?publish=yes](https://public.tableau.com/app/profile/banumathi.v/viz/bussiness_16974499719050/Sheet12?publish=yes)

**VIDEO VISUALATION LINK:**

[https://drive.google.com/file/d/1L0VJr6i91n9bLIZdxtrxH\\_WOwaXVWMT/view?usp=share\\_link](https://drive.google.com/file/d/1L0VJr6i91n9bLIZdxtrxH_WOwaXVWMT/view?usp=share_link)