Review Article

Comparative Study on Equipment Management by Owning and Rental using Spss

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Abstract - *The most significant and vital tool is construction equipment for a construction enterprise. All the construction projects will be installed on the building equipment as soon as possible. The most critical weaknesses for project success are project time and expense. Project success. However, machinery is one of the long-term investments made with much capital by a construction firm. Good project management must be efficiently assured to make optimal use of personnel, equipment, and machinery. A construction machinery manager must make fair decisions about the use of the construction equipment to achieve maximum performance and minimal cost for the customer. Data from lease vehicles and private building companies are collected. This expertise was evaluated for the selection of the correct decision variables and the creation of a model for cost-effectiveness. The obtained data have been processed using SPSS tools. We have also performed time and cost research using Primavera methods. The most common way to assess whether to purchase rent is through facilities. In order to decide on the more efficient alternative, the managers should equate costs of renting different equipment with costs.*

Keywords - *Spss, Equipment.*

I. INTRODUCTION

A. GENERAL

Improvements to the procurement of machinery dependent on economic, organizational research are the principal factor in the progress of large development programmers. The equipment is considered as one of the key resources for project managers, particularly for heavy civil projects, to perform the work needed for construction projects. The organization, for a duration, can purchase or lease equipment. For building companies, vehicle fleets can be the largest long-term expenditure. It is a significant phase in evaluating the rental alternative and in helping decision-makers. Building machinery is specifically economically measured in order to evaluate ownership and operational costs and economic lives for each equipment category. The risks associated with the equipment chosen must be taken into account in order to adequately conclude the economic study of the product.

This is an awful job in handling the big machinery of the building. The building firm will purchase or contract the equipment. Two choices exist. Industries have only two major profits when turning the goods into buildings, walls, houses, and other items. Machinery costs may range from 5% to 10% of the total construction cost of a building and from 40% or more of the project's total cost. Given the large costs of the projects, the buyer's leasing decision has a significant effect on profitability.

B. OBJECTIVE

- There are listed and suggested several reasons to consider while renting the equipment.
- When determining the more competitive solution, administrators will compare lease expenses when output prices.
- Equipment in the form of leasing or lease.
- Recognizing major variations and commonalities in asset management, risk identification, and expense identification

II. LITERATURE REVIEW

Tatari et al. (2006) The study examined the main agenda for the equipment selection process as higher productivity, greater flexibility, and sustainable financial aspects. Research in recent years has shown that increased confidence in equipment has always been termed a strategic decision during the construction of any project.

Gransberg et al. (2006) The civil contractor has identified three fundamental methods for equipment and machinery procurement. The lease needs 100% possession, while the leasing conditions are set annually for a predefined duration.

Nabizadeh et al. (2009) Hourly development of a dozer model, form of loader axle, sort of loaders' crawler, sheep-feet wheels and a smooth disk roller, on the premised ground-fill dam in Iran were performed. Studies

were conducted. During their studies, they used many approaches, such as long-range analysis and ratio analysis. The actual production of the sheepfoot roller was least split with the nominal output, and the loader had the greatest disparity between true and nominal performance.

Chitkara et al. (2009), Intheir novel, stated that a building project is distinct from other ventures as expensive capital resources such as time, manpower, money, and equipment had to be developed.

Schexnayder et al. (2009) The repair of facilities that leads to the bypass of around 40 percent of the project's overall operating expense was not provided adequate consideration.

III. METHODOLOGY
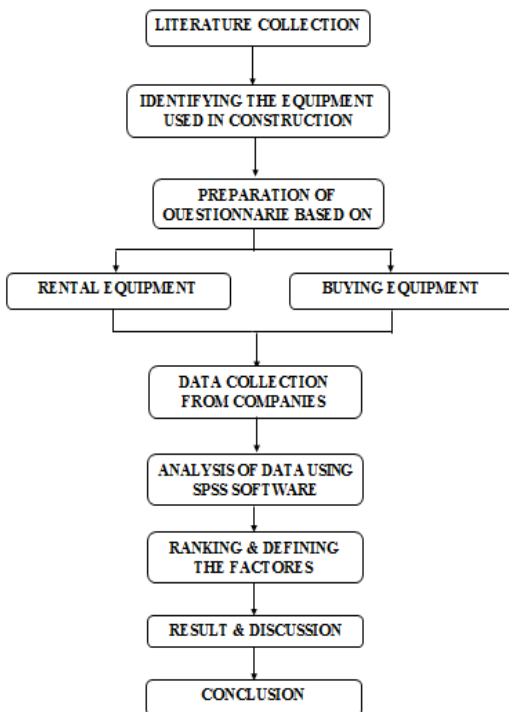
IV. ABOUT SOFTWARE

A. PRIMAVERA

Formed in 1983 following the acquisition by the Oracle Company of Primavera Systems Inc. in 2008. Primavera P6 is a software platform developed by Oracle. This is used to handle tasks and can also be correlated with ERP programs. This manages various tasks and an infinite number of target schedules for 100,000 events.

Primavera supports project managers, regardless of size, to unite planners, sellers and recipients. Primavera helps you view the implementation phases of current programs and program events, match projects and maps, approximate project details, and quick and record decision-making.

B. SPSS

SPSS is short for the Social Science Mathematical Package used by researchers in different ways for the comprehensive statistical analysis of results. Predictive data sets had to be checked manually by researchers until SPSS. However, this method is automated by SPSS. Not only can SPSS percentage checks be carried out, but you can also even use SPSS for certain purposes.

SPSS is renowned for its simple, English-style, and amazing user manual. The SPSS is used in the compilation and analysis of data from the surveys performed by market analysts, wellness analysts. While Survey Gizmo has good interactive surveillance capabilities, researchers see SPSS as the best tool for thorough statistical research. Many of the major analysis companies use SPSS for data and mine text knowledge to take advantage of their study.

V. DATA COLLECTION

1. Does the regular inspection avoid cost overrun?
   * Strongly agree
   * Agree
   * Neutral
   * Strongly disagree
   * Disagree

2. Will the equipment maintenance affect by improper cash flow?

   * Strongly agree
   * Agree
   * Neutral
   * Strongly disagree
   * Disagree

3. Have they faced accidents by improper equipment training?

   * Strongly agree
   * Agree
   * Neutral
   * Strongly disagree
   * Disagree

4. Do you reduce the completion time of the project by construction equipment?
   * Strongly agree
   * Agree
   * Neutral
   * Strongly disagree
   * Disagree

5. Have the quality improved by construction equipment?
   * Strongly agree
   * Agree
   * Neutral
   * Strongly disagree
   * Disagree

6. Have you chosen earthwork equipment based on soil conditions?

- Strongly agree
- Agree
- Neutral
- Strongly disagree
- Disagree

7. If equipment management create any impact on construction?

- Strongly agree
- Agree
- Neutral
- Strongly disagree
- Disagree

8. Is, improper cash flow affects equipment maintenance?

- Yes
- No

9. Lack of skilled/trained workers is the major cause of poor workmanship

- Yes
- No

10. Improper knowledge about new technology also created problems in equipment operation?

- Yes
- No

11. Modifying project activity and schedule once the machine suddenly breakdowns will enhance the efficiency of the work?

- Yes

- No

12. Wait until the failed machine is completely repaired and ready for use.

- Agree
- Strongly agree
- Disagree
- Strongly disagree

13. Loss in productivity of equipment will delay the work

- Yes

- No

14. When a piece of equipment is rented, the responsibility of maintenance lies on the person who rents the equipment.

- Yes

- No

15. The most obvious advantage of buying construction equipment is that you gain ownership of it.

- Yes
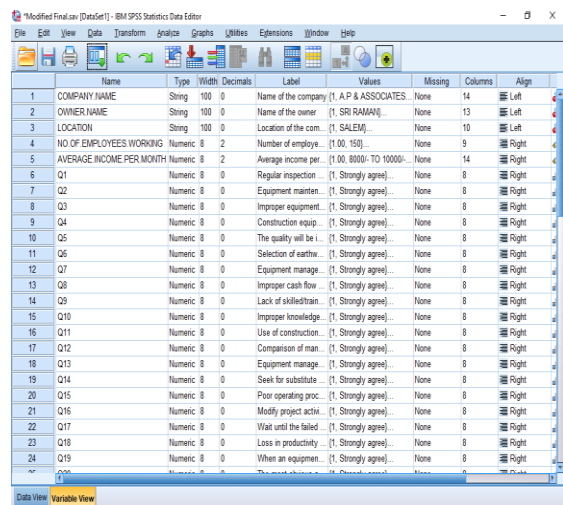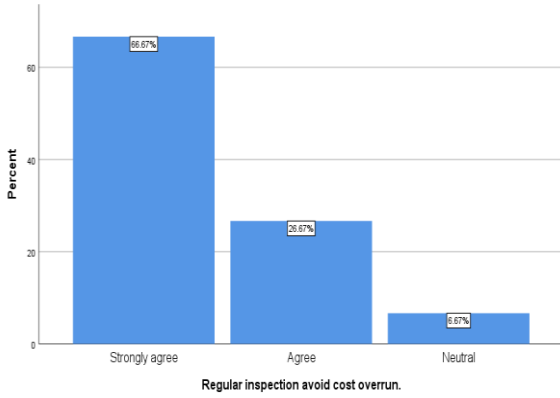
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VI. DATA ANALYSIS IN SPSS
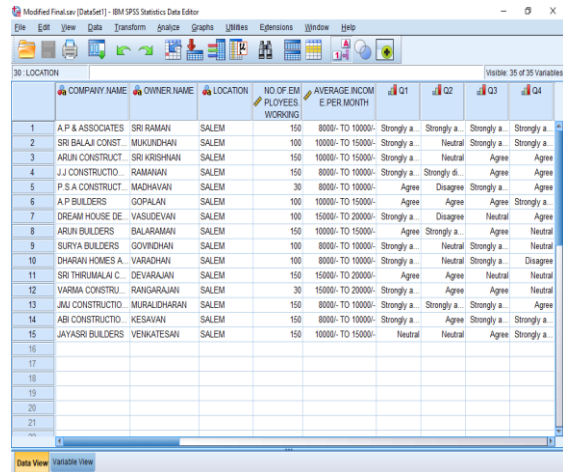
Fig. 1 Data view

Fig. 2 Variable view

A. PERCENTAGE ANALYSIS

Regular inspection avoids cost overrun.				
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	10	66.7	66.7	66.7
	Agree	4	26.7	26.7	93.3
	Neutral	1	6.7	6.7	100.0
	Total	15	100.0	100.0	

Inference:

It is concluded from the above table that 66.7% of respondents have come to a strong agreement, 22.67% agreed, and 6.67% are neutral in avoiding cost-overrun regular checks.

Equipment maintenance is affected by improper cash flow.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	3	20.0	20.0	20.0
	Agree	4	26.7	26.7	46.7
	Neutral	5	33.3	33.3	80.0
	Strongly disagree	1	6.7	6.7	86.7
	Disagree	2	13.3	13.3	100.0
	Total	15	100.0	100.0	
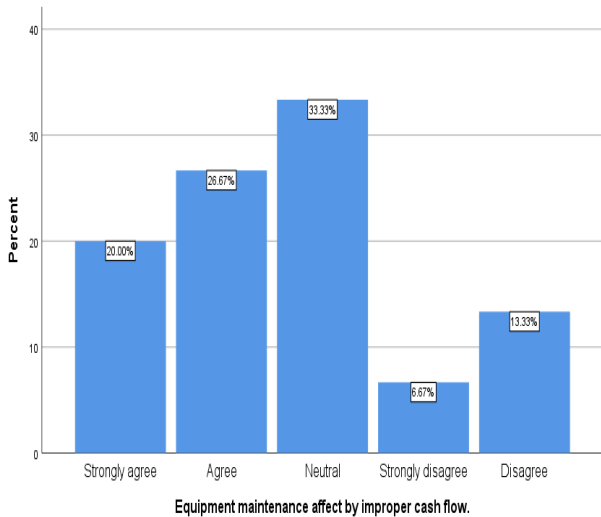
Inference:

The following table indicates that the management consequences of dysfunctional cash flow are firmly decided to buy 20% of respondents, 26.67% of respondents support, 6.67% disagree firmly, 13.33% disagree, and the rest are in a favorable position.
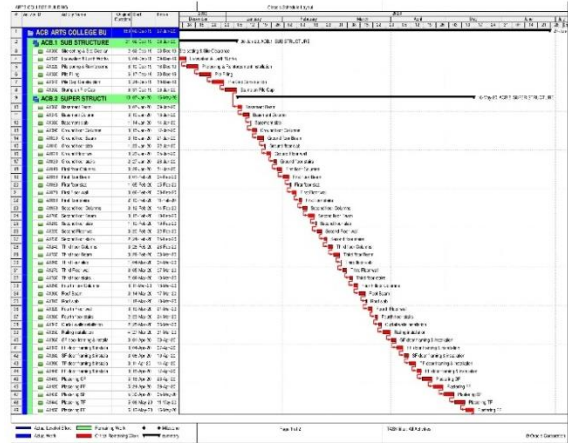

Fig. 3 Project Schedule

Fig. 4 Project Resource

VII. CONCLUSION

The following conclusions have been taken from the aforementioned analysis.

- Many respondents wanted daily inspections to lower costs overruns.
- Few interviewed were not in agreement about the effect of improper cash flow on equipment maintenance.
- Insufficient computer guidance as casualties has been registered.
- • From the study, it can be inferred that the building activity decreases the project word.
- It is assumed that building machinery should increase its efficiency.
- Most all decided on the groundwork's soil quality. •Also, few interviewees disagreed regarding the value of machinery control in the building.
- Nearly 50 % of respondents firmly accepted the lack of qualified/trained personnel as the principal cause of poor manufacturing.
- Our research shows that ignorance of new developments often causes machinery problems.
- Many respondents were not in favor of rising expense and efficiency increases in the use of construction equipment.
- Building facilities have been established to boost job exactness by matching workforce / industrial machinery.
- Every interviewee accepted that replacement equipment would suddenly crash from the machine.
- More than 50 % of the people consulted denied that the primary source of computer malfunction is bad results in our study.
- Almost 30 percent refused to fully fix the wait before a broken unit and to be used.
- Our research reveals that the leasing of facilities is a problem for repair for individuals.
- The total net cost of constructing infrastructure shall be determined as to whether to purchase or lease a project, according to our study.

- Some interviewees have protested that nearly all leasing costs more than purchasing an item.
- Many respondents will not want to pay for the entire duration of the contract, particularly though you avoid utilizing the property.It was noted that almost 70 % of respondents accepted that leases are typically simpler to secure and more affordable than buying equipment loans.
- Nearly 30 percent of our findings disagreed with ability and flexibility safety by the leasing of building equipment and materials.
- Nearly 70% disagreed that equipment leasing or selling relies on equipment use.

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