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A COMPARATIVE ANALYSIS OF ASSET MANAGEMENT DECISION IN GOVERNMENT-CONTROLLED AND PRIVATELY-OWNED ORGANISATIONS IN NIGERIA. (OYO STATE AS A CASE STUDY)

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Abstract

This paper examines asset management policies in selected public and private organisations in Oyo State Nigeria. The management of the physical assets in these organisations were examined to ascertain whether they are run with same degree of efficiency.

The methodology adopted is the student t-test statistics which was used to test the stated hypotheses and to evaluate management's performance on asset maintenance and asset replacement decisions in these organisations. Furthermore, a model showing the relationship between asset maintenance and asset replacement was formulated and subjected to a multiple regression analysis in order to estimate the coefficients and test of significance at the probability level of 0.05.

Results obtained, showed that private sector organisations manage assets better than government-controlled organisations. Secondly, the formulated model provides the necessary framework on how to understand better the relationship between asset maintenance and asset replacement decisions.

Consequently, as a policy option, the paper proffers ways of improving asset management decisions especially in government-controlled organisations. Such include opening and maintaining an asset management fund account; periodic training of staff on asset management and maintaining the management of assets by proper agencies amongst others.

Introduction

There is an important need to properly manage tangible assets because the cost of replacing assets now in Nigeria continues to increase in a manner that is disproportionate to the rate of income generation. This rising cost of asset replacement has been attributed to the high inflationary trend in the country which is caused by a parlous economy (see Olalokun (1979), Osakwe (1983), Ayodele (1988), Fakiyesi (1996), Shodehinde (2001), Odozi (2002) and World Bank /International Monetary Fund (IMF) 2004.

Moreover, what has become increasingly worrisome is the degree of indifference exhibited by the management of most government organisations towards

the policy of asset management as it relates to asset maintenance and asset replacement decisions. In this regard Shodehinde (2001), noted that vehicles worth N600 million were left to rot away in the premises of Lagos state Government secretariat Ikeja on the excuse of lack of funds to effect proper maintenance. This scenario, he averred, is replicated in other government organisations and parastatals such as Nigerian Police stations, Teaching Hospital premises, military barracks, Government Farm Settlements just to mention a few.

Furthermore, Ogunmade (2002), captured the scene very aptly, when he opined that management of most government organisations give little or no regard to asset management and that the quest for money by some officers of government have indeed over ridden the demand of maintenance and safety. Therefore, one can safely assert that a lot of money must have been lost through asset neglect in most government organisations as was amply stated in the expository works of Ayodele (1988), Edwards (1990), Burns (1990), Asiogu (1991), Owolabi (2000) and Burns (2001). However, none of these researchers gave an insight of what obtains as regards the management of tangible assets in the private organisations. Therefore, the current question in academic discourse is, do management of privately-controlled organisations exhibit the same degree of apathy in asset management as their counterparts in government controlled organisations?

Hence, this study is designed to examine empirically whether there is a point of convergence in asset management practices and policies between private and public sector oriented organizations.

Again, the existing accounting models for asset management dwell mainly on asset replacement periods (Pandey (1979) and Van Horne (1980). None of the models has been able to show the relationship between asset maintenance and asset replacement decisions. This paper shall provide a model that will relate appropriately asset maintenance and asset replacement decisions.

Conceptual Framework and Literature Review

The theoretical framework on which asset management decisions are premised hails from an aspect of financial management in accounting where models are usually employed to demonstrate replacement patterns in asset management over a given period of time. Prominent among the models are, the minimum average cost method (MAC), Equivalent annual cost approach (EAC), and the least common multiple method (LCM) (Pandey (1979) and Van Horne (1980). The minimum average cost method involves determining the average cost of each alternative replacement. The models are not too different from each other except that the EAC and LCM employ the use of net present value (NPV) and cash flow analysis, obtained from simulation of replacement cycles to arrive at the optimum replacement period. However the models hold for identical assets that are mutually exclusive. Non-identical assets, usually pose different replacement problems.

Thoughts on Assets Replacement and Assets Maintenance Decision

Many researchers have looked into asset management policies from different perspectives. Kester (1933) viewed asset management from the angle of cost of revaluated repairs and maintenance. This cost was classified as expenses incurred to restore the operative efficiency of the plant subsequent to or as a result of a breakdown in the plant. However, cost incurred for renewals, in anticipating, avoiding or preventing a breakdown was termed maintenance cost. Styles (2000) posited that to arrive at an

appropriate maintenance cost, depreciation value of the plant should be incorporated. Nevertheless, the need to reduce the depreciation rate of a going concern which was hitherto highlighted by Kester (1933) was proffered by Saliers (1943). The argument here is that if depreciation rate is reduced, the useful life of the asset would probably increase and the operating cost may decrease. Therefore, repair policy should be pursued in order to avoid deferred maintenance that would attract large costs.

The Complex Nature of Asset Management

The complex nature of asset maintenance and asset replacement decisions was revealed by Edwards (1990), who noted that modern technology has helped produce more efficient plants and machinery with longer life span that would make prediction of their replacement periods difficult. This position was earlier shared by Ayodele (1988) who opined that it is difficult to actually distinguish the time to stop maintaining an asset from the time a replacement of the asset should be effected. However, Ayodele (1988) noted that the older the asset, the less the realisable value would be, and delayed decision to replace an asset may cause inflation to catch up with the new value of the asset. Besides, Bonds and Mitchell (2002) argued that asset maintenance decision have gone beyond delayed decision to replace to something much more complex.

The influence of Culture on Asset Maintenance

The influence of culture on asset management but with emphasis on asset maintenance was extensively discussed by Wiredu (1980), Nellis (1986), Robins (1997), Abrahams (1998), Aribisala (1998), Oladipo (1998), Adeleke (2001) and Aluko (2003). Collectively these researchers agreed that the dynamics of African culture has shifted from the preservation of values, norms etc to the culture of indifference with respect to asset management in government controlled organisations.

Consequently, little or no serious attention is paid to the maintenance of government-owned properties because they see government business as nobody's business. This nonchalant attitude exhibited towards the maintenance of government-owned properties was made more manifest in Nigeria, during the era of military rule.

Causes of Poor Asset Management Quality in Nigeria

Olaopa (2002) enumerated the causes of poor asset management as high illiteracy rate, poor leadership quality, lack of adequate infrastructure for sustainable maintenance, poor record keeping on the part of management of most organisations and inadequate motivation of workers. These, perhaps may have prompted the Federal government of Nigeria (FGN) to embark on the privatisation programme as contained in the Privatisation Handbook (2002). However, this move by the FGN was faulted by Pauline and Kort (2002) who argued that a pragmatic way to properly handle the issue of asset management is not via privatisation but by creating asset management reserve fund. Harlow and Gorny (2002) posited that the creation of asset management fund would make no appreciable impact on asset maintenance.

Be that as it may, a thorough understanding of the variables in asset management process is imperative for effective asset management decisions averred England (2001), Abdullah (2003) and Hope (2003).

Methodology and Model

Data was obtained from both primary and secondary sources. Primary data was obtained through the instrumentality of questionnaire issued to one hundred (100) respondents in four organisations coded organisations ABC and D in Oyo State,

Nigeria. The respondents consist of senior and junior staff in administrative, works, (drivers and mechanics) and accounts departments. Organisations A and B are Hospital in Ibadan and a mechanised farm in Oyo town respectively. Organisations A and B are government controlled. Organisations C and D are Hospital in Ogbomoso town and a mechanised farm in Shaki town, respectively. Organisations C and D are privately owned. Similar organisations were selected for easy comparism. Twenty five (25) respondents in each of the four organisations were served with questionnaires. Responses were measured on a 5 point ordinal scale with a lowest response score of 1 and a maximum response score of 5. The points were represented as 1 (poor), 2 (fair), 3 (good), 4 (very good) and 5 (excellent). This gave an expected mean responses score of 2.5 on the scale. Each response was statistically analysed using the descriptive statistics of mean, variation, standard deviation and coefficient of variation in percentage. The mean of responses were computed around the expected mean of 2.5 and the corresponding t-value obtained with the aid of student t-test statistics as informed by the expository works of Owolabi (2001) and Agbadudu (2002). The results obtained from organisation A which is government controlled Hospital was compared with organisation C which is a privately controlled Hospital.

Also organisation B (a government controlled mechanised farm) was compared with organisation D a privately owned mechanised farm. Since two variables, asset maintenance and asset replacement policies of the four organisations are being compared, we test the formulated hypotheses using the student-t test set at a critical t-value of 1.96 (assuming the samples are normally distributed) at 5% level of significance and n-2 degree of freedom. The three formulated hypotheses are;

Hypothesis 1:

H_0: There are no differences in the asset maintenance policies of government and privately owned organisations.

H_A: There are differences in the asset maintenance policies of government and privately owned organisations.

Hypothesis 2:

H_0: There are no differences in the asset replacement policies of government and privately owned organisations.

H_A: There are differences in the asset replacement policies of government and privately owned organisations.

Hypothesis 3:

H_0: There are no differences in the overall performance of government and privately owned organisations in terms of asset management policy.

H_A: There are differences in the overall performance of government and privately-owned organisation in term of asset management policy.

Decision Rule

Accept the null hypothesis Ho if the t-values of any of the variables under consideration (asset maintenance or asset replacement) is equal to or less than the table t-value of 1.96. Otherwise reject H_0 and accept the alternative hypothesis H_A.

The Model

In establishing the relationship between asset maintenance and asset replacement, decisions model was formulated incorporating the two variables and with the aid of secondary data obtained from the organisations books, the model was subject

to a multiple regression analysis

$AR_t = \alpha\ Amt_{-1} + ARt_{-1} + Ut_{-1}$ ..... (1)

$AM_t = \gamma\ Amt_{-1} + ARt_{-1} + Ut_z$ ..... (2)

This is a distributed lag model.

Where AR_t = Asset replacement at time (t)

AM_t = Asset maintenance at time (t)

ARt_{-1} and AMt_{-1} are lagged variables of asset replacement and asset maintenance respectively.

α and γ are coefficients of the independent variables.

Ut = Disturbance error term.

Equations (1) and (2) can be linearly rewritten as

$Ar_t = \alpha + \alpha_0 AM_{t-1} + \alpha_1 AR_{t-1} + \alpha_2 AR_{-1} + Ut_1$....(3) and

$Am_t = \gamma + \gamma_0\ AMt + y_1\ AMt_{-1} + \gamma_2 AR_{t-1} Ut_2$ .....(4)

Equation (3) and (4) imply that the values of the dependent variables ARt and AMt depend on the weighted sum of present and past values of the regressors.

On apriori ground it is expected that asset replacement (AR) will increase as asset maintenance (Am) decreases over time and vice versa.

Adopting Almon (1973) technique, equation (3) and (4) are transformed by replacing the α's and γ's by some polynormial. As our α's and γ's follow a third degree polynomial they assume the form of $\alpha_0 = y_0$

$\alpha_1 = a_0, + a_1 + a_2 + a_3$

and $\alpha_2 = a_0, + 2_a + 2^2 a_2 + 2^3 a_3$ .....$a_0 + k_{a1} + k^2 a_2 + k^3 a_3$

Let Y be ARt and X be AMt (then let $\gamma = b$) (5)

Equation (3) and (4) can be written as

$$Y = \alpha + a \sum_{i=0}^{k} X_{t-1} + a_1 \sum_{i=1}^{k} iX_{t-1}\ a_2 \sum_{i=2}^{k} i^2 Y_{t-1} + U_t \qquad (6)$$

Simplifying the notations in equation (6) and (7) with

$$Z_0 = \sum_{i=0}^{k} X_{t-1} \text{ ....., then we have}$$

$$X = \gamma + b \sum_{i=0}^{k} X_{t-1} + b_1 \sum_{i=1}^{k} iX_{t-1}\ b_2 \sum_{i=2}^{k} i^2 Y_{t-1} + U_t \qquad (7)$$

$Y = \alpha + a_0 Z_{0t} + a_1 Z_{1t} + a_2 Z_{2t} + U_t$ and (8)

$X = \gamma + b_0 Z_{0t} + b_1 Z_{1t}, + b_2 Z_{2t}, + U_t$ (9)

Y and X are functions of Z_{0t} Z_{1t}, and Z_{2t} with U_t

Satisfying all the Ordinary least square (OLS) assumptions

The dependent variables AR(Y) and Amt (X) were regressed against the independent variables (Z) which are the lagged forms of the dependent variables. The sum of the coefficients a_1 and b_2 was analysed in order to arrive at a decision.

Decision Rule

Asset Replacement (AR) that is (Y) would be responsible for changes in Asset maintenance (AM) that is (X) if the $\Sigma(a_1$ or $\alpha_1)=0$ $\Sigma(b_2$ or $\gamma 2)=0$ otherwise Asset maintenance (AM) is responsible for changes in (Asset Replacement) if $\Sigma(a_1$ or $\gamma_1)=0$

and $\Sigma(b_2$ or $\gamma_2)=0$. The coefficients are summed up and their F-values are determined and compared with the tabulated F-value at 5% level of significance.

Discussion Results

Responses obtained from respondents through questionnaire were analysed in order to answer the research questions and test the formulated hypotheses. All the administered questionnaire were appropriately filled and returned. From responses obtained in question 1 on the rating of their organisations performance in asset maintenance, the mean rating for government-controlled organisation A and B were 2.74 and 2.60 respectively (see Appendix table 1). These are just a little bit above the expected mean of 2.5. On the other hand, privately-owned organisation C and D have a mean rating of 4.44 and 4.60 respectively which are much higher than the expected mean value of 2.5. This implies that asset maintenance policy was better observed in organisations C and D which are privately owned than government controlled organisations A and B. Even in the ratings of the performances of these organizations by respondents, higher ratings on the 5 point scale were recorded for organisation C and D which are 91% and 90% respectively against 8% each for organisation A and B. The t-values obtained for organisation A and B are 1.74 and 0.66 respectively. While the t-values obtained for organisation C and D are 13.66 and 15.91 respectively. Using these t-values to tests hypothesis number 1 therefore, t-values obtained for organisation A and B which are government controlled are not significant because they are less than the critical t-value of 1.96. While the t-values for privately owned organisation C and D which are 13.66 and 15.91 are higher than the critical t-value of 1.96. Hence, they are significant. Consequently, in hypothesis 1 the null hypothesis (H_0) was rejected and the alternative hypothesis H_A which states that differences exist between asset maintenance policy of government and private organisations was accepted.

Responses on how impressive the asset replacement policies of the four organisations are rated, are also shown in (Appendix table 1). There, government controlled organisation A and B recorded mean value rating of 1.96 and 2.23 respectively against those of the privately-controlled organisations C and D which gave mean values of 3.09 and 4.60 respectively on a 5-point scale with an expected mean value of 2.5. This points to the fact that asset replacement policy of privately controlled organisations are more impressive than those of the government-controlled organisations. In the same vein, the percentage rating favoured the privately owned organisations more. For example, organisations C and D recorded 27% and 95% respectively against 20% and 14% recorded by organisation A and B respectively. The t-values obtained for organisations A, B C and D are 1.61, 1.26, 2.92 and 5.55 respectively.

Consequently, we employ the above t-values in testing hypothesis 2 which states for null hypothesis that they are no differences in the asset replacement policy of government-controlled and privately-controlled organisations. Since the critical value oft is 1.96, the t values obtained from government-controlled organisation A and B are insignificant since they are less than the critical t-value. Those obtained from organisations C and D which are privately-controlled are significant because they are higher than the critical t-value of 1.96. Therefore, the null hypothesis which states that there are no differences in the asset replacement policy of government controlled and privately-controlled organisations is rejected and the alternative hypothesis is accepted which states that differences exist in their asset replacement policy.

The overall evaluation of the asset management performance of government controlled and privately owned organisations were undertaken using responses obtained in (Appendix table 1). While government controlled-organisation A and B recorded mean values of 2.36 and 2.32 respectively privately owned organisations C and D recorded mean value of 2.93 and 3.19. When these values are set against the expected mean of 2.5 it means that the government-controlled organisations fall below the expected mean value while privately-owned organisations recorded values above the expected mean. The t-values obtained from government controlled organisations A and B are -0.68 and -0.28 respectively. The privately controlled organisation C and D are 2.35 and 3.03 respectively. Employing these t-values to test hypothesis number 3, we discovered that the t-value obtained from the responses of government-controlled organisations are below the tabulated t-value of 1.96. So they are not significant. While the t-values obtained from the privately-controlled organisation are higher than the tabulated t-value and are therefore significant. This leads to the rejection of the null hypothesis while the alternative hypothesis which states that differences exist in the asset maintenance and asset replacement decisions in government-controlled and private controlled organisations.

In establishing a relationship between asset maintenance and asset replacement decision the regression results obtained by regressing ARt and AMt on their successive lagged variables (See Appendix table 2) are expressed as

$Y = 0.6 + 0.07Z_{1t} + 0.6211Z_{2t} + 1.23Z_{3t}$

Se (1.5) (2.06) (0.30) (14.07)

t=(0.4) (0.034) (2..03) (0.09)

$R^2 = 0.9813$ F = 3.91 Dw = 2.32 DF = 18 P = 0.05

The intercept is significantly different from zero which shows that it is a regression passing through the origin. The standard error of the intercept is not significant because it is greater than half of the parameter estimate (SP>1/2β). The value of slop a_0 is equally not significant because ($Sa_0 > {}^1/_2\, a_0$). But slope a1 is a little bit lower than half of the parameter estimate. The standard error for a_2 is significant too. The t-values of the intercept α slope a_0 are not statistically significant since they are less than the tabulated t-value of 1.96 at 5% significant level (p=0.05). The F-value is statistically significant because it is higher than the tabulate F (3.55). The R2 value of 0.9813 or 98% shows that the model shows a good fit and that asset maintenance accounts for 98% variation of what happen in asset management policy.

Durbin Watson (Dw) value of 2.03 shows that the model has no serial correlation with the disturbance error term Ut and therefore very efficient.

The second regression result is thus presented

$X = 0.92 + 4.13Z_{1t} + 0.043Z_{2t,} + 0.096Z_{3t}$

Se =(0.031) (0.803) (0.014) (0.061)

t=(2.97) (5.14) (3.07) (1.57)

$R^2 = 0.37$ F=2.81, Dw = 2.4, DF = 18 P=0.05

The intercept of 0.92 is different from zero and therefore significant. The standard error of 0.031 is less than half the parameter estimate and is equally significant. The t-value of 2.97 is greater than the tabulated t-value of 1.96. This is equally significant. The standard error and the t-value of the slope γ_1 are significant because the former is less than half the value of the parameter estimate and the

calculated t-value of 5.14 is greater than the tabulated t-value of 1.96. The second slope Y2 is statistically significant because the standard error is less than half of the parameter estimate and the computed t-value (3.07) is greater than > t = (1.96). However the slope γ_3, is significant because it is significantly different from zero but its standard error and t-values are not significant because the standard error is greater than half the value of the parameter estimate while the computed t-value is less than the tabulated t-value of 1.96. The R^2 of 0.37 shows that, in the model, only 37% of variation of what happens in asset management policy of the organisation is attributable to asset replacement. A Dw value of 2.40 shows that the model is not serially correlated with the disturbance error term (Ut). The F-value of 2.81 is less than the tabulated F-value of 3.55. This is insignificant.

Finally, summing up the coefficients of α_1 and γ_2 for three successive lags of α_1 Amt and γ_2ARt, the following results were obtained.

Amt_{-1} Amt_{-2} Amt_{-3}

For α_1, $\Sigma(0.6211 + 0.510 + 0.217) = 1.35$

and

Amt_{-1} Amt_{-2} Amt_{-3}

for γ_2 Σ (0.0960 + (-0.07 10)+(-0.025) = 0

Applying the decision rule,

If $\Sigma\alpha_1 = 0$ and $\Sigma\gamma_2 \neq 0$ then we concluded that AR is the cause of Am and if

$\Sigma\alpha_1 \neq 0$ and $\Sigma\gamma_2 = 0$ we infer that Am is the cause of AR. From the above results, $\Sigma\alpha_1 = 1.35$ and $\Sigma\gamma_2 = 0$ from three successive lags. Therefore, $\Sigma\alpha_1 \neq 0$ and $\Sigma\gamma_2 = 0$. Therefore asset maintenance (Am) is the cause of asset replacement (AR). That is to say if the cost of maintenance becomes exceedingly high, the best option is to replace the asset. The cost of maintenance of any asset is therefore a pointer to when the asset should be replaced.

Conclusion and Recommendation

The paper revealed that differences exist in the asset management policy of government controlled and privately-owned organisation. Infact the study established that privately controlled organisations, manage assets better than government controlled organisations.

Finally, this study formulated a model relating appropriately, asset maintenance and asset replacement policy which showed that the degree of asset maintenance determines when asset replacement should take place. This perhaps explains why Saliers (1943) and Vainer (2000) advocated for the need to frequently maintain assets in order to reduce their rate of replacement.

Besides, having established that a difference exist in the quality of asset management policy between government controlled and privately controlled organisations, the following recommendations are proffered; to at least narrow this asset management gap, namely that every organisation should open and maintain an asset management fund run by an asset manager; organisation should embark on periodic training of staff inform of continuing education on asset management; monitoring the management of assets by appropriate agencies and perhaps tie promotions of employees on quality leadership and good performance in asset management. Finally, apart from the establishment of asset management laws and the creation of the enabling environment for such laws to operate, vigorous efforts should be made by the

management of all organisations to understand and imbibe the interlocking relationship between asset maintenance and asset replacement decision in order to always arrive at quality decision in asset management.

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APPENDIX TABLE 1
A COMPARATIVE STATISTICAL DISTRIBUTION OF RESPONSES ON ASSET MANAGEMENT IN ORGANISATIONS ABC AND D

Questions	% Re-sponse	Rating	ORG A (GOVT)	% Re-sponse	Rating	ORG C (GOVT)	% Re-sponse	Rating	ORG B (GOVT)	% Re-sponse	Rating	ORG D (GOVT)
1. How do you rate the performance of your organisation in terms of asset maintenance?	3 5 55 37 0	5 4 3 2 1	Mean = 2.74 Variance = 0.48 Standard deviation = 0.69 Coeff of var (%) = 25 t = 1.74	55 36 7 2 0	5 4 3 2 1	Mean = 4.44 Variance= 0.50 Standard deviation = 0.71 Coeff of var (%) = 32.69 t = 2.92	4 4 40 52 0	5 4 3 2 1	Mean = 2.60 Variance= 0.58 Standard deviation = 0.76 Coeff of var (%) = 29 t = 0.66	70 20 10 0 0	5 4 3 2 1	Mean = 4.60 Variance = 0.44 Standard deviation = 0.66 Coeff of var (%) = 14.35 t = 15.91
2. How do you rate the performance of your organisation in terms of asset replacement?	9 11 7 43 30	5 4 3 2 1	Mean = 1.96 Variance = 2.82 Standard deviation = 1.68 Coeff of var (%) = 85.71 t = 1.61	12 15 48 20 5	5 4 3 2 1	Mean = 3.09 Variance =1.02 Standard deviation = 1.01 Coeff of var (%) = 32.69 t = 2.92	5 9 14 48 24	5 4 3 2 1	Mean = 2.23 Variance =1.15 Standard deviation = 1.07 Coeff of var (%) = 48 t = 1.26	73 22 3 1 1	5 4 3 2 1	Mean = 4.21 Variance = 2.37 Standard deviation = 1.54 Coeff of var (%) = 36.57 t = 5.55
3. Is the overall performance of your organisation in terms of management very impressive?	5 15 3 65 12	5 4 3 2 1	Mean = 2.36 Variance = 1.06 Standard deviation = 1.03 Coeff of var (%) = 43.8 t = 1.61 n = 25	9 11 44 36 0	5 4 3 2 1	Mean = 2.93 Variance =0.82 Standard deviation = 0.91 Coeff of var (%) = 30.91 t = 2.35 n = 25	9 7 15 45 24	5 4 3 2 1	Mean = 2.32 Variance =1.15 Standard deviation = 1.07 Coeff of var (%) = 48 t = 1.26 n = 25	20 15 32 30 3	5 4 3 2 1	Mean = 3.14 Variance = 1.3 Standard deviation = 1.14 Coeff of var (%) = 35.74 t = 3.03 n = 25
	(b)	(a)	(a) (b)	(a)	(a)	(b)	(a)	(a)	(b)	(a)	(a)	(b)

APPENDIX
TABLE 2
CUMULATIVE EXPENDITURE PROFILE OF ASSET MANAGEMENT IN ORGANISATIONS A B C AND D (N) MILLION (1984-2003)

				Lagged variables	
Year	Coded Year	Amount Spent on maintenance (AM) N/m x 10^4	Amount Spent on replacement (AR) N/m x 10^4	Am_{t-1}	AR_{t-1}
1984	1	10.20	16.73	-	-
1985	2	8.60	11.20	10.20	16.73
1986	3	8.40	6.21	8.60	11.20
1987	4	7.50	3.11	8.40	6.21
1988	5	9.40	0.91	7.50	3.11
1989	6	8.35	2.15	9.40	0.91
1990	7	7.80	10.22	8.35	2.15
1991	8	8.00	1.24	7.80	10.22
1992	9	10.21	2.08	8.00	1.24
1993	10	11.20	6.11	10.21	2.08
1994	11	13.10	0.48	11.20	6.11
1995	12	8.76	10.93	13.10	0.48
1996	13	9.00	17.28	8.76	10.93
1997	14	10.12	11.00	9.00	17.28
1998	15	7.30	3.43	10.12	11.00
1999	16	6.20	1.03	7.30	3.43
2000	17	6.10	0.76	6.20	1.03
2001	18	8.20	5.73	6.10	0.76
2002	19	5.20	0.45	8.20	5.73
2003	20	5.34	1.98	5.20	0.45
		(a)	(a)	(b)	(b)

Sources:

(a) From the books of organisations A B C and D

(b) Author's computation.