Operation Evaluation of Regional Electricity by Responsibility of Assessment Accounting and Effect Rate of Investigating on Accessible to Aims of Tavanir Specialty Mother Corporation

Zhaleh Sarabhemati and Babak Jamshidinavid
Department of Accounting, Kermanshah Branch,
Islamic Azad University, Kermanshah, Iran

Abstract: Indicators uses are common and usual factors because of their assessments towards better managements of corporations. Indicators and operation assessment criterions definitions, following requirements 218 and 219 of fifth development program are important factors because of existence vacuum in an effective operation of assessment system in regional electricity corporations. This research has investigated operation assessment of regional electricity corporation by responsibility of assessment accounting and effect rate of investigating on accessible to aims of Tavanir specialty Mother Corporation. Research statistic sample includes 16 regional electricity corporations in all around the country and research time duration is from 1388-1393 which has been investigated by data paneling technique. Research conclusions represent that assessment indicators or investment responsibility measurement accounting are included investment return variables (ROI), remains profit (RI) and Economic Additional Value (EVA). Total efficiency and electricity accessible indicators have meaningful effect on production reserved coefficient but don't have any effects on energy efficiency asset factor efficiency and finished price. Moreover, corporations operations of regional electricity has more power in production part than transition part.

Key words: Responsibility of assessment accounting, investment return price, remained profit, economical additional value, Tavanir corporation

INTRODUCTION

Specialty Mother Corporation of production management is a sub category of Iran Power Ministry which does production, transition and expansion of Iran Electricity Power (Tavanir) this corporation is responsible for development of production installation, transition and electricity whole sale in Iran include 16 regional electricity corporations in different parts of the country and own distribution corporations and electricity production management. Regional electricity are responsible for securement on transition of sure and consistent electricity energy of their geographical coverage regions.

Major management of Tavanir corporation should be sure of manager's aims corporations of regional electricity corporations with whole aims of Tavanir specialty mother corporation. Aims coordination will be received by manger's coordination of different section with major management to access the aims.

Accounting system is beneficent in decisions while is consistent with management aims, in fact accounting system is a channel of superficial relationships which are justified by suggesting information of administrative managers to access their main and secondary aims who are directed by best managers. Responsibility assessment accounting helps management accounting to create coordination between functional sections aims and business unit aims (Horngren *et al.*, 2003). Aim of responsibility accounting is creation report of dysfunction and reason relationships between special manager's activities and their financial conclusions. Research aim is looking for two main contents first, accounting system design of responsibility assessment should be reflected and operational conclusions of each organizational section in production and services, this aim is done because of creation centers of responsibility in organization. Second, this aim is done because of creation centers of responsibility center which is based on control contents (Mohammadipoor *et al.*, 1972). Based on above mentioned points, accounting accomplishment of responsibility assessment accounting in regional electricity corporations need forming group work and clarifying organization algorithm in term of responsibilities and aims but in this research with wider view Tavanir

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Corresponding Author: Babak Jamshidinavid, Department of Accounting, Kermanshah Branch, Islamic Azad University, Kermanshah, Iran

specialty Mother Corporation as one centralized corporation which has branches in different regions of the country and all branches have similar coding system of accounting and regional Tavanir Corporations as responsibilitie's centers which will be divided to coverage needed information of accounting indicators of responsibility assessment corporations operations of regional electricity with use of accounting operational assessment indicators of responsibility assessment which will be investigated and their effects amounts will be clarified in access to Tavanir specialty Mother Corporation.

One of the main discussion points in today organizations is operational assessment problem which has been considered as the main important topic in definitions of indicators and operational assessment standards. One of the management accounting instruments of operational assessment is accounting system of responsibility assessment. Responsibility accounting system is a system which will be given to manager's decisions power and responsibility for each activity of one special region of the corporation. Based on this system, managers are responsible for sectional activities. Cycle development of general cooperation, economical and securement electricity, all satisfaction gradation as aims of Iran electricity industry have been considered. Electricity price which is effect of financial efficiency and electricity agencies economic is an important factor for electricity users. One of the important point which separates electricity from other industries is its lack of reservation ability in huge business criterion which caused the electricity in different hours of days, different days of week and different months of year has different value for users and different cost for securement. Another point is lack of electricity securement damage based on done studies in our country is >50 and 100 times of electricity finished price. This reality is justified in future politics of electricity industry and in comparison with other factors give higher weight to secure instrument of users electricity. However, electricity has been considered as economical and welfare social development bases of today society, this importance and sensibility couldn't stop production activity essence, transition and distribution of electricity as economical agencies activities that should be assessed. To access electricity industry aim, investigation works of responsibility assessment accounting can be effective. So, the research tries to investigate and evaluate operations of 16 regional electricity corporations in the country which re sub categories of Tavanir Specialty Mother Corporation with use of indicators of responsibility assessment accounting and their effects on aims of tavanir specialty mother corporation.

Theoretical bases

Responsibility assessment accounting: Is an information system which defines responsibility centers (for example, a sub category of each organization unit as a responsibility center), clarifies each central options, evaluates each central operation and delivers them as suitable reports to major managers (Jerold, 2006). By an accurate look to accounting system of responsibility assessment, concrete requirement situation for use of accounting system of independent accounts can be imagined and financial information of all responsibility centers can be prepared as an accounting system and based on financial reporting of evaluating responsibility (Modares and Ahmadzadeh, 1967).

Performance levels of responsibility assessment accounting: Definition of responsibility centers, budgetary costs anticipation and incomes of responsibility center, organization algorithm preparation, operational justifications and domain of each responsibility centers, operation report preparation for each center by its responsible manager, indicator determinations of centers responsibilities assessments, operations reporting evaluation by higher major managers deviations analyses.

When a corporation expands, major management will be recognized and added by responsibilities areas as responsibility (Don *et al.*, 2007).

Responsibility centers: These centers are processes of unit's recognitions and secondary sections in an organization, responsibility divisions to mangers of these sections and operation assessments of the mangers. Each center manger should answer reduced incomes (income center), committed costs (cost center), earned profit (profit center) and accomplished investment (asset center).

Operation evaluation with accounting indicators of responsibility assessment: Responsibility needs answering, answering means operation measuring and real conclusions should be compared with expected conclusions. Corporations are looking for profit increasing while private organizations are searching free services with low cost for public (Moore, 2003). So, these organizations have public aims and they are encountered by a big challenge as customer's attentions with less sources. Then one of the most important account level of responsibility assessment of cost center is determination finished cost of item standard, operation evaluation of units through comparison (deviation investigation and real finished costs of items costs) with standard finished item costs. Deviations analyses are key instruments to measure operation of a cost center.

Investment of return: Used operation measuring is for evaluation of investment efficiency and common criterion for operation measuring of investment center is investment return (used investment return). Ratio of investment return of earned profit division of investment center place to collection of invested assets in investment center will be received (Jerold, 2006).

Economic additional value: Has been introduced because of requirements of accounting profit as a transitional criterion of operation evaluation of distortions abilities such as depreciation and etc. as a new criterion with name of economic additional value by Juel, M., Stern and Steward, Bent, J., in 1989 for operation evaluation.

Remained profit: Is one of the criterions of operation assessment and is the nearest content to economical additional value. It is operation measuring of investment centers which is received by costs reductions of investments situations from produced incomes by investment assets.

Techniques aims: One of the main dimensions of electricity industry is its techniques dimensions this dimension includes different aspects studying, designing and programming of system, electricity standards, development and correction of electricity channels, utilization of power system and channel management.

Accessible electricity indicator during 1 year (ASAI) is considered as undistributed energies ratio in the country to all used expected energy (with steady assumption of energy use during times) as time average of inaccessible to electricity (www.tavanir.org.ir). Indicator of electricity production reserved is evaluated by ratio of extra power to securement ability power (accessible units) to the most requirement of adjustment use (www.tavanir.org.ir).

Financial and economical aims: Development cycle of public partnership has been considered as economical and sure energy securement and gradations of all satisfactions as public aim of Iran electricity industry. Electricity has been considered as infrastructure of economic development of social welfare of today societies. However, this importance and sensitivity haven't stopped activities essences such as production, transition and distribution which have been considered as activities of economic agencies and are evaluated by economic and financial indicators. For electricity users its price which is result of financial efficiency and electricity agencies economic is an important satisfactory determinate factor.

Moreover, public partnership in investment for production or distribution of electricity needs profitable activities and has clear future for investors. In follow, some accessible economical and financial indicators are as) finished price indicator asset factor indicator) energy efficiency indicator total efficiency indicator.

Finished price indicator is one of the most important common operation assessment indicator of economic energy. In agencies which are active in elusive situations because lack of production sale price determination in relationship of finished price market with acceptable profit factors and other essential consideration sale price production calculations are bases. In electricity agency necessity of electricity securement with sure probability and suitable quality are the most important factors which determine sale price based on finished price.

Energy efficiency indicator: accomplishes indicator to power plant's kinds determinations with higher efficiency and distribution and transition system with lower losses. Efficiency indicator of asset factor: relation of additional value of each sub category to payment's values of asset services and goods which indicate efficiency factor of asset factor and represent one payment unit for asset services and goods which have been created for activities of additional value amount.

Total efficiency indicator: is one of the most important indicators in each economical agency. This indicator represents total operation situations of the agency and instead of details represents total operations of each agency (www.tavanir.org.ir).

Literature review: Mohammadipoor *et al.* (1972), investigated responsibility assessment accounting, responsibility assessment accounting system for use in small and medium corporations and specified organizations which had been limited by 3 types of responsibility assessment systems and most organization would follow one type of responsibility assessment accounting system based on responsibility assessment accounting system factors. Safa investigated accounting responsibility role in organization structure and indicated that responsibility accounting was a different method of cost category and had more effects on operation evaluation to be able to control production cost by one total design of production, marketing, official and financial aspects in an organization with use of controlling and programming techniques benefits. In fact, each manger should be recognized with a responsibility to access aims. Khodaparast, declared that operation evaluation represented organizations victory degree in access to

their aims and operation had the near relationship with corporation's aims and investigated relationship between economical additional value and investment return price. He found that there was no correlation between economical additional value and investment return price which is the main reason of asset cost price. Vakilian Aghoei, investigated that there are meaningful relationships between economical additional value and remained profit in profit anticipation of each share of future year and share profit of future year. This creation had anticipation power and it was clarified in the research that there was no meaningful relationship between economical additional value and each share profit of future year and didn't have anticipation power. Azizzadeh, represents that operation assessment criterions had role in creation in their research, investment return price (ROI), remained profit (RI), sale return price (ROs), Economical Additional Value (EVA), Market Additional Value (MVA) and comprehensive indicator of operation assessment and concluded that all operation assessments indicate both new and old evaluated institute operation degree and had helped growth and continuous of energy activity. Creations of investment return price, remained profit and economical additional value had been operation assessment criterions in responsibility assessment accounting. Modares and Ahmadzadeh (1967), investigated funds theoretical application in responsibility accounting system with use of coding system and designing of suitable softewares which could provide separated and independent financial reporting for each responsibility system, use of accounting system of independent account that helped major manager to evaluate better operation of responsibility central mangers that could happen easier and had effective amount and economical cost of organization operations. Hanini (2013), investigated performance amount in Jordan banks with designing of 55 questionnaires and research analysis by SPSS Software. This research, "investigating performance amount of responsibility assessment accounting in Jordan banks", divided organizational structure of Jordan banks into responsibility centers, clarified each manger's duties and options in each responsibility center, compared budget incomes and costs of each center with real costs and incomes and extracted deviations of each center but this research had some weak points as: lack of employment's partnership in budget production of the centers, lack of encouragement system and lack of motivation among personals. Alshomaly (2013), investigated operation assessment and responsibility accounting (on healthy institutes on the North of Jordan),

this study was done with aim of transparency methods for operation assessment in medical parts of Jordan and its relationship with doctrine of responsibility accounting was used and data were gathered by questionnaires and analyzed by SPSS that medical institutes used on the North of Jordan. Bawab and Aqeel (2012), investigated responsibility assessment in operation evaluation of centralized institutes in Yamane banks, data were gathered by questionnaires and analyzed by SPSS. In this research, there was no limitation and financial and non-financial measurements were used in operation evaluation of performance units in Yamane banks. Rehana (2011), investigated satisfactory levels of organizational services in Bangladesh, data were gathered by questionnaires and analyzed by SPSS. Satisfaction from total system of responsibility effect was clarified. Fatena *et al.* (2011), investigated performance amount of responsibility accounting characteristics in industrial corporations of Jordan and their effects on profiting and operational efficiency. Research conclusions represented meaningful relationships among responsibility accounting performance, corporation profiting and operational efficiency.

MATERIALS AND METHODS

The research is applicational based on its aim of applicational development in a special basis because applicational researches are directed toward knowledge practice application. The research is observational and analytic based on its data is sectional in term of time is deductive in term of performance logic and is quantitative based on research performance processes and during its performance levels, it is searching gradation levels of regional electricity corporation operations based on aims of tavanir specialty mother corporation. Research data were gathered by research definition with audited financial statements gathering of regional electricity corporations from 1388-1393 from society office of tavanir corporation. Comparative (manager's distributions and transitions) statistic reporting, Iran electricity industry and tavanir corporation circulation and research data were analyzed by statistic softewares.

Research population and sample statistic: Research statistic sample includes all regional electricity corporations that their financial statements have been approved by auditing organization. Research time is from 1388-1393 in Iran because this time duration includes whole activities of regional electricity corporation after
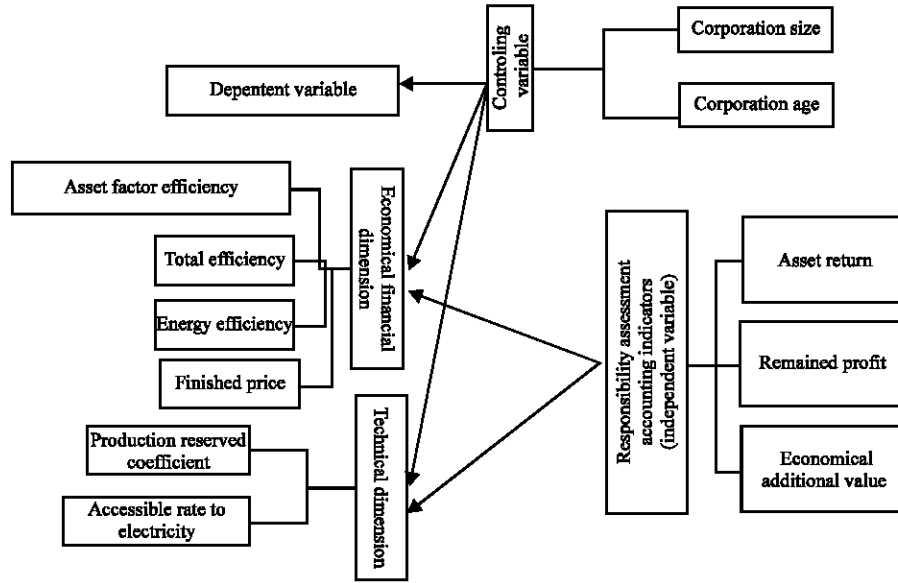
Fig. 1: Research content model

independency of distribution corporation from them. Statistic population include 16 regional electricity corporations, so enumeration should be used to determine sample mass (Fig. 1).

Content model
Research model
First hypothesis regression model:

$$RFP_{it} = b_0 + b_1 ROI_{it} + b_2 RI_{it} + b_3 EVA_{it} + b_4 AC_{it} + b_5 SC_{it} + \varepsilon_{it}$$

Second hypothesis regression model:

$$TP_{it} = b_0 + b_1 ROI_{it} + b_2 RI_{it} + b_3 EVA_{it} + b_4 AC_{it} + b_5 SC_{it} + \varepsilon_{it}$$

Third hypothesis regression model:

$$PC_{it} = b_0 + b_1 ROI_{it} + b_2 RI_{it} + b_3 EVA_{it} + b_4 AC_{it} + b_5 SC_{it} + \varepsilon_{it}$$

Fourth hypothesis regression model:

$$EP_{it} = b_0 + b_1 ROI_{it} + b_2 RI_{it} + b_3 EVA_{it} + b_4 AC_{it} + b_5 SC_{it} + \varepsilon_{it}$$

Fifth hypothesis regression model:

Table 1: Conclusions of correlation spearman test

Meaningful correlation	ROI	RI	EVA	SC	AC
ROI	1/000				

RI	0/702	1/000			
	0/063	-------			
EVA	0/913	0/619	1/000		
	0/071	0/059	--------		
SC	-0/135	0/090	0/081	1/000	
	0/191	0/000	0/435	--------	
AC	0/057	-0/183			
	0/583	0/075	0/175	0/049	
			0/089	0/000	1/000

$$CP_{it} = b_0 + b_1 ROI_{it} + b_2 RI_{it} + b_3 EVA_{it} + b_4 AC_{it} + b_5 SC_{it} + \varepsilon_{it}$$

Sixth hypothesis regression model:

$$ASAI_{it} = b_0 + b_1 ROI_{it} + b_2 RI_{it} + b_3 EVA_{it} + b_4 AC_{it} + b_5 SC_{it} + \varepsilon_{it}$$

Where:

Cp_{it} = Cost price
Ep_{it} = Energy Efficiency
RFP_{it} = Remember Factor Product
Pc_{it} = Capital element process
Tp_{it} = Total efficiency
Ac_{it} = Corporation age
Sc_{it} = Corporation size
$ASAI_{it}$ = Indicator of accessible electricity during 1 Year (Table 1)

Table 2: Variances dissimilarity of self-correlation of research hypotheses tests conclusions

Hypotheses	Variances dissimilarity test			Self-correlation test		
	F-values	p-values	Dissimilarity	F-values	p-values	Self-correlation
H_1	21/350	0/000	Yes	1564/521	0/061	no
H_2	96/139	0/000	Yes	11/224	0/074	no
H_3	27/120	0/000	Yes	0/770	0/3939	no
H_4	2/-1016	1 No	13/854	0/002	yes	
H_5	12/74	0/000	Yes	1/165	0/2976	no
H_6	4/105	0/000	Yes	53/286	0/000	yes

Table 3: Conclusions of f limer and hasman tests

Hypotheses	F-limer		Hasman		Cross-section
	F-values	p-values	Chi-square	p-values	
H_1	0/7241	0/75	-	-	-
H_2	1/277	0/24	-	-	-
H_3	3/0361	0/0008	36/05	0/000	Fix
H_4	193316	0/000	11/0637	0/050	Fix
H_5	1/5140	0/1219	-	-	-
H_6	24/2357	0/000	14/8872	0/0109	Fix

Spearman correlation test: This test is used to investigate existence or inexistence of correlation and its tense degree between variables, based on inexistence correlation between independent and controlling variables, the model has been validated for multi variables regression. represents correlation between variables.

Variances dissimilarity of self-correlation of research hypotheses tests: Table 2 represents that all research hypotheses except fourth and sixth hypotheses have self-correlation problem. To compensate dissimilarity problem Estimating Generalized Least Squares (EGLS) should be used and to compensate self-correlation problem parameters of resolving self-correlation should be used.

Research hypothesis in paneling mood: To diagnose choice between mixture or conflation methods of research hypotheses, F limer test (Chow) has been used. Then to determine and choose one of the fixed effects pattern or accidental effect, Hasman test has been used. Their conclusions are represented in Table 3.

Based on Table 4 conclusions, related model of first hypothesis has dissimilar problem but doesn't have self-correlation problem so estimating generalized least squares should be used for the first hypothesis and its conclusions have been represented in the above table. The conclusions related to F statistic (0/000) represented that the model in total mood is meaningful and attention to Watson Dorbin (1/983) defines lack of self-correction problem. Moreover, conclusions of adjusted determination coefficient indicate that in the research duration 0/08 of production reserved coefficient changes have been affected by operation assessment of

Table 4: Conclusions of H_1 test

Variables	EGLS		
	Coefficients	t-statistic	t-expectancy
ROI	-0/0069	-4/6815	0/0000
RI	0/00002	4/0922	0/0000
EVA	0/00008	4/9601	0/0000
AC	-0/0096	-8/5468	0/0000
SC	-0/0153	-0/9506	0/0000
C	1/5059	6/1702	0/342

Table 5: Conclusions of H_2 test

Variables	EGLS		
	Coefficients	t-statistic	t-expectancy
ROI	-0/0069	-4/6818	0/0000
RI	0/00002	4/0922	0/0000
EVA	0/00008	4/9601	0/0000
AC	-0/0096	-8/5468	0/0000
SC	-0/0153	-0/9506	0/0000
C	1/5059	6/1702	0/342

Determination coefficient: 0/1265; 0/0000; Adjusted determination coefficient: 0/1236; Watsoon-doorbin statistic: 2/1057; F statistic: 44/30; F statistic expectancy: 0/0000

responsibility evaluation accounting. However, meaningful levels of independent variables have been <0/05 (p = 0/05). So, first hypothesis of research based on effects of responsibility assessment accounting operation evaluation indicators of regional electricity corporations on production reserved coefficient are affirmed.

Based on Table 5 conclusions, related model of second hypothesis has dissimilar problem but doesn't have self-correlation problem, so estimating generalized least squares should be used for the second hypothesis and its conclusions have been represented in the above table. The conclusions related to F statistic (0/000) represented that the model in total mood is meaningful and attention to defines lack of self-correction

Table 6: Conclusions of H_3 test

Variables	EGLS		
	Coefficients	t-statistic	t-expectancy
ROI	0/01598	5/9916	0/0000
RI	0/0009	1/8050	0/0751
EVA	-0/0003	-0/1878	0/8516
AC	-0/0095	-1/0711	0/2876
SC	0/0022	0/0827	0/9342
C	0/5969	1/7134	0/0908

Determination coefficient: 0/7259; Adjusted determination coefficient: 0/6528; Watsoon-doorbin statistic: 0/3636; F statistic: 9/9310; F statistic expectancy: 0/0000

Table 7: Conclusions of H_4 test

Variables	EGLS		
	Coefficients	t-statistic	t-expectancy
ROI	0/0008	-12607	0/2125
RI	0/0003	-0/1885	0/8511
EVA	-0/0009	1/1580	0/2516
AC	-0/0005	1/1158	0/2691
SC	0/0012	1/5688	0/1221
C	0/9342	48/6939	0/0000
AR(I)	0/2249	2/2510	0/0282

Determination coefficient: 0/8282; Adjusted determination coefficient: 0/8069; Watsoon-doorbin statistic: 2/2655; F statistic: 16/7193; F statistic expectancy: 0/0000

Table 8: Conclusions of H_5 test

Variables	EGLS		
	Coefficients	t-statistic	t-expectancy
ROI	-1/2625	-/17975	0/0725
RI	-0/0008	-0/3721	0/7099
EVA	0/0002	3/4066	0/0007
AC	-3/6204	-6/7459	0/0000
SC	79/6433	10/412	0/0000
C	-797/55	-6/8622	0/0000

Determination coefficient: 0/1188; Adjusted determination coefficient: 0/1160; Watson-Dorbin satistic: 1/9549; F satistic: 41/27; F statistic expectancy: 0/0000

Table 9: Conclusions of H_6 test

Variables	EGLS		
	Coefficients	t-statistic	t-expectancy
ROI	-0/005	-2/1356	0/0369
RI	-0/0001	-2/1206	0/0382
EVA	0/0006	2/1585	0/0350
AC	0/0568	3/5871	0/0007
SC	0/1258	4/5819	0/0000
C	993/6	1496/42	0/0000
AR (1)	0/4072	8/2151	0/0000

Determination coefficient: 0/9835; Adjusted determination coefficient: 0/9775; Watson-Dorbin satistic: 2/3; F satistic: 164/25; F statistic expectancy: 0/0000

problem. Moreover, conclusions of adjusted determination coefficient indicate that in the research duration 0/12 of efficiency changes have been affected by independent variables. However, meaningful levels of independent variables, EVA, RI, ROI have been >0/05 (p = 05). So, second hypothesis of research based on effects of responsibility assessment accounting operation evaluation indicators of regional electricity corporations on total efficiency are affirmed.

Based on Table 6 conclusions, related model of third hypothesis has dissimilar problem but doesn't have self-correlation problem so estimating generalized least squares should be used for the third hypothesis and its conclusions have been represented in the above table. The conclusions related to F statistic (0/000) represented that the model in total mood is meaningful and attention to Watson Dorbin (2/3636) defines lack of self-correction problem. Moreover, conclusions of adjusted determination coefficient indicate that in the research duration 0/6528 of asset factors efficiency changes have been affected by independent variables. However, meaningful levels of independent variables, EVA, RI have been >0/05 (p = 0/05). So, third hypothesis of research based on effects of responsibility assessment accounting operation evaluation indicators of regional electricity corporations on asset factors efficiency are not affirmed.

Based on Table 7 conclusions, related model of fourth hypothesis doesn't have dissimilar problem but has self-correlation problem so estimating generalized least squares should be used for the fourth hypothesis

and its conclusions have been represented in Table 9. The conclusions related to F statistic (0/000) represented that the model in total mood is meaningful and attention to Watson Dorbin (2/2655) defines lack of self-correction problem. Moreover, conclusions of adjusted determination coefficient indicate that in the research duration 0/081 of asset energy efficiency changes have been affected by independent variables. However, meaningful levels of independent variables have been >0/05 (p = 0/05). So, fourth hypothesis of research based on effects of responsibility assessment accounting operation evaluation indicators of regional electricity corporations on energy efficiency are not affirmed.

Based on Table 8 conclusions, related model of fifth hypothesis has dissimilar problem but doesn't have self-correlation problem so estimating generalized least squares should be used for the fifth hypothesis and its conclusions have been represented in the above table. The conclusions related to F statistic (0/000) represented that the model in total mood is meaningful and attention to Watson Dorbin (1/9549) defines lack of self-correction problem. However, conclusions of adjusted determination coefficient indicate that in the research duration 0/12 of asset energy finished price changes. Moreover, meaningful levels of independent variables, ROI, RI have been >0/05 (p-value 0/05). So, fifth hypothesis of research based on effects of responsibility assessment accounting operation evaluation indicators of regional electricity corporations on finished price are not affirmed. Based on Table 9 conclusions, related model of sixt hypothesis has

Table 10: Conclusions of paneling accumulation test with use of kao test

Models	Kaeo test conclusions	
	F-values	p-values
First model	2/45	0/007
Second model	-2/79	0/003
Third model	-7/15	0/000
Fourth model	-1/72	0/042
Fifth model	-6/23	0/000
Sixth model	-0/25	0/040

dissimilar and self-correlation problems, so estimating generalized least squares and fixed effects tests should be used for the sixth hypothesis and its conclusions have been represented in Table 10. The conclusions related to F statistic (0/000) represented that the model in total mood is meaningful and attention to Watson Dorbin (2/3) defines lack of self-correction problem. However, conclusions of adjusted determination coefficient indicate that in the research duration 0/98 of electricity accessible indicator changes during 1 year. Moreover, meaningful levels of independent variables, ROI, RI have been >0/05 (p = 0/05). So, sixth hypothesis of research based on effects of responsibility assessment accounting operation evaluation indicators of regional electricity corporations on electricity accessible during 1 year are affirmed.

Accumulation of kao test: To investigate existence or inexistence of long-term duration between model variables accumulation, Kao test has been used because of controlling variable of corporation size in the first to the sixth hypotheses models so long-term relationships of variables in all six hypotheses have been affirmed. Table 10 represents this long-term relationships of the variables in the research models.

CONCLUSION

First hypothesis: Indicator of responsibility assessment accounting operation evaluation of regional electricity corporations have meaningful effect on production reserved coefficient. Based on Table 4, it can be said with 0/095 assurance level that indicator of responsibility assessment accounting operation evaluation of regional electricity corporations have meaningful effect on production reserved coefficient. So, first hypothesis of meaning effect of indicator of responsibility assessment accounting operation evaluation of regional electricity corporations on production reserved coefficient is accepted. Production reserved coefficient with more power plants formations or higher performance capacity of higher existence power plant and positive reserved coefficient represent that power plants performances capacities are more than people need use. Regional electricity corporations are private and want to give

services to public so increase of investment return price and remained profit have positive meaningful effect on production reserved coefficient increase. If used asset and asset cost increase, economical additional value will decrease. Increase of production reserved coefficient represents used asset and more asset cost in production section which caused decrease of economical additional value.

First hypothesis: However, meaningful levels of independent variables, EVA, RI, ROI have been <0/05 (p-value 0/05), second hypothesis of research based on effects of responsibility assessment accounting operation evaluation indicators of regional electricity corporations on total efficiency are affirmed. Based on Table 5, it can be said with 0/095 assurance level that indicator of responsibility assessment accounting operation evaluation of regional electricity corporations have meaningful effect on total efficiency. In regional corporations investment return price has negative meaningful effect on total efficiency. It means that if profit percent of done investments are more, income ratio to cost (total efficiency) will decrease. This indicates that increase of total efficiency will be received by cost decrease not income decrease and profit increase for done investments have been received from decrease of investment cost. Decrease of cost has an effect on investments profits which have been decreased, however, decrease of asset costs increase RI and EVA. Cost decrease in the sections which are related to profit investments efficiencies of assets and equipment decrease of investments costs in electricity industry section have been because of prohibitions. Based on conclusions of the first and the second hypotheses and total electricity corporation's incomes of energy sale and electricity energy transition, it can be concluded that electricity investment in transition is less than production section.

First hypothesis: However, meaningful levels of independent variables, EVA, RI have been >0/05 (p = 0/05). So, third hypothesis of research based on effects of responsibility assessment accounting operation evaluation indicators of regional electricity corporations on asset factors efficiency are not affirmed. Based on Table 6, it can be said with 0/095 assurance level that indicator of responsibility assessment accounting operation evaluation of regional electricity corporations have no meaningful effect on asset factor efficiency. Research conclusions indicate that investment return price of asset factor efficiency has positive meaningful effect on received income percent of energy sale to total asset. If asset return price increases, investment

production will increase. In this research remained profit and economical additional value don't have any meaningful effects on asset factor efficiency but total model is accepted.

First hypothesis: However, meaningful levels of independent variables have been >0/05 (p = 0/05). So, fourth hypothesis of research based on effects of responsibility assessment accounting operation evaluation indicators of regional electricity corporations on energy efficiency are not affirmed. Based on Table 7, it can be said with 0/095 assurance level that indicator of responsibility assessment accounting operation evaluation of regional electricity corporations have no meaningful effect on energy efficiency. Based on meaningful levels of research dependent variable, fourth hypothesis is not accepted and energy efficiency will equal to customer sold energy percent to produce energy which is remained energy after production of perished energy. In the research investment return, remained profit and economical additional value don't have any roles in optimizing transition channel for prohibition of energy loss.

First hypothesis: However, meaningful levels of independent variables, ROI, RI have been >0/05 (p = 0/05). So, fifth hypothesis of research based on effects of responsibility assessment accounting operation evaluation indicators of regional electricity corporations on finished price are not affirmed. Based on Table 8, it can be said with 0/095 assurance level that indicator of responsibility assessment accounting operation evaluation of regional electricity corporations have no meaningful effect on finished price. So, meaningful level of RI and ROI of fifth hypothesis will not be accepted. It means that if economical additional value increases, finished price will be more. This means that corporation has created more wealth for shareholders and finished price will be more. Asset cost has not been recognized in accounting that represents use conclusion of cash money in different investments are similar to risk.

First hypothesis: However, conclusions of adjusted determination coefficient indicate that in the research duration 0/98 of electricity accessible indicator changes during 1 year. Moreover, meaningful levels of independent variables, ROI, RI have been >0/05 (p-value 0/05). So, sixth hypothesis of research based on effects of responsibility assessment accounting operation evaluation indicators of regional electricity corporations on electricity accessible during 1 year are affirmed. Based on Table 9, it can be said with 0/095

assurance level that indicator of responsibility assessment accounting operation evaluation of regional electricity corporations have no meaningful effect on electricity accessible during 1 year. Electricity accessible indicator, moreover production reserved coefficient is affected by power transition posts and lines to secure electricity. Considering first hypothesis test conclusions based on positive and meaningful effect of remained profit and investment return price on production reserved coefficient with considering last hypothesis conclusions based on negative effect of RI and ROI on efficiency accessible indicator during 1 year can be concluded that investment and optimizing of electricity transition channel have not produced well. Fourth hypothesis conclusions based on lack of meaningful effect of indicators of regional electricity corporation responsibility assessment operation evaluation on energy hypothesis conclusion test indicate that economical additional value has a positive and meaningful effect on electricity represents increase of used asset in production section.

SUGGESTIONS

Applicational suggestions: Based on first research conclusion indicator of responsibility assessment accounting operation evaluation of regional electricity corporations have meaningful effect on production reserved coefficient. Based on Table 4, it can be said with 0/095 assurance level that indicator of responsibility assessment accounting operation evaluation of regional electricity corporations have meaningful effect on production reserved coefficient. So, first hypothesis of meaning effect of indicator of responsibility assessment accounting operation evaluation of regional electricity corporations on production reserved coefficient is accepted. Production reserved coefficient with more power plants formations or higher performance capacity of higher existence power plant and positive reserved coefficient represent that power plants performances capacities are more than people need use. Regional electricity corporations are private and want to give services to public, so increase of investment return price and remained profit have positive meaningful effect on production reserved coefficient increase. If used asset and asset cost increase, economical additional value will decrease. Increase of production reserved coefficient represents used asset and more asset cost in production section which caused decrease of economical additional value. Electricity corporations can make a culture about decrease of energy use to increase reserved coefficient and remove the need of more investments in this part. These corporations can suggest partnership in private

section in formation and utilization of electricity power plants, correction of conserved systems, correction behavior and improvement of the country management, gradation of management skills in corporations of electricity management.

Based on the second hypothesis conclusion meaningful levels of independent variables, EVA, RI, ROI have been <0/05 (p = 0/05), second hypothesis of research based on effects of responsibility assessment accounting operation evaluation indicators of regional electricity corporations on total efficiency are affirmed. Based on Table 5, it can be said with 0/095 assurance level that indicator of responsibility assessment accounting operation evaluation of regional electricity corporations have meaningful effect on total efficiency. In regional corporations investment return price has negative meaningful effect on total efficiency. It means that, if profit percent of done investments are more, income ratio to cost (total efficiency) will decrease. This indicates that increase of total efficiency will be received by cost decrease not income decrease and profit increase for done investments have been received from decrease of investment cost. Decrease of cost has an effect on investments profits which have been decreased, however, decrease of asset costs increase RI and EVA. Cost decrease in the sections which are related to profit investments efficiencies of assets and equipment decrease of investments costs in electricity industry section have been because of prohibitions. Based on conclusions of the first and the second hypotheses and total electricity corporation's incomes of energy sale and electricity energy transition, it can be concluded that electricity investment in transition is less than production section. Based on meaningful acceptance of responsibility assessment accounting operation evaluation indicators on total efficiency, negative and meaningful effect of investment return, positive and meaningful effect of remained profit and economical additional value on total efficiency, it is suggested to specify more budget to relationship with profit investment.

Based on conclusion of the third hypothesis meaningful levels of independent variables, EVA, RI have been >0/05 (p = 0/05). So, third hypothesis of research based on effects of responsibility assessment accounting operation evaluation indicators of regional electricity corporations on asset factors efficiency are not affirmed. Based on Table 6, it can be said with 0/095 assurance level that indicator of responsibility assessment accounting operation evaluation of regional electricity corporations have no meaningful effect on asset factor efficiency. Research conclusions indicate that investment return price of asset factor efficiency has positive meaningful

effect on received income percent of energy sale to total asset. If asset return price increases, investment production will increase. In this research remained profit and economical additional value don't have any meaningful effects on asset factor efficiency but total model is accepted. Meaningful and positive effect on investment return price, it is suggested that effective factor of energy sale should be considered.

Based on the fourth hypothesis conclusion meaningful levels of independent variables have been >0/05 (p = 0/05). So, fourth hypothesis of research based on effects of responsibility assessment accounting operation evaluation indicators of regional electricity corporations on energy efficiency are not affirmed. Based on Table 7, it can be said with 0/095 assurance level that indicator of responsibility assessment accounting operation evaluation of regional electricity corporations have no meaningful effect on energy efficiency. Based on meaningful levels of research dependent variable, fourth hypothesis is not accepted and energy efficiency will equal to customer sold energy percent to produce energy which is remained energy after production of perished energy. In the research investment return, remained profit and economical additional value don't have any roles in optimizing transition channel for prohibition of energy loss. It is suggested that transition channel optimizing should consider energy losses to decrease these losses about this problem.

Based on the fifth hypothesis conclusion, meaningful levels of independent variables, ROI, RI have been >0/05 (p-value 0/05). So, fifth hypothesis of research based on effects of responsibility assessment accounting operation evaluation indicators of regional electricity corporations on finished price are not affirmed. Based on Table 8, it can be said with 0/095 assurance level that indicator of responsibility assessment accounting operation evaluation of regional electricity corporations have no meaningful effect on finished price. So, meaningful level of RI and ROI of fifth hypothesis will not be accepted. It means that if economical additional value increases, finished price will be more. This means that corporation has created more wealth for shareholders and finished price will be more. Asset cost has not been recognized in accounting that represents use conclusion of cash money in different investments are similar to risk. It is suggested that planning of total cost decrease and fuel decrease will cause decrease of finished price, profit increase and economical additional increase. Based on the sixth hypothesis conclusion conclusions of adjusted determination coefficient indicate that in the research duration 0/98 of electricity accessible indicator changes during 1 year. Moreover, meaningful levels of

independent variables, ROI, RI have been >0/05 (p-value 0/05). So, sixth hypothesis of research based on effects of responsibility assessment accounting operation evaluation indicators of regional electricity corporations on electricity accessible during 1 year are affirmed. Based on Table 9, it can be said with 0/095 assurance level that indicator of responsibility assessment accounting operation evaluation of regional electricity corporations have no meaningful effect on electricity accessible during 1 year. Electricity accessible indicator, moreover production reserved coefficient is affected by power transition posts and lines to secure electricity. Considering first hypothesis test conclusions based on positive and meaningful effect of remained profit and investment return price on production reserved coefficient with considering last hypothesis conclusions based on negative effect of RI and ROI on efficiency accessible indicator during 1 year can be concluded that investment and optimizing of electricity transition channel have not produced well. Fourth hypothesis conclusions based on lack of meaningful effect of indicators of regional electricity corporation responsibility assessment operation evaluation on energy hypothesis conclusion test indicate that economical additional value has a positive and meaningful effect on electricity represents increase of used asset in production section. There are suggestions for regional electricity corporations that essential financial sources for investments about development bases, transition channels optimizing, electricity power distribution and private section partnership should be secured. Use patterns of electricity energy, replacement of advance equipment with old equipment in electricity channels for efficiency power increase, system consistency, development and optimizing of electricity power transition channels and asset cost decrease will increase electricity accessible indicator.

In applicational area, there are some suggestions that regional electricity corporations should consider to access their clarified aims in their corporation evaluation to responsibility assessment accounting system. Big corporation's owners and investors should consider responsibility assessment accounting system to evaluate operation of management aim such as programming and sharing sources, operational control and operation evaluation of sections managers. It is suggested that other industries should investigate use degree effect of responsibility assessment accounting system on responsibility accounting indicators to access research aim. Moreover, responsibility assessment accounting discussion should be used for management and accounting lesson's chapters. Poya methodology should be used to evaluate country future accountants and mangers about use of this branch of accounting as suitable system of information flow account giving account or giving answer and right owner or wanting answer are necessary.

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