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ORIGINAL RESEARCH PAPER

Sustainability Reporting and Economic Satisfaction in Petrochemical Companies

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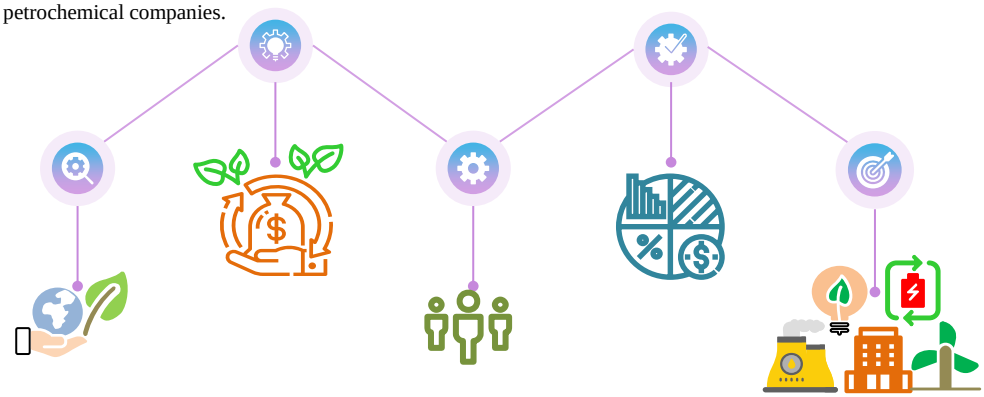
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A B S T R A C T

Sustainability reporting refers to non-financial reporting, while economic satisfaction deals with materialistic aspects of work life. This study sheds light on the relationship between economic satisfaction and sustainability reporting and the way to balance them in the petrochemical companies. In this regard, a descriptive-survey analysis was conducted. A total number of 86 employees in the accounting, economic, HSE, sales, quality and production departments of the petrochemical companies were selected as the research sample size and the questionnaires were distributed among them. The cluster sampling method was adopted and the data required for examining the seven hypotheses of this study were collected. Through using questionnaires, the reliability and validity of the questions were confirmed by Cronbach's alpha coefficient of 0.82 Research hypotheses were analyzed by using Pearson's test and Kolmogorov-Smirnov statistical test. The results showed that there are relationships between different aspects of sustainability reporting and economic satisfaction within petrochemical companies.



1. Introduction

Sustainability reporting (from the company's perspective) is in fact a performance measurement system with a set of non-financial parameters (such as environmental, social and governance metrics) which is used to measure and report the sustainability activities of companies. It also identifies and discloses the current and potential future risks and impacts faced by companies. Today, an action based on the company economic satisfaction of employees is not an attractive and theoretical choice, but it is a necessary condition for the sustainability of that company and certain complex positions that the rival companies are experiencing now, requires them to rely on their productivity and performance in order to be fruitful. Once a company has a clear picture of its vision and goals, it would have a strong basis for improving its management practices and bringing them into alignment with articulated missions and objectives [1]. Economic satisfaction in a company has a great importance in the perception and changes within company. Economic satisfaction lead to recognition of identity of company and they act as a function guide for a successful future. The aim of many companies is to maintain and utilize economic satisfaction in practice and to reveal them within and outside company [2] Meanwhile, many issues and factors affect success, that the most important of them are issues which are related to economic satisfaction and sustainability reporting. Economic satisfaction and sustainability reporting are considered as two important social institutions and the first necessity for the social stability and maintenance and public health is the well-balanced functioning of two institutions . However, in some cases, because of multiple factors and problems, this balance is disturbed in favor of one of these two dimensions and it will affect success. The conflict between economic satisfaction and sustainability reporting is one of the most common sources of stress for the economic satisfaction of employees, especially within the complex and manufacturing companies. In stimulating and profitable society, in which we live, most of employees think that fulfillment of their functions, both at home and work environments, are equally difficult. All studies conducted in this field reveal that solving the conflict between economic satisfaction and sustainability reporting has become one of the main concerns of experts within the management discipline. [3], the conflict between economic satisfaction and sustainability reporting is one of the main obstacles that limit the effectiveness of companies and their ability to learn. Therefore, the present research has been performed with the aim of testing the relationship between economic satisfaction and sustainability reporting and the ways of creating balance between them in the petrochemical companies.

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Basically, economic satisfaction (from employees' perspectives) is in fact the level of positive emotions and attitudes that the personnel have towards their economic situations. When an employee says that he has a high economic satisfaction, this means that he really loves his economic situation and feels good about it and pays too much respect to it. Research results indicate that employees with higher economic satisfaction remain in good condition in terms of physical and mental strength [4]. Due to complex and multifaceted nature of issue of employees' economic satisfaction-companies' sustainability reporting balance, some problems often arise in its understanding and interpretation. As a result of this misconception, most employees see economic satisfaction and sustainability reporting as two completely separate issues and by placing priorities of individual and company against each other, they consider economic satisfaction and sustainability reporting as "Zero-Sum Game", in which one party generally gains at the expense of another party [5]. Sustainability reporting-economic satisfaction conflict is one of the stressful factors that are caused by misunderstanding conflict, because this conflict indicates discrepancies and contradictions between requirements and demands of two different subjects. Two aspects are considered in concept of economic satisfaction-sustainability reporting conflict orientation. The direction in which economic satisfaction related issues interfere with sustainability reporting and the direction in which sustainability reporting issues interfere with the economic satisfaction. Also, in either of two directions of economic satisfaction-sustainability reporting conflict, there are three dimensions: Time-based, Strain-based and Behavior-based. Working for long hours is a sign of reaching to the economic satisfaction. Difference in the long work hours is not only witnessed among various countries, but also individuals, groups and different levels of positions have different work hours in each of those countries. Their reasons and motivations for spending more hours in the company are different. Several studies in the industrialized countries showed that some personnel, including managers and professional employees, work more than fifty hours a week and among the different economic sectors, hotel staffs and workers in agricultural sectors are most affected by working long hours. Also, studies indicate that, long work hours is more common among men [6]. Among the other factors that refers to the economic satisfaction issue, is the problem of taking multiple jobs. Some staffs like to work in more than one company in order to meet the needs of life. Managers also, with motivation of gaining more income or some other motives, work in several places simultaneously.

2. Experimental

2.1. Sustainability Reporting Dimensions

The sustainability reporting goals were presented by the United Nations in 2015. It includes 169 aim and encompasses a vast variety of international problems such as poverty, environment, peace, justice, etc. each dimension of sustainability has its own special characteristics. The below illustration (Figure 1) helps to understand those dimensions and their dependencies.

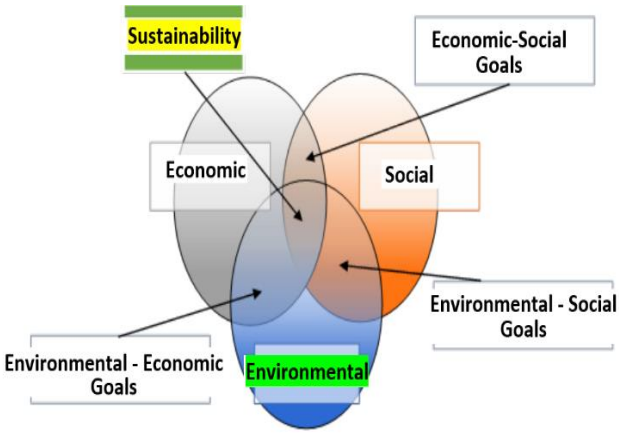


Figure 1. Sustainability dimensions diagram.

In this research dimensions of the sustainability reporting have been identified and categorized within seven main dimensions. They are 1) Environmental, 2) Social, 3) Governance, 4) Ethics, 5) Health, 6) Safety/Risks, and 7) Transparency and Accountability.

2.2. Theoretical Framework and Hypotheses Development

Building on the Figure 1 [7], sustainability reporting is more focused on the external stakeholders. However, internal stakeholders which are specially employees, have their own specific considerations, mainly economic satisfaction. Economic satisfaction, as a new phenomenon of business planning, can be considered as a solution to problems of employees. This approach allows two or more employees to share the responsibilities of 40-hour job in a week (full-time job). Therefore, for example, one of the employees should work from 8 am 12 pm and other must work from 1 pm to 5 pm or each of individuals should work full-time on specified days [8]. In other words, in this method, two or more people voluntarily share a full-time job and share salary, profits, etc. accordingly. Each of these individuals has an independent contract with employer and possesses certain rights and benefits. This type of employment has been proposed as a better option between unemployment and full-time job for women; because, due to the features of the mentioned jobs, women are able to create a better economic satisfaction -sustainability reporting balance [9]. The study of [10], im plies that there is a significant positive relationship between work-sustainability reporting conflict and economic burnout, and among dimensions of economic-sustainability reporting conflict, the strain-based conflict had the greatest impact on economic burnout. It was also discovered that the time-based conflict has no significant relationship with economic burnout among the correctional staff. Carlson et al [11] in a study have measured the positive side of the economic satisfaction–sustainability reporting interface and according to the, work engagement creates positive emotions and improves the level of skills and also the acquisition of knowledge and new skills, and open up new ways to a better life. Kung [12] in a study has considered the issues related to economic situation. Results show that there is a positive relationship between economic satisfaction and sustainability reporting and professional competencies. Economic competencies have a positive contribution to the involvement and economic satisfaction. This study provides insights to human resource managers about how they can maintain qualified employees and increase employees' economic satisfaction within petrochemical companies. The relationships between dimensions of sustainability reporting and economic satisfaction is shown below (Table 1).

Table 1: Dimensions of sustainability reporting and economic satisfaction.

Row	Independent Variable	Dependent Variable
	Sustainability Reporting :	
1	Environmental	
2	Social	Economic Satisfaction
3	Governance	
4	Ethics	
5	Health	
6	Safety/Risks	
7	Transparency and Accountability	

According to the above discussion, the following main hypothesis and sub-hypotheses are propounded

2.3. The main hypothesis of the research

There is relationship between sustainability reporting and economic satisfaction within petrochemical companies.

2.4. Sub-hypotheses

1. There is relationship between Environmental and economic satisfaction.
2. There is relationship between Social and economic satisfaction.
3. There is relationship between Governance and economic satisfaction.
4. There is relationship between Ethics and economic satisfaction.
5. There is relationship between the Health and economic satisfaction.
6. There is relationship between Safety/Risks and economic satisfaction
7. There is relationship between Transparency and Accountability and economic satisfaction.

3. Method

3.1. Methodology

The descriptive-survey method is used for conducting the present study and in terms of objective, it is of applied type and according to time period, it is a cross sectional study.

3.2. Data Collection

The statistical population of the research is consisted of 430 employees in petrochemical companies. Sample of the study involved 86 of employees (obtained by using a Cochran's formula) personnel within accounting, economic, quality, HSE, production and sales departments of the petrochemical companies. The data collection tool was a researcher-made questionnaire. Cronbach's alpha for the economic satisfaction questionnaire was equal to 0.823 and it was 0.769 for sustainability reporting questionnaire. To test the hypotheses, Pearson correlation coefficient was used. Data were inserted, screened and refined using EXCEL software. The above calculations were then performed by SPSS software and the significance level of $p \leq 0.95$ was considered for all tests.

4. Results and Discussion

4.1. Analysing the Main Hypothesis of the Research

It was hypothesized that corporate sustainability reporting is related to the employees' economic satisfaction within petrochemical companies. Results of

Table 2 show that the level of significance between sustainability reporting and economic satisfaction and is equal to 0.001 and it is smaller than 0.05 (margin of error).

Table 2. Correlation coefficient between sustainability reporting and economic satisfaction.

		Sustainability Reporting
Sustainability reporting	Correlation coefficient	0.631
	Significance level	0.001
	Number	86

With regard to the above calculations, the null hypothesis is rejected and the alternative hypothesis is confirmed. In other words, there is a significant relationship between two variables. The correlation coefficient between sustainability reporting and economic satisfaction is 0.631, which represents a positive correlation. As a result, the higher corporate sustainability reporting is, the better employees' economic satisfaction would be.

Table 3. Model adequacy index.

Correlation Coefficient	Coefficient of Determination	Adjusted Coefficient of Determination	The Standard Deviation of Error
0.628	0.449	0.462	0.28

Correlation between independent and dependent variables is equal to 0.628. The coefficient of determination is 0.449, which indicates that 46 percent of changes in sustainability reporting are related to economic satisfaction economic satisfaction. According to the proposed indexes, the model possesses necessary adequacy.

Table 4. F-test.

	Source of Changes	Total Square	Df	Mean Square	F	Significance Level
Sustainability reporting	Regression	26.624	1	26.638	297.283	0.001
	Remaining Amount	30.375	84	0.092		
	total sum	56.983	85			

According to the above table, the calculated significance level for this statistic is 0.00, which indicates that regression is significant at the level of 0.99.

Table 5. Results of the T-test for the relationship between sustainability reporting and economic satisfaction.

	Model	Non-standardized Coefficients	Standardized Coefficients	t	Significance Level
	B	Standard deviation	Beta		
Constant	0.965	0.180		5.323	0.001
Sustainability reporting	0.842	0.044	0.631	17.244	0.001

According to the above table, the calculated significance level for this statistic is 0.00, which indicates that regression is significant at the level of 0.99.

4.2. Analyzing the Sub-hypothesis 1

Table 6. Correlation coefficient between environmental and economic satisfaction.

		Sustainability Reporting
Environmental	Correlation coefficient	0.378
	Significance level	0.001
	Number	86

Results of Table 6 show that the level of significance between environmental and economic satisfaction is equal to 0.001 and it is smaller than 0.05 (margin of error). Therefore, the null hypothesis is rejected and the alternative hypothesis is confirmed. So there is a significant relationship between two variables. The correlation coefficient between environmental and economic satisfaction is 0.378, which represents a positive correlation. As a result, the greater environmental is, the better economic satisfaction.

Table7. Results of T-test for the relationship between environmental and economic satisfaction

	Model	Non-standardized Coefficients	Standardized Coefficients	t	Significance Level
	B	Standard Deviation	Beta		
Constant	2.609	0.195		13.403	0.001
Environmental	0.338	0.046	0.387	7.358	0.001

In lieu of any change in a environmental unit, 0.387 units of change occurs in economic satisfaction (R = 0.387). Of course this is true when we assume that all other variables are constant. T-test related to regression coefficients for independent variable is also shown in the above table, that value for this variable is equal to 0.001; thus, the economic satisfaction is effective on economic satisfaction.

4.3. Analyzing the Sub-hypothesis 2

Table 8. Correlation coefficient between social and economic satisfaction.

		Sustainability Reporting
Social	Correlation coefficient	0.519
	Significance level	0.001
	Number	86

Results of Table 8 indicate that the level of significance between social and economic satisfaction is equal to 0.001 and it is smaller than 0.05 (margin of error). Therefore, the null hypothesis is rejected and the alternative hypothesis is confirmed. So there is a significant relationship between two variables. The correlation coefficient between social and economic satisfaction is equal to 0.519, which represents a positive correlation and thus, with higher levels of corporate social responsibility, the state of employees' economic satisfaction would be much better**.**

Table 9. Results of T-test for the relationship between social and economic satisfaction

	Model	Non-standardized Coefficients	Standardized Coefficients	t	Significance LEvel
	B	Standard deviation	Beta		
Constant	2.326	0.158		14.668	0.001
Social	0.435	0.039	0.517	11.000	0.001

In lieu of change in a social unit, 0.517 units of change occurs in economic satisfaction (R = 0.517), of course this is true when we assume that all other variables are constant. T-test related to regression coefficients for the independent variable is also shown in this table, that the value for this variable is equal to 0.001; thus, the social affects economic satisfaction in an effective way.

4.3. Analyzing the Sub-hypothesis 3

Table 10. Correlation coefficient between governance and economic satisfaction.

		Sustainability Reporting
Governance	Correlation coefficient	0.437
	Significance level	0.001
	Number	86

Results of Table 10 suggest that the significance level between the governance and economic satisfaction is equal to 0.001 and it is smaller than 0.05 (margin of error), therefore, the null hypothesis is rejected and the alternative hypothesis is confirmed. So there is a significant relationship between two variables. The correlation coefficient between governance and economic satisfaction is equal to 0.437, which represents a positive correlation and thus, whatever the governance is greater, the state of economic satisfaction would be better.

Table 11. Results of T-test for the relationship between governance and economic satisfaction.

	Model	Non-standardized Coefficients	Standardized Coefficients	t	Significance Level
	B	Standard Deviation	Beta		
Constant	2.858	0.132		21.619	0.001
Governance	0.302	0.033	0.437	9.040	0.001

In lieu of any change in a unit of governance, 0.437 units of change occurs in economic satisfaction (R = 0.438), of course this is true when we assume that all other variables are constant. T-test related to regression coefficients for the independent variable is also shown in this table, that the value for this variable is equal to 0.001; thus, the governance affects economic satisfaction in an effective way.

4.4. Analyzing the Sub-hypothesis 4

Table 12. Correlation coefficient between ethics and economic satisfaction.

		Sustainability Reporting
Ethics	Correlation coefficient	0.374
	Significance level	0.001
	Number	86

Results of Table 12 show that the significance level between ethics and economic satisfaction is equal to 0.001 and it is smaller than α= 0.05, therefore, the null hypothesis is rejected and the alternative hypothesis is confirmed, so there is a significant relationship between two variables. The correlation coefficient between ethics and economic satisfaction is equal to 0.374, which represents a positive correlation and so, the higher ethics is the better economic satisfaction would be.

Table 13. Results of T-test for the relationship between ethics and economic satisfaction

	Model	Non-standardized Coefficients	Standardized Coefficients	t	Significance Level
	B	Standard Deviation	Beta		
Ethics	2.975	0.145		21.619	0.001
	0.266	0.036	0.374	9.040	0.001

In lieu of any change in a unit of ethics, 0.374 units of change occurs in economic satisfaction (R = 0.374), of course this is true when we assume that all other variables are constant. T-test related to regression coefficients for the independent variable is also shown in this table, that the value for this variable is equal to 0.001; thus, the ethics is effective on economic satisfaction.

4.5. Analyzing the Sub-hypothesis 5

Table 14. Correlation coefficient between health and economic satisfaction.

		Sustainability Reporting
Health	Correlation coefficient	0.54
	Significance level	0.001
	Number	86

Results of Table 14 indicate that the significance level between health and economic satisfaction is equal to 0.001 and it is smaller than 0.05 (margin of error), therefore, the null hypothesis is rejected and the alternative hypothesis is confirmed, so there is a significant relationship between two variables. The correlation coefficient between health and economic satisfaction is equal to 0.540, which represents a positive correlation and thus, more health would result in better economic satisfaction.

Table 15. Results of T-test for the relationship between health and economic satisfaction.

Model	Non-standardized Coefficients	Standardized Coefficients	t	Significance Level
	B	Standard Deviation	Beta	
Constant	2.467	0.134		18.360	0.001
Health	0.391	0.033	0.540	11.815	0.001

In lieu of any change in a unit of health, 0.540 units of change occurs in economic satisfaction (R = 0.540), of course this is true when we assume that all other variables are constant. T-test related to regression coefficients for independent variable is also shown in this table, that the value for this variable is equal to 0.001; thus, the health is effective on economic satisfaction.

4.6. Analyzing the Sub-hypothesis 6

Table 16. Correlation coefficient between safety/risks and economic satisfaction.

		Sustainability Reporting
Safety/Risks	Correlation coefficient	0.559
	Significance level	0.001
	Number	86

Results of Table 16 show that the significance level between the safety/risks and economic satisfaction is equal to 0.001 and it is smaller than 0.05(margin of error), therefore, the null hypothesis is rejected and the alternative hypothesis is confirmed, so there is a significant relationship between two variables. The correlation coefficient between safety/risks and economic satisfaction is equal to 0.559, which represents a positive and very strong correlation and thus, with higher levels of safety/risks, the state of economic satisfaction would be much better.

Table 17. Results of T-test for the relationship between safety/risks and economic satisfaction.

Model	Non-standardized Coefficients	Standardized Coefficients	t	Significance Level
	B	Standard Deviation	Beta	
Constant	2.442	0.130		18.795	0.001
Safety/Risks	0.397	0.032	0.559	12.416	0.001

In lieu of any change in a safety/risks unit, 0.559 units of change occurs in economic satisfaction (R = 0.559), of course this is true when we assume that all other variables are constant. T-test related to the regression coefficients for independent variable is also shown in this table, that the value for this variable is equal to 0.001; therefore, the safety/risks is effective on economic satisfaction.

4.7. Analyzing the Sub-hypothesis 7

Table 18. Correlation coefficient between transparency and accountability and economic satisfaction.

		Sustainability Reporting
Transparency and Accountability	Correlation coefficient	0.513
	Significance level	0.001
	Number	86

Results of Table 18 indicate that the significance level between transparency and accountability and economic satisfaction is equal to 0.001, which is smaller than 0.05 (margin of error), therefore, the null hypothesis is rejected and the alternative hypothesis is confirmed, so there is a significant relationship between two variables. The correlation coefficient between transparency and accountability and economic satisfaction is equal to 0.513, which represents a positive and very strong correlation and thus, the greater transparency and accountability results in better economic satisfaction.

Table 19. Results of T-test for the relationship between transparency and accountability and economic satisfaction.

Model	Non-standardized Coefficients	Standardized Coefficients	t	Significance Level
	B	Standard Deviation	Beta	
Constant	2.118	0.175		12.074	0.001
Transparency/ Accountability	0.469	0.043	0.513	11.011	0.001

In lieu of any change in a unit of transparency and accountability, 0.513 units of change occurs in economic satisfaction (R = 0.559), of course this is true when we assume that all other variables are constant. T-test related to the regression coefficients for independent variable is also shown in this table, that the value for this variable is equal to 0.001. Therefore, transparency and accountability have effective impact on economic satisfaction.

5. Conclusions

It was proved that there is positive relationship between sustainability reporting and economic satisfaction among petrochemical companies. It was also unveiled that all dimensions of companies' sustainability reporting are related to employees' economic satisfaction. The results are consistent with the findings of Kung [12], Babaian et al. [13], Rezaian et al. [14], Lambert et al. [10], Arshadi and Shokrkon, Beauchamp et al., Baghayi Sarabi, Kalali and Doostdar [15], and Simon et al.These findings can be described in this way that favorable conditions and facilities along with sustainability reporting will lead to the better economic satisfaction. It is suggested to managing directors of the companies to address their employees' satisfaction as well as their external sustainability reporting. This study contributes to the body of knowledge by investigating an untouched phenomena of sustainability reporting and economic satisfaction in the petrochemical industry.

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