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Research Article

## Adding a Contribution to Natural and Environmental Approach by Corporate Social Responsibility for the Turkish Defense Industry: A Corporate Framework for Wildlife Conservation in Biodiversity Hotspots of Turkey

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### Abstract

It is important to prioritize natural and environmental issues in a balanced way with economic and social issues, when addressing the development progress of Turkish Defense Industry, which has a high potential in the economy, with a socially inclusive and environmentally sustainable approach. Some approaches for the responsibilities of a firm concerning society have typically excluded defense companies from their research, mainly on ideological grounds. On the contrary, the managers of defense companies have concerns that their companies imply to operate in socially responsible ways. Additionally, it is well known fact that wildlife and biodiversity are under direct and indirect impact of such human activities. Current knowledge on biodiversity points out the requirement of further efforts and resources to increase the understanding and, thus, develop more effective conservation strategies. A framework for integration of Corporate Social Responsibility (CSR) and wildlife conservation could be beneficial to increase the effort on this purpose, especially for less studied regions. This research aims to outline characteristics and perceptions of managers as decision makers of CSR activities in Turkish Defense Industry and propose a framework for integration between wildlife conservation and CSR of the Turkish Defense Industry. Results

highlighted that demographic characteristics and company structure does not impact the CSR view of managers as considerably as expected. Additionally, managers of defense industries, especially mid-level corporations are aware of CSR, but their knowledge is insufficient for planning. A framework for CSR activities for wildlife conservation was designed by including corporations, non-governmental organization and universities, as stakeholders. This framework can provide structure to take their interest to increase the understanding by continuous monitoring of wildlife and implementing more effective conservation strategies for the biogenic components of nature.

**Keywords:** Business management, orientation, perception, conservation management, integration

## Introduction

The concept of Corporate Social Responsibility (CSR) has been developed since last 70 years. Bowen (2013) supported the involvement of businessmen in social responsibility activities that are consistent with the values and objectives of the society in 1953. Nowadays, CSR has become one of the main concerns in the business world. Increasing the role of enterprises in the society (Challis & Challis, 2014) and gaining competitive advantage (Bali & Cinel, 2011) are the reasons for this progress. Globalization, technological development, educated labor force, democracy and rivalry leads to the reshaping of relations between business and society (Kramer et al., 2006). Therefore, CSR is one of the most emphasized concern in the business world in recent years. It is not proper approach to summarize that CSR is a means of appearing good to the society with a short-term approach from a few months to a couple of years. Being long-term and gaining legitimacy is a necessity for the companies. The most known advantage of CSR is that it increases the sustainability and importance of the social performance as well as the sustainability of the economic performance. Thus, CSR emphasizes the economic, legal, ethical and discretionary (philanthropic) responsibilities of enterprises towards society and to its stakeholders (Carroll, 1979). In other words, social responsibility is seen as an obligation of a company to make an effort to protect and increase the social welfare of the society as well as its own interests. (Bartol & Martin, 1997).

Byrne (2007) claims that defense industry companies (hereafter; defense company) who manufacture and sell weapon systems cannot be considered socially responsible because of the nature of the industry. Similarly, Baker (2005) defines CSR as “give something back to society”, therefore indicated the growing attention on defense companies’ products being irresponsible because of their negative effects on people. So, it is important in terms of evaluation of CSR to take into account how a company generates revenue, and where this revenue comes from (Baker, 2005). On the other hand, Halpern and Snider (2012) clearly pointed out the role of CSR in defense industry. However, it is still under ethical discussion (Hurst, 2004; Halpern & Snider, 2012) whether defense companies have CSR.

Managers’ CSR orientation (CSRO) is an academic term that describes the importance given by a manager to domains of CSR defined according to the Carroll (1979) model. As a company leader, the manager is a corporate leader that plays an important role in a company's resource allocation and strategic decision making. The manager is responsible for coordinating the company in a profitably (Halpern, 2008). Due to this significant role, it is also necessary to determine the demographic factors and company structures which impact the managers’ view towards CSR. Thus,

the CSR orientations of these managers should be assessed to determine the extent to which they differ from commercial company managers of other industries and whether such exclusions from CSR studies in the literature are valid.

Increased human activity as well as natural causes increases the importance of taking action for conservation of wildlife and biodiversity. Even though extinction of species is a natural phenomenon, rapid trend in loss were seen after humans dominated ecosystem (Johnson et al., 2019). It should be also noted that there is wide spectrum of reasons for the decrease in biodiversity and wildlife such as habitat destruction, over exploitation of source, invasive introductions, etc. After all, conservation actions to protect or restore the biologic components became a serious need to reduce the impacts of human activities. Conservation of biodiversity and wildlife has various steps from filling data gaps to developing management strategies as well as focusing to single species to a community in a habitat or ecosystem (Bengil, 2019). Nowadays, conservation is an important concern for countries and there are many international organizations (e.g. International Union for Conservation of Nature and Natural Resources (IUCN)) and agreements (e.g. Convention on Biological Diversity, Bern Convention) regarding it. On the other hand, a conservation action requires long-term effort to see recovery or for continuation of success. As many conservation scientists face, financial and scientific supports are main challenges for application of new ideas or continuation of long-term studies to obtain successful results. Even though there are studies aiming conservation of species in Turkey (e.g., Unal & Kizilkaya, 2019; Bengil, 2020; Mavruk, 2020), efforts remain to limited time period or limited coverage of biological components since limited availability of budget and specialist.

As pointed out by Udoto (2012), CSR is shown as one of the critical platforms for engagement of stakeholders. Additionally, its importance has intensified with globalization, activism and technological developments. Therefore, application of CSR can be observed in various topics from education to protection of the environment. Concept of CSR came into prominence for conservation of biodiversity and wildlife since it provided a unique source of opportunity for sustainable monitoring and research actions. There are some previous studies pointing out its advantages on cost-benefit for conservation of biodiversity and wildlife in Africa (Udoto, 2012 and references therein). Additionally, successful examples can be seen all over the world (Ghosh & Mathur, 2020 and references therein; Baroth & Mathur, 2019). Some successful applications are also available on other industries such as oil industry (CSR Wire, 2000). Progress, challenges and advantages of CSR on conservation has been discussed and provided some suggestions for future applications such collaborations in biodiversity conservation and scaling up strategies (Pandey, 2020; Ghosh & Mathur, 2020). However, to the best of our knowledge, there is no application or an attempt provide baseline on CSR strategy for Turkish defense industry, especially for conservation of biodiversity and wildlife.

In this study, it is aimed to provide scientific baseline for the development of CSR strategy in Turkish defense industry. As initial step of practical approach to develop strategy, the scope of the research was framed to determine the managerial orientation due to extensive and comprehensiveness of the subject. To reach this aim, characteristics of managers and their companies and their perception on CSR were gathered and analyzed. Specifically, their tendency towards conservation of biodiversity and wildlife and various other topics were also evaluated. As a final step, a CSR framework for defense industry in Turkey was proposed based on described

characteristics and perceptions on conservation of biodiversity and wildlife.

### Material and methods

Quantitative research method was used, by the application of questionnaire (see Supplementary File), in order to achieve the research objectives, and to maximize the validity of results. Although there are over 1000 companies in the defense sector in Turkey, 156 companies can be classified as main contractors based on the final product (Presidency of Defense Industries, 2019). Therefore, a sample group was determined as at least 100 attendances (managers) from defense industry companies by using combination of purposive and convenience sampling method. Surveys were to the sample group in digital form as an attachment of e-mail and for some cases as a printout.

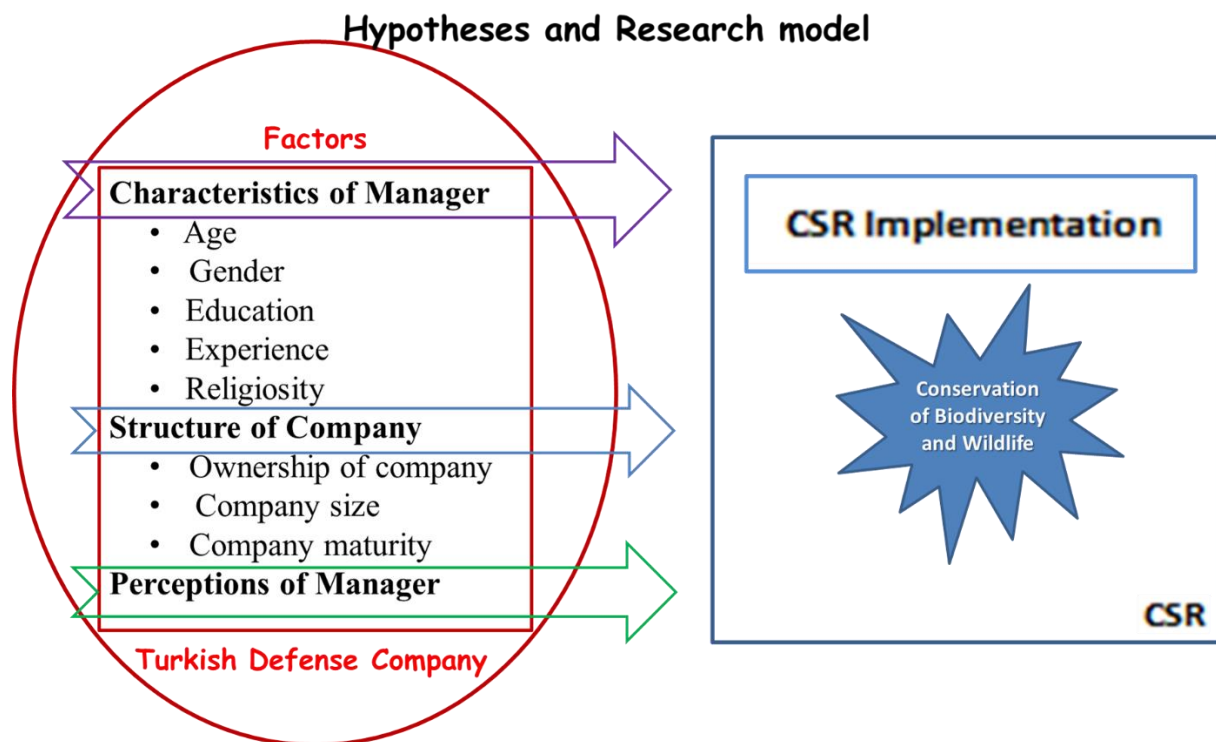
Previous studies indicated that application of questionnaire as survey has provided evidence that Managers' CSR implementation preferences are attributable to a variety of factors, such as characteristics of the manager (inherited and learned), structure of the company and perception of the managers (Aupperle et al., 1985; Ibrahim et al., 1994; Smith & Blackburn, 1988; Bhambri & Sonnenfeld, 1988 as cited in Halpern et al., 2012). Therefore, the opinions of the managers were collected by including questions grouped under specific factors. Additionally, a section was to understand CSR tendency towards conservation of biodiversity and wildlife. The factors addressed three main focus in order to provide understanding on the properties and preferences of the managers for CSR implementations, especially for conservation biodiversity and wildlife. These focusses were aiming (1) to identify the demographic factors, (2) to understand the company' structure (in defense industry) factors, and (3) to clarify the perceptions of the Turkish defense company managers that affect the CSR tendency of the Turkish defense company manager. Research design and factors used for the analysis were presented in the Figure 1.

In order to understand managers' preferences within the CSR implementation context, an additional questionnaire section was added into the survey and activities regarding environmental and natural protection in Turkish defense companies. Thus, current implementations in the industry were asked, and activity preferences of managers were also questioned. Tendencies towards protecting of nature and environment was pointed out to evaluate its contribution as the main category.

Within the scope of the analysis design, an adaptable scale was developed in the preliminary phase that enabled work in this field. The 14-five-point Likert item pool created for the manager's view by the literature review was organized and a trial scale was created. Exploratory factor and confirmatory factor analysis were conducted with this item set that was created based on the results of criticisms made only by interviewing defense industry managers. At the end of the factor analysis, the scale was formed to its final version as six items. The Statistical Package for Social Sciences SPSS v24.0 program was used for analyzing the data and creating the structures of the scale by means of the exploratory factor analysis. To validate the factor structure, confirmatory factor analysis with AMOS v26 was used. "View of manager towards CSR" were assessed using these emerging dimensions arising out of the factor analysis of the Likert type and six items were described. Next phase was to conduct the analyze on the CSR perception of the manager, means and standard deviations of the participant' scores were calculated and compared. Finally in the CSR implementation context, the present company applications/activities and preferences of the managers regarding a total of 15 CSR activities within the framework of five main areas were

determined and interrogated. The survey which consists of open, closed-ended and five-point Likert items were analyzed statistically. As statistical methods, descriptive analysis techniques, Kruskal-Wallis H test and Mann-Whitney U test (used to compare the mean of two groups), which are nonparametric test methods were used in the study.

Framework structure for conservation of biodiversity and wildlife was developed after obtaining the results of analysis, since characteristics of the managers and structural differences among companies which might affect significantly the determining steps and stakeholders. Additionally, understanding the perception of the managers and their tendency towards conservation of biodiversity and wildlife is an important input for determining complexity of the framework structure as well as number of stakeholders. To contribute to conservation of biodiversity and wildlife, three main goals were identified with the frame: (i) filling the data gaps, (ii) developing conservation strategies, and (iii) developing management plan.



**Figure.1** Research design and factors used for analysis. Results of analysis were also used to develop framework for conservation of biodiversity and wildlife.

## Results

A total of 100 participants were attended to the survey as managers of Turkish defense industry by digital form (n=80), e-mail (n=12) and printout form (n=8) from minimum 34 different companies. Other participants (n=36) did not prefer to indicate name of their companies. Seven of the participant's responses were removed, since they were outlier from the confirmatory factor analysis.

## Factor Analysis

It was found that lowest factor loading value was 0.60, for exploratory factor analysis which is defined as at least 0.4 by Nunnally (1978). Only the factors with eigenvalues greater than “1” were used in the analysis (Can, 2018). Bartlett test of Sphericity was found to be ( $\chi^2= 412.7$ ,  $p<0.00$ ). The Kaiser-Meyer-Olkin (KMO) value was found to be 0.6. Factor analysis produced two factors that explained the 70.6% of total variance: “Managers’ view of CSR Benefits” and “Managers’ view of CSR Existence”, respectively. The internal consistency of the two factors (Coefficient Cronbach’s alpha) was estimated as 0.8 and 0.6 for both factors, respectively. Since alpha is above value of 0.5, reliability was considered acceptable (Helmstadter, 1964). Criteria values on the confirmatory factor analysis are shown in Table 1. According to assumption proposed by previous studies (Avşar, 2007; Hair, 2005; Byrne, 2001; Jöreskog & Sörbom, 1993), results of the confirmatory factor analysis provide that the two-factor structure is valid and fits the data well.

**Table 1.** Confirmatory Factor Analysis Results. Abbreviation presented below Table.

| <b>CFA Validity Results</b>  | <b>RMSEA</b> | <b>RMR</b>  | <b>CMIN</b> | <b>DF</b>   | <b>CMIN/DF</b> |             |             |
|------------------------------|--------------|-------------|-------------|-------------|----------------|-------------|-------------|
|                              | 0.07         | 0.03        | 11.50       | 8.00        | 1.44           |             |             |
| (Hair, 2005; Byrne, 2001)    | $\leq 0.08$  | $\leq 0.05$ | -           | -           | $< 2; < 5$     |             |             |
| <b>CFA Fit Index Results</b> | <b>CFI</b>   | <b>AGFI</b> | <b>NFI</b>  | <b>GFI</b>  | <b>RFI</b>     | <b>IFI</b>  | <b>TLI</b>  |
|                              | 0.96         | 0.91        | 0.97        | 0.96        | 0.95           | 0.99        | 0.98        |
| (Jöreskog & Sörbom, 1993)    | $\geq 0.90$  | $\geq 0.80$ | $\geq 0.90$ | $\geq 0.90$ | $\geq 0.90$    | $\geq 0.90$ | $\geq 0.90$ |

RMSEA: Root Mean Square Error of Approximation; RMR: Root Mean square Residual; CMIN: Minimum value of the discrepancy; DF: Degrees of Freedom; CFI: Comparative Fit Index; AGFI: Adjusted Goodness of Fit Index; NFI: Normed Fit Index; GFI: Goodness of Fit Index; RFI: Relative Fit Index; IFI: Incremental Fit Index; TLI: The Tucker-Lewis coefficient.

**Table 2.** Demographic Characteristics of the Participants

| <b>Participants Age</b>             | <b>Frequency</b> | <b>%</b> | <b>Participants Experience (years)</b> | <b>Frequency</b> | <b>%</b> |
|-------------------------------------|------------------|----------|----------------------------------------|------------------|----------|
| 18 – 25                             | 2                | 2.2      | 1 – 5                                  | 15               | 16.1     |
| 26 – 35                             | 9                | 9.7      | 5 – 10                                 | 20               | 21.5     |
| 36 – 45                             | 19               | 20.4     | 10 – 15                                | 8                | 8.6      |
| 46 – 55                             | 50               | 53.8     | 15 – 20                                | 9                | 9.7      |
| 56 – 65                             | 11               | 11.8     | 20 +                                   | 41               | 44.1     |
| >66                                 | 2                | 2.2      |                                        |                  |          |
| <b>Participants Education Level</b> | <b>Frequency</b> | <b>%</b> | <b>Participants Religious</b>          | <b>Frequency</b> | <b>%</b> |
| Associate degree                    | 6                | 6.5      | Islamism                               | 79               | 84.9     |
| Bachelor's degree                   | 21               | 22.6     | Deism                                  | 6                | 6.5      |
| Master's degree                     | 58               | 62.4     | Don't want to indicate                 | 8                | 8.6      |
| Doctoral degree                     | 7                | 7.5      |                                        |                  |          |
| Prof. Dr.                           | 1                | 1.1      |                                        |                  |          |

## Demographic Characteristics

Descriptive analysis on demographic characteristics of the participants showed that there are 53.8% of the respondents in the 46-55 age group, and 78.5% of the respondent managers are male. Additionally, 44.1% of the respondents have 20 years or more work experience, and %84.9 of the respondents is Islamic. There was dominance of master’s degree as education level among managers of the defense industry. Results of descriptive analysis are presented in Table 2.

Analysis result on age indicated that there is only significant difference between the age of 36-45 and managers' view of CSR benefit ( $p < 0.05$ , Chi-Square). Regarding gender, there are significant differences in both at view of CSR existence and benefit for the female group ( $p < 0.05$ , Mann-Whitney U). Analysis on education level showed that there is a significant difference between existence of social responsibility for master's degree and CSR benefits for bachelor's degree ( $p < 0.05$ , Chi-Square). No significant differences were found for work experience and religion in terms of social responsibility point of view.

### Company Structures

Majority of participants (64.5%) were manager for a company from the private sector. It was seen that companies operating in the aerospace sector had a higher participation with 35.2%, while the lowest participation was in energy system with 1.1%. The rate of size of the company ranged from 33.3 (number of employees is more than 1000) to 4.3% (number of employees is between 51-100). It is found to be that 58.1% of participant works in a company with an experience more than 20 years. Descriptive statistics on company structures are given in Table 3.

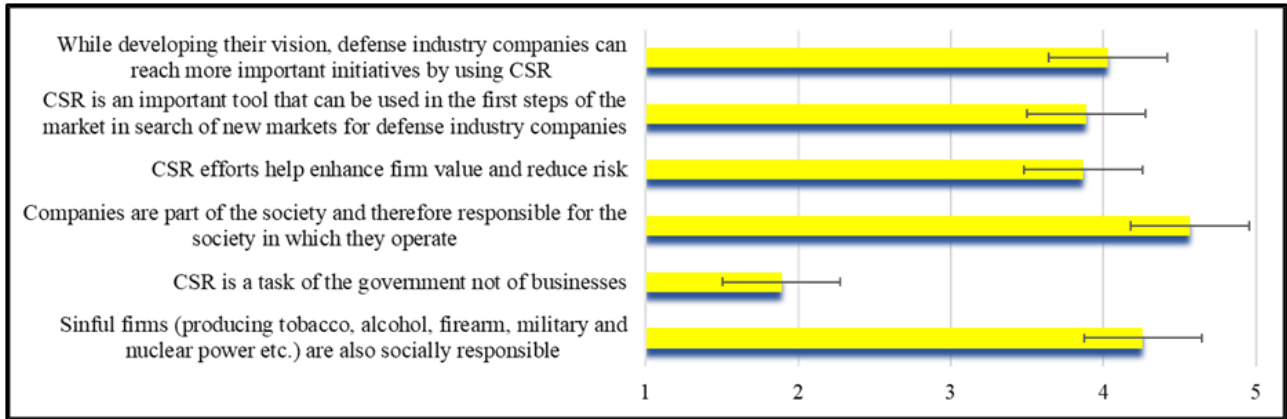
Results from comparison clearly pointed out that there are no significant differences between factors of company structures and managers' view of CSR existence as well as managers' view of CSR benefits.

**Table 3.** Company Structures Participating in the Survey

| Category                                         | Frequency | %    | Category                                          | Frequency | %    |
|--------------------------------------------------|-----------|------|---------------------------------------------------|-----------|------|
| <b>Company Maturity</b>                          |           |      | <b>Company Activity Industry</b>                  |           |      |
|                                                  |           |      | Aerospace Industries                              | 29        | 31.2 |
| 1 – 5 years                                      | 18        | 19.4 | Arms and Ammunition Industry                      | 7         | 7.5  |
| 5 – 10 years                                     | 5         | 5.4  | Military Shipbuilding Industry                    | 20        | 21.5 |
| 10 – 15 years                                    | 9         | 9.7  | Military Automotive and Armoured Vehicle Industry | 6         | 6.5  |
| 15 – 20 years                                    | 7         | 7.5  | Rocket and Missile Industry                       | 3         | 3.2  |
| 20 + years                                       | 54        | 58.1 | Electronics Industry                              | 13        | 14.0 |
| <b>Size of Company<br/>(number of employees)</b> |           |      | Military Apparel Industry                         | 3         | 3.2  |
|                                                  |           |      | Health systems                                    | 8         | 8.6  |
| 1 – 50                                           | 20        | 21.5 | Energy Systems                                    | 1         | 1.1  |
| 51 – 100                                         | 4         | 4.3  | Training and consultancy                          | 3         | 3.2  |
| 101 – 500                                        | 21        | 22.6 | <b>Company Ownership</b>                          |           |      |
| 501 – 1000                                       | 17        | 18.3 | Public/Government company                         | 33        | 35.5 |
| Over 1000                                        | 31        | 33.3 | Private sector company                            | 60        | 64.5 |

### CSR Perception

Majority of the defense company managers (91.3%) strongly believes (mean score 4.6) that their companies have responsibilities towards the society. A high percentage (78.4%) of the managers disagree (mean score 1.9) that CSR is a task of the government. 76.4% of the Managers agree (mean score 4.0) that planning and implementation of CSR activities in the strategic management process provide new vision. Moreover, 64.5% of managers nearly agree (mean score 3.9) that company value and risk-taking ability can be increased by implementing CSR. The means and standard deviations of the six questions regarding managers' perceptions of CSR are given in Figure 2.

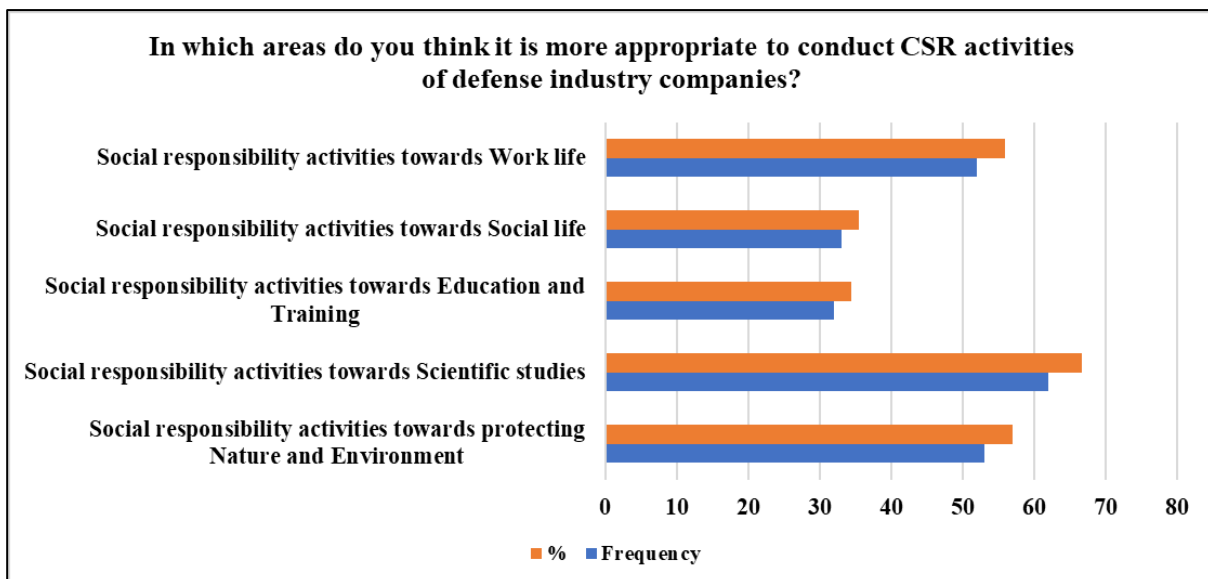


**Figure 2.** Mean Scores and Standard Deviations of Managers CSR Perception. Black bar shows standard deviation.

The participants of 66.7% (62) stated that they are familiar with the concept of CSR and 33.3% (31) stated that they were not familiar with the concept. Out of the 62 managers that are familiar with CSR only 14 gave a definition. It is therefore possible that not all managers are confident enough about their knowledge of CSR to give their definition. It can also be that the question is not answered because it is an open question. Out of the 31 managers, five gave an answer that shows no knowledge or a misunderstanding of CSR. In conclusion, it can be said that the percentage of CSR familiar managers is in reality lower. Whether the managers that give a definition really have a correct understanding of the concept of CSR is also debatable.

### CSR Implementation Preferences

Managers preferences within the CSR implementation context in main CSR area preference is towards scientific studies with the highest percentage (66.7%). Second the most preference area is regarding to the environmental and natural protection (Figure 3). Additionally, second and fourth preference towards CSR activity/application fields are nature and environment protection activities and protection of animal rights (14.4% and 13.7%) (Table 4).





**Figure 3.** Managers preferences towards CSR**Table 4.** Managers preferences towards CSR activity/application field

| <b>Which of the following CSR activity/application fields are more beneficial in the CSR implementation in Turkey and which one/s do you think they deserve to be appropriate?</b> | <b>Responses</b> |             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------|
|                                                                                                                                                                                    | <b>N</b>         | <b>%</b>    |
| Supporting scientific fairs, shows and competitions                                                                                                                                | 67               | 15.3        |
| Protecting Nature and Environment (Implement)                                                                                                                                      | 63               | 14.4        |
| Supporting scientific studies / R&D                                                                                                                                                | 61               | 14.0        |
| Protecting the Animal rights (sea and terrestrial)                                                                                                                                 | 60               | 13.7        |
| Supporting Education programs (organizing & participating)                                                                                                                         | 41               | 9.4         |
| Health (Supporting & Implement)                                                                                                                                                    | 34               | 7.8         |
| Work Ethics                                                                                                                                                                        | 23               | 5.3         |
| Contribution to Work of Life                                                                                                                                                       | 18               | 4.1         |
| Human rights                                                                                                                                                                       | 18               | 4.1         |
| Sports activities (organizing & participating)                                                                                                                                     | 17               | 3.9         |
| Protecting Nature and Environment (Supporting)                                                                                                                                     | 16               | 3.7         |
| Supporting Training activities (organizing & participating)                                                                                                                        | 12               | 2.7         |
| Historical Protection programs                                                                                                                                                     | 4                | 0.9         |
| Charitable and/ or philanthropic actions                                                                                                                                           | 3                | 0.7         |
| <b>Total</b>                                                                                                                                                                       | <b>437</b>       | <b>100%</b> |

## Framework

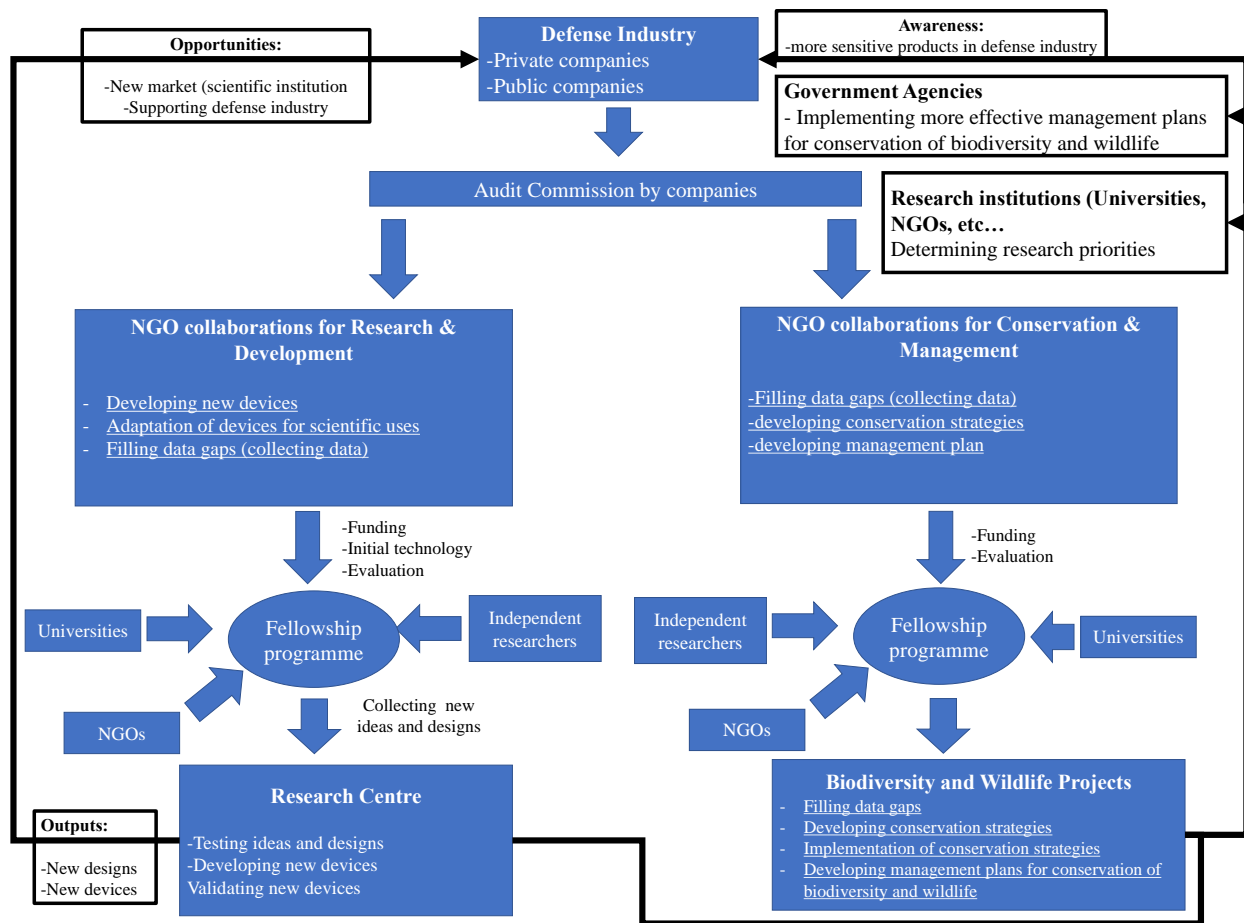
Results from analysis for various factors under characteristics, perception of the manager and company structure did not indicate any distinctive difference for CSR of defense industry in Turkey, especially for private and public/government companies. Therefore, activity flow of framework was designed homogeneously for all companies. Since perception of the manager indicates searching of new markets and feel responsible for their society, two main activity flows, scientific and conservation of biodiversity and wildlife, were identified within the frame. These two flows are related with the main goals of the framework. While flow on conservation of biodiversity and wildlife designed for meeting three main goals, scientific flow aims to fill data gaps for biodiversity. In addition to this, scientific flow aims to produce scientific devices by adaptation of technology developed by defense industry. Therefore, national, cheaper and abundant devices for conservation-based studies might be available as well as a new market can be created for defense industry while providing an opportunity for increased scientific experiences.

Turkish defense companies were integrated into framework as financial and technology contributors via CSR activities, while NGOs (non-governmental organization) were integrated as organizers of scientific and conservation activities. NGOs are the main organizations in Turkey for Nature Conservation studies. Their transparent and non-profit structure provides advantages for organizing activities and managing budget. NGOs also have an advantage to reach various stakeholders from independent researchers of special expertise to government agencies for dissemination. Beneficiary stakeholders are defined as Turkish defense companies, government agencies and research institutions in this framework. Universities, NGOs and independent researchers were chosen to represent contractor stakeholders (Third Party Stakeholders). Framework on conservation biodiversity and wildlife through CSR activity of Turkish defense industry is presented in Figure 4.

## Discussion

The pioneering and creativity aspect of the defense industry in technology development and application has always emerged as an indisputable case in the world, when ethical debates are left aside on the social responsibilities of the defense industry. Therefore, it is undeniable to consider the contributions of defense industry efforts and designs, which are the driving force of research and development, to social and natural life within the scope of CSR. Under consideration that defense industry has grown over the ages, it will be the most pragmatist approach to develop a parallel strategy along with these ethical debates and to maximize CSR awareness of defense industry managers, to increase their willingness, motivation presented in this study, and to contribute to the nature and wildlife. On the other hand, such integration through CSR can be an advantageous to provide awareness on considering environment, biodiversity and wildlife while planning activity and developing technology in defense industry. Thus, their activities can be less harmful, in a way, for the balance of the natural.

Becan (2011) highlighted that business have several tasks concerning conservation and sustainability of nature. Importance of precautionary approach to ecosystem dynamics against problems before facing them has also been pointed out (Pelit et al., 2009). As reported by Nalbant (2005), integrating technologies can be considered important tool that can protect the ecological environment with its used or newly designed products/technologies in the context of social responsibilities. Parallel to this, a framework for scientific technology and conservation of biodiversity and wildlife were designed and proposed for CSR activities of Turkish defense industry. Even though some aims such as adoption of measures for the reduction of environmental impact, preventing and mitigating environmental contamination were mentioned to define roles of armed forces for the conservation of environmental condition (Ruíz, 2005), up to the best of our knowledge, this study is the first to provide a baseline for CSR characteristics, and then design a scientific technology and conservation framework for the Turkish defense industry. In parallel, result of this study is also support that Turkish managers in defense industry strongly believe the existence of CSR. On the other hand, protection activities towards nature, environment and animal rights are second the most CSR implementation way of preferences for them.



**Figure 4.** Framework on conservation biodiversity and wildlife through CSR activity of Turkish defense

Although the level of awareness, knowledge and interests of managers are open to research, results of this study showed apparently that the managers have positive perception and approach of managers to CSR and within the CSR context implementations such as conservation of wildlife, and environmental protection. However, the results (62 managers stated that they are familiar with CSR but only 14 of them can define the CSR properly) also highlighted clearly that they lack of knowledge on CSR principles and applications. Therefore, a serious of educational and awareness activities should be organized to increase the knowledge of the managers on CSR. Thus, CSR activities can be made in wide spectrum from scientific technology to wildlife rather than a few popular areas.

Studies argue that there is no relationship between philanthropic activities and the profitability of the organization (eg. Abbot & Monsen, 1979; Aupperle et al., 1985). On the other hand, there are studies also showing that there is a positive relationship between voluntary responsibilities/philanthropic activities and profitability (eg. Macchiette & Roy, 1994; Waddock & Graves, 1997). Many countries have transformed the social responsibility implementations of organizations into a legal and corporate process as an obligatory. On the contrary, CSR are voluntarily applied activities for the reputation of the organizations based on the application at the level of corporate communication projects in Turkey (Boran, 2011). It is understood that profitability and business reputation are the dominant factors in real life in Turkey, as well as

influence of many factors to determine the manager's CSR tendency. However, some studies emphasize that philanthropic values that exists in Turkey for institutionalized originations are through institutional changes from a historical perspective by considering many different socio-political and economic factors (Alakavuklar et al., 2009; Küskü & Bay, 2012). At this point, an important point to be noted is that there are claims towards organizations using CSR activities as a means of promotion to make profit. Therefore, the voluntary responsibilities/philanthropy dimension of CSR and the profitability dimensions are still the controversial position among the approaches in Turkey (Dinçer & Özdemir, 2013). Even though CSR is a topic under discussion, attempting to understand the structure and developing strategies are required to make activities effective and beneficial for various areas is needed to be supported. Additionally, these contradictions can be the preventing reason for managers to be proactive when applying CSR in various areas. Self-motivation in CSR is also needed in Turkish defense industry. An additional aim such as finding new markets for the products by producing scientific devices might help to expand CSR applications.

### **Conclusion**

As conclusion, the impact of the demographic characteristics of the managers and the company structures on CSR orientations has been identified for Turkish defense industry, and therefore an appropriate strategy has been developed for the implementation of CSR regarding the biodiversity and conservation of wildlife. Declaratively, majority of Turkish defense company managers strongly agree and believe at CSR issues. Very practical and homogenous strategy can be defined for CSR in Turkish defense industry since there are no significant differences between the majority of the demographic characteristics, company structures and the CSR existence views of the defense company managers. To motivate the managers, some commercial opportunities are included for the companies such as opening new markets via CSR framework. This approach can provide some positive outcomes to reduce the number of companies in defense industry in a future under more peaceful dynamics of the world.

All work that needs to be done will require cooperation between business shareholders and stakeholders. The realization of fictions that will ensure continuous and sustainable cooperation with the public, private sector, academia, civil society, international organizations, and the society, at both national and international level, will ensure the sustainable management of the environment and natural resource management and contribute to the strengthening of a country's competence in this regard.

### **Acknowledgment**

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