IBN HALDUN UNIVERSITY
SCHOOL OF GRADUATE STUDIES
DEPARTMENT OF BUSINESS ADMINISTRATION

MASTER THESIS

SUSTAINABILITY-ORIENTED HUMAN RESOURCES PRACTICES AND THEIR IMPACTS ON FINANCIAL PERFORMANCE: A STUDY ON EUROPEAN COMPANIES

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THESIS SUPERVISOR

PROF. SÜMEYYE KUŞAKCI

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by

MUHANNAD ABU MAHFOUZ

A thesis submitted to the School of Graduate Studies in partial fulfillment of the requirements for the degree of Master of Business Administration

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APPROVAL PAGE

This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Business Administration

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_____	_____	_____

This is to confirm that this thesis complies with all the standards set by the School of Graduate Studies of Ibn Haldun University.

Date of Submission Seal/Signature

ACADEMIC HONESTY ATTESTATION

I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

Name Surname:

Signature:

ÖZ

SÜRDÜRÜLEBİLİRLİK ODAKLI İNSAN KAYNAKLARI UYGULAMALARI VE FİNANSAL PERFORMANS ÜZERİNDEKİ ETKİLERİ: AVRUPA ŞİRKETLERİ ÖRNEĞİNDE BİR ARAŞTIRMA

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Bu çalışma, Çevresel, Sosyal ve Kurumsal Yönetişim (ESG) puanlarından elde edilen sürdürülebilir İK uygulamalarının çeşitli boyutlarını inceleyerek sürdürülebilir İK yönetimi (SHRM) uygulamalarının kuruluşların finansal performansı üzerindeki etkisini incelemektedir. Kullanılan veriler, Thomson Reuter's veri tabanı üzerinden farklı Avrupa ülkelerinde 100'den fazla çalışanı olan kamu ve özel kuruluşların 5 yıllık (2015-2019) dönemleri için toplanmıştır. Kuruluşların finansal performansını ölçmek için bağımlı değişken olarak varlıkların aktif getiri oranı (ROA) kullanılmıştır. Finansal performansı etkileyeceği önerilen beş bağımsız değişken ise sosyal boyut puanı, eğitim saati puanı, işgücü puanı, insan hakları politikası puanı ve kadın yönetici oranıdır. Ampirik panel modellerini tahmin etmek için Genelleştirilmiş En Küçük Kareler Yöntemi (GLS) yöntemi kullanılmıştır. Tüm bağımsız değişkenler, ROA ile % 5 ile % 1 arasında anlamlılık düzeyinde pozitif bir ilişki göstermiştir. Bulgular, çalışanların, müşterilerin ve toplumun kuruluşlara olan bağlılığını ve güvenini ölçen sosyal puanın ve çalışanların eğitim ve gelişimine yatırım yapmanın organizasyonun finansal performansını etkilemede kritik olduğunu göstermektedir. Örneklem çalışanların iyi eğitim gördüğü, insan haklarının bilincinde olduğu ve kadınların yönetim düzeylerine katılımının normal kabul edildiği Avrupa ülkelerinden olduğu için bu faktörler önemlidir, ancak kuruluşların mali performansı ile daha az ilişkilidir.

Anahtar Kelimeler: Sürdürülebilir İKY, Finansal Performans, Aktif Getiri Oranı, ESG, Sosyal Sürdürülebilirlik.

ABSTRACT

SUSTAINABILITY-ORIENTED HUMAN RESOURCES PRACTICES AND THEIR IMPACTS ON FINANCIAL PERFORMANCE: A STUDY ON EUROPEAN COMPANIES

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This study examines the impact of the sustainable HR management (SHRM) practices on the organizations' financial performance by studying various dimensions of sustainable HR practices derived from Environmental, Social, and Governance (ESG) scores. Secondary data were retrieved from Thomson Reuter's database for five years spanning between 2015-2019. The data was collected for the public and private organizations having more than 100 employees over different European countries. To test the study hypothesis, return on assets (ROA) was used as a dependent variable to measure the financial performance of the organizations. The proposed five independent variables that could be affecting the financial performance were social pillar score, training hours score, workforce score, policy human rights score and women mangers. Generalized Least Square Method (GLS) method was employed to estimate the empirical panel models. All the independent variables showed a positive and significant relationship with the ROA between 5% and 1% level of significance. The findings suggest that in the study sample of organization, investing in social pillar score that measures the employees, customers and society's loyalty and trust towards organizations, and investing in employees' training and development is critical to affect the organizations' financial performance. Since the sample is from European countries where employees are educated and aware of their human rights and women participation at managerial level are normal, these factors are important but less strongly related with the organizations' financial performance.

Keywords: Sustainable HRM, Financial Performance, Return on Assets, ESG, Social Sustainability.

DEDICATION

It is dedicated to my daughter who has provided me with the energy to complete this thesis to enhance my experience and my knowledge level for a better situation in my career path. In addition, it is dedicated to my parents who have supported me in all my life stages to achieve my goals and my ambitions. At the end, this is dedicated to my wife for her support and patience during my master's degree study, as she was encouraging me all the time to do my best and to not give up because of anything.

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Besides my thesis advisor, I would like to thank my fellow in Ibn Haldun University; Ambreen SULTAN a graduate student in Management department, for her support in data analysis using STATA. In addition, I would like to thank Nour KIFO, a student in my class for her support and her guidance throughout my thesis especially in the methodology and results chapters. Last but not the least; I would like to thank my wife Noha DIAB for her efforts in proofreading of the thesis. Lastly, I would like to send big thanks for my family especially my parents for supporting me and encouraging me through the 2 years of the master's studying.

Muhannad Abu Mahfouz
İSTANBUL, 2021

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LIST OF SYMBOLS AND ABBREVIATIONS

CE	Capital expenditure
CSR	Corporate social responsibility
D/E	Debt to equity
EPS	Earnings per share
ESG	Environment, Social and Governance
FP	Financial performance
GLS	Generalized least square
HCWS	High commitment work systems
HERO	Health and Well-being Best Practices Scorecard
HR	Human resources
HRM	Human resources management
MC	Market capitalization
OLS	Ordinary least square
P/E	Price to earning
ROA	Return on assets
ROE	Return on equity
ROI	Return on investment
ROL	Return on labor
SHRM	Sustainable human resources management
SME's	Small and medium enterprises
TA	Total assets
VIF	Variance inflation factor
μ_i	Firm specific unobserved fixed effect
ϑ_t	Time trend
β	Parameters of independent variables
γ	Parameters of control variables
i	Number of cross-sections
t	Time trend component
e	Error term

CHAPTER I

INTRODUCTION

Sustainability has become a critical issue for organizations because of several reasons including environmental changes, government pressures, and community demands for greater environmental and social responsibility. The most important objective of organizations especially in the private sector is to conduct a profitable business and to enhance their performance. On the other side, organizations' top managements should be held accountable for their impacts on society and the environment. They have to take into consideration the risks and opportunities related to society and the environment in all business decisions. This is the concept of "triple bottom line" as named by Elkenton (1994), which means that the organization should deliver positive results for planet, people, and profit. In addition to that, sustainability has different directions including workplace responsibility, job satisfaction, healthy and safe workplace, maintaining diversity and equal opportunities, respect of human rights, gender diversity and board diversity. Especially corporate environmental responsibility and human rights are increasingly becoming a crucial part of an organization's social validity.

Sustainability is affecting the business models of organizations by taking all stakeholders including employees, customers, regulators, environment, and suppliers into consideration. Sustainability proposes a greater interaction between stakeholders and companies even if they are not in a direct relationship with the organization.

Human resources management (HRM) is one of the major instruments in achieving the desired social sustainability goals of organizations. Even though there has always been a department dealing with workers, the title and coverage of the department has changed many times because of the transformation in social and economic life. Even the title went through several stages and developments. The British industrial revolution in the 18th century has played a major role in development of the modern HRM practices, as the foundation of large factories increased the demand for the

workforce significantly. As the employees started to ask for their rights and satisfaction, various problems related with the management of the workforce have arisen. The concept of the modern HRM started to be developed and regulated between the First World War and the Second World War that had witnessed a combination of manufacturing peak, which motivated the governments to regulate employment and personnel issues (Patrichi, 2015). Thus, governments began to intervene in businesses and to introduce some fundamental human rights and the work safety legislation as a part of their sustainable development strategy. These interventions had been directly influencing the HRM of businesses.

The second rapid development of HRM started with the beginning of 20th century. A separate department was launched by many organizations to control all the issues related to the employees and it was named "Personnel Management". The department was focused on productivity of employees. Later on, the term HRM developed in response to the competitive pressures dominating American markets by the late 1970s because of some factors such as globalization, deregulation, and rapid technological changes. The HRM department has emerged as the body within the company dealing with all the activities aiming toward the effective utilization of the employees in order to achieve individual, group, and organizational objectives.

The evolution of HRM departments can add a strong argument to this study. All the above-mentioned changes and developments in titles and activities made HRM one of the major managerial departments that covers the main proportion of the organization's budget and refers to its huge efforts of extracting the effectiveness of the employees.

In addition to that, there are some statistics revealing the importance of the HRM in achieving and maintaining organizational sustainability goals. In other words, these statistics reflect the relevance of social-sustainability oriented HR-practices as a strategy for higher scores in environmental, social, and governance (ESG) aspects of sustainability. For example, flexibility in the workplace offers an alternative approach to work-life balance. According to LinkedIn Global Recruiting Trends 2019, since 2016 there has been a 78% increase in the job posts on LinkedIn platform, which mention work flexibility (Chanler et al., 2019). The same report also states that females (36%) cite flexibility more than males (29%) as a very important value in the

workplace. According to Jobvite Report 2019; 43% of new hires are quitting shortly after being employed because they realize that the job is not what they were expecting. While that disappointment is necessitating strong onboarding programs (Shetelboim, 2019), 88% of employees evaluates orientation programs as inefficient as per Gallup report (Clifton, 2017).

The flexibility in the workplace, training and on-boarding programs are just a few practical examples taking employees' satisfaction and performance into consideration. At that point, the crucial question is whether these sustainability-oriented HR practices are leading to a better organizational financial performance and what managerial recommendations could be given depending on that.

1.1 Background of the Study

According to Richard (2010), organizational performance could be described by the achievement of organizational goals in terms of financial performance, product market performance, shareholder return, and workforce satisfaction, etc. Financial performance includes profits, return on assets, and return on investments. Product market performance includes sales and market share. Financial performance is a particular measure of how well an organization utilizes its assets to generate revenue. This term is also used as a general measure of a firm's overall financial strength over a given period of time (Kenton, 2020).

Sustainable HRM is the effective employment of HR tools to build an HR system that contributes to the sustainable performance of the firm. Dyllick & Hockerts (2002) define socio-efficiency of sustainable HRM as minimizing the negative impacts of work on employees such as occupational health problems and social harm of work including anxiety, headache, anger, back pain, irritability, depression, and cardiovascular disease.

The social impact hypothesis which is a theory proposed by Freeman (1984) suggests that meeting the CSR goals and needs of different stakeholders such as employees' needs increases financial performance. One rigorous research conducted as a meta-analysis of 52 studies proved that the financial performance is positively affected by Corporate Social Responsibility (CSR) and to a lesser extent environmental responsibility. (Orlitzky et al., 2003)

This research will be focusing on the relation between the social sustainability-oriented HR practices and their effects on the financial performance. While HR-practices are independent variables, financial performance is the dependent variable that will be studied within this research. The effects of the social sustainability practices within the field of HRM on the financial performance will be studied based on several measures derived from the ESG score of Thomson Reuters Eikon database.

The financial performance of a company could be either low, medium, or high. The sustainability score of several HRM practices will be analyzed by correlating the financial performance categories using Stata software. In addition, there will be six control variables in the study model including total assets, total equity, cash flow, capital expenditure, total debt, and market capitalization. These variables have been chosen depending on the previous studies as they are commonly used as control variables.

According to Lanhelle (1999) it is important to differentiate between the different types of corporate social responsibility. The first type of CSR is external to the organization and focuses on the community's environmental and social need. The second type of CSR is internal to the organization and includes sustainability-oriented human resource practices for the benefit of the employees as primary stakeholder. The second type, which has not been fully investigated by previous studies, is the focus of our thesis. Therefore, this research intends to bridge this gap by focusing on the relationship between the sustainability-oriented HR practices and organizations' financial performance.

To sum up, this study will be focusing on specific variables extracted from the ESG scores that are related to the HR practices such as the workforce score and employee development score. The dependent variable is the financial performance not the overall performance. Moreover, the study sample will be the organizations having more than 100 employees in the European countries in specific fields to make the study more efficient and to extract useful recommendations for other case studies and for future research.

1.2 Problem Statement and Research Objectives

The literature on sustainable HRM practices has various objectives that can provide diverse hypotheses. To date, the link between social sustainability-oriented HR

practices and financial performance is inconclusive and ambiguous. Depending on a variety of empirical models, a segment of the literature advocates for the positive effects of general HRM practices on the organization's financial performance. Yet, another group of studies claims that there is no significant effect of HRM practices on financial performance.

In addition to that, previous studies have been split into two sections: Those focusing on HRM practices in general without focusing on the social sustainability, and those combining both. Most of the literature that aimed to study the relationship between sustainable HRM practices and financial performance have focused on the traditional measures such as employee turnover and employee satisfaction while in this study a combined score has been implemented such as workforce score that reflects more than one dimension. The main question was whether sustainable HRM practices from a social perspective affect the financial performance positively or there is no significant effect. This work aims to conduct a comprehensive study that captures different dimensions of sustainable HRM practices and to assess their impact on financial performance using the example of developed countries having high ESG scores as well. Considering the fact that many previous studies have shown the positive effect of sustainable HRM practices on financial performance directly and indirectly, conducting a study using the example of developed countries with high ESG scores and strong economies would be more advantageous to test the relationship more efficiently.

Organizations in public and private sectors are increasingly implementing sustainable practices and following regulations in order to be in alignment with the global sustainability trends. However, these practices still need to be implemented more deeply within the organizations, which requires studies that are more comprehensive and a better understanding about the impact of sustainability on financial performance.

It should be reminded that practices that lead to social sustainability might be positively affecting the financial performance if they are applied properly. On the other hand, there are strong arguments that might be affecting the profitability negatively. Due to contradicting results, the study objective is to discover the direct effects of sustainable HRM on the financial performance. This work specifically investigates effects of the sustainability-oriented HR practices on the organization performance

from a financial perspective using the ESG scores and financial data derived from Thomson Reuters Eikon.

While most of the previous studies were focusing on the ESG score in general and measuring its effect on various organizational performance indicators, this research will be focusing on the specific components of ESG, which are related to the HR practices and their impact on financial performance. The sample of this research will be the European public and private organizations having more than 100 employees and operating in the energy, industrial, technology and telecommunications industry, as these are forming the most important and the biggest industries in Europe. This research intends to cover the gap in the literature, because there are few studies targeting the European companies. One of the purposes of this study is to attract the attention of the top management and decision makers to the importance of implementing sustainability oriented HRM practices within the organizations by examining the effect of a specific variable on the financial performance. The results of this study could lead us to some practical recommendations in order to achieve the anticipated level of sustainability within HRM practices. Besides, the sample of the research is targeting one of the main economic regions so, the model and recommendations derived from this study might be implemented on other regions considering the difference between the different regions.

1.3 Research Question and Research Hypothesis

The main research question around the study objectives is: Do sustainability-oriented HR practices especially the below mentioned variables lead to an improvement in the financial performance of the organizations?

To address the above-mentioned main research question of the study, five hypotheses were formulated:

H1: Social pillar score is positively and significantly related with organizations' financial performance.

H2: Workforce score is positively and significantly related with organizations' financial performance.

H3: Human rights score is positively and significantly related with organizations' financial performance.

H4: Employees' training and development is positively and significantly related with organizations' financial performance.

H5: Gender diversity is positively and significantly related with organizations' financial performance.

By investigating these hypotheses, the research question will be answered and there will be a clear argument if there is a significant correlation between the various sustainability-oriented HRM practices and the financial performance.

1.4 Conceptual Framework

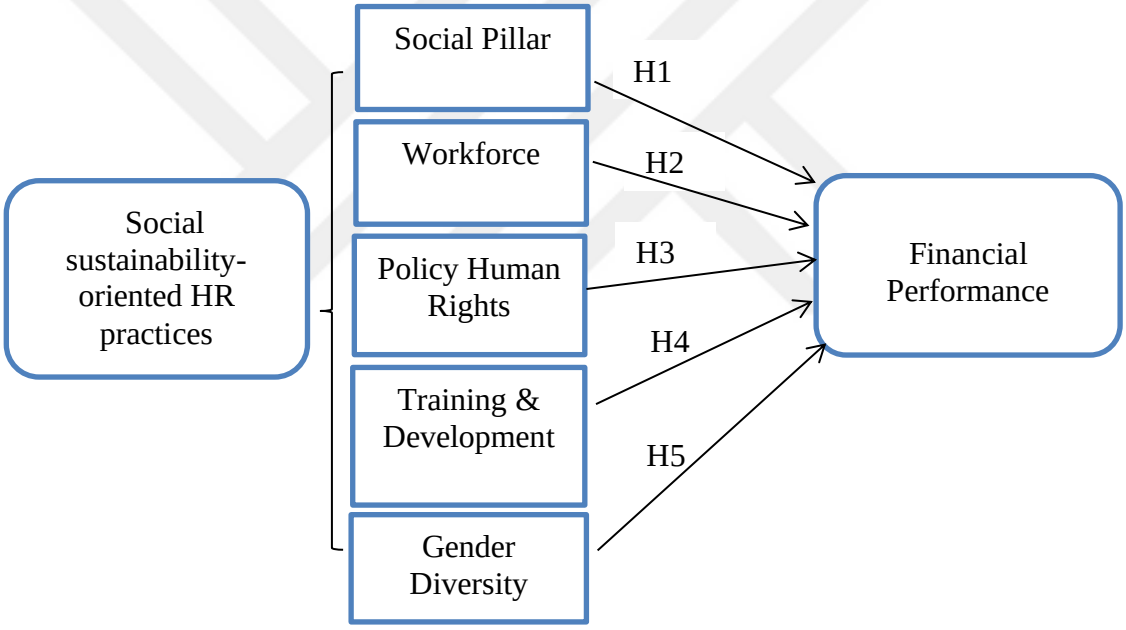

Figure 1.1. Conceptual Framework of the Study

1.5 Significance of the Study

There is an extensive literature available on the relationship between the social sustainability-oriented HR practices and the organization's financial performance. In recent years, some studies have also tried to analyze the impact of social sustainability-oriented HR practices on the organization's non-financial performance. While some studies have considered the effect of sustainable HR practices using general practices such as job description, compensation system, and performance appraisal as variables that could be affecting the financial performance, in this study specific scores including social pillar score, workforce score, average training hours score, etc. have been used and correlated with the financial performance. The independent variables have been used to reflect the ESG perspective and the importance of it within the organizations and how it can be positively affecting the financial performance far from the short-term financial implications.

Particularly social sustainability-oriented HR practices have never been addressed in this manner in previous studies. Additionally, the sample of the study consists of companies that originated from or are operating in Europe that is considered as a developed region with high quality standards and well-developed labor law. Moreover, what makes the study unique is its approach to test each score separately.

1.6 Structure of the Study

In this chapter the sustainable HRM and financial performance have been introduced in align with the aim of this study. The research objectives and the problem statement are outlined to explain the argument of this research in addition to the study hypotheses. Chapter 2 presents the literature review by investigating similar studies related to the research topic. The literature review highlights the gaps that are not covered by the previous studies and that will be covered by this study. Chapter 3 presents the empirical model, data, study variables and empirical methodology that is used to reach the research objectives and to test the study hypothesis. Chapter 4 presents the results and findings. Chapter 5 concludes the study by providing some recommendations and future guidelines.

CHAPTER II

THEORETICAL BACKGROUND

This chapter reviews the relevant empirical and theoretical literature on the relationship between social sustainable HRM practices and organization's financial performance. Additionally, it points out the different sample and statistical methods that have been used by different studies. Lastly, this chapter highlights the literature gap that this study intends to fill.

2.1 Sustainability and CSR

The concept of sustainability primarily and inaccurately has been discussed in the context of environment. However, Brundtland Commission of the United Nations has defined the concept of sustainability as an extensive approach to development, which is global, long-term and including a variety of stakeholders. It introduced the idea that there are three pillars of sustainable development: economic, social, and environmental. The three pillars concept has also reflected the importance of the social impact resulting from sustainability oriented HR practices as a need of the current nature of economic growth and development (Brundtland, 1987). The Brundtland approach to sustainability caused an interest in a wide range of concepts dealing with the responsibilities of organizations. One of the most popular concepts is CSR. The basis of CSR is that organizations might carry not only economic and legal responsibilities, but also should carry ethical and philanthropic responsibilities. The current trends are directing organizations to be ESG performance driven including the environment and governance dimensions in addition to the social scores. Without CSR, there would be no ESG. However, there are many differences between them. The difference between CSR and ESG is that CSR tries to make an organization accountable, while ESG criteria make its efforts measurable. Because ESG is quantifiable to a far greater degree. In addition, the rise of impact investing allowed

the organizations to use the ESG scores as a useful measurement helping in ranking the companies.

2.1.1 Environmental, Social and Governance Scores

ESG is a collection of scores indicating the sustainability and ethicality of the organizations. Environmental criteria measures the impact of the organization on the environment. Social dimension measures how the organizations managing their relationship to employees, suppliers, customers, and all other stakeholders. Governance aspect deals with an organization's leadership, executive pay, audits, internal regulations, and shareholders rights. ESG is a trustworthy and comprehensive way for investors willing to evaluate the organization's status, and to take a decision of investment. ESG-based investment has different names, including sustainable investments, responsible investments, impact investments, or socially responsible investments. According to a Bloomberg Briefs Article written by Colby (2017), the investments made based on the ESG scores has increased 25 percent between 2015 and 2017 reaching to US$23 trillion, and accounting for around one-quarter of all professionally managed investments globally. In addition, a recent study conducted among more than 36 percent of chief executives and board members by KPMG International indicated that the investor's pressure has significantly increased the organization's focus on ESG.

By looking into these facts related to the importance of the ESG scores for investors and other stakeholders, organizations from all the industries and sizes should take the ESG scores into consideration in planning and decision-making processes.

General definition of social sustainability according to the Western Australia Council of Social Services (WACOSS) is as following: "Social sustainability occurs when the formal and informal processes; systems; structures; and relationships actively support the capacity of current and future generations to create healthy and livable communities. Socially sustainable communities are equitable, diverse, connected and democratic and provide a good quality of life." One more definition of social sustainability developed by UK-based enterprise called "Social Life" is "a process for creating sustainable, successful places that promote wellbeing, by understanding what people need from the places they live and work. Social sustainability combines design of the physical realm with design of the social world – infrastructure to support social

and cultural life, social amenities, systems for citizen engagement and space for people and places to evolve" (Saffron et al., 2012).

2.2 Human Resources

Human resource as a term was mentioned for the first time by John R. Commons, an American economist, in his 1893 book named "The Distribution of Wealth" (Kaufman B. E., 2001). Nevertheless, in the academic field, the term was used for the first time in 1958 by the economist E. Wight Bakke (Kaufman B. E., 2008) in a report. On the other hand, there are several concerns regarding the term "Human Resources". One of them is arguing that by this name, the people are objectified and abused as human beings are not "commodities" or "resources", but they are innovative and productive. In 2001, the International Labor Organization decided to revise its 1975 recommendation 150 on HR development, reaching a conclusion stating the principle of "Labor is not commodity" principle. However, despite all these concerns regarding the name, still "Human Resources" are the most used terminology while some organizations started to use "Talent management", "People operations" and "Human capital management.

There are several definitions of HR management that are used professionally; one of these definitions is that HRM is the process of managing people in organizations in a structured and comprehensive manner. Another definition is that HRM circles the ideas of management of people in organizations from a macro-management perspective like customers and competitors in a marketplace. This comprises the focus on making the "employment relationship" fulfilling for both management and employees. Several activities fall under HR departments including job design & job analysis, employee hiring and selection, employee training & development, compensation and benefits, employee performance management, etc.

Scholars produced many HR models that highlight the importance of HR practices, how HR adds value to the organization, and how the organization business influences HR. Among them, there are five main HR models as below:

1- The Standard Causal Model of HRM

2- The 8-box Model by Paul Boselie

3- The HR Value Chain by Paauwe and Richardson (1997)

4- The HR Value Chain Advanced

5- The Harvard Framework for HR

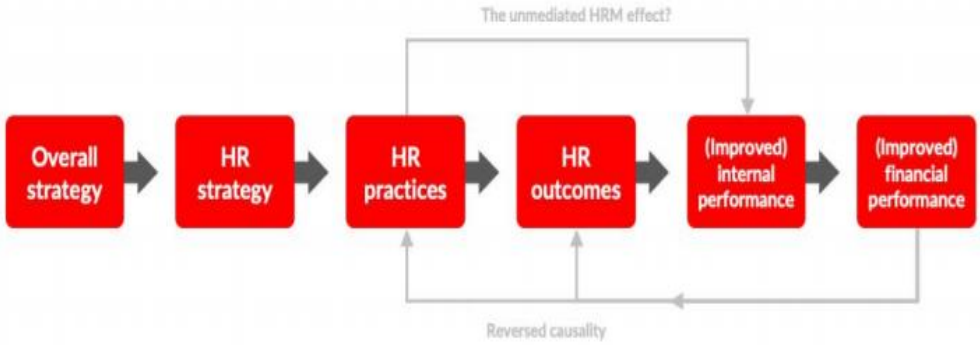

Figure 2.1. The Standard Causal Model of HRM (Vulpen, 2019)

This model is derived from many similar models published in the 90's and early 2000's. The model shows a casual chain that starts from the overall strategy of the organization up to the financial performance at the end. By using this model, it is clear where the role of the HR practices is within the chain as a major player affecting the financial performance. Starting from the organization's overall strategy means that the HR strategy should be in align with the organization strategy to be effective to reach the desired performance. HR strategy includes the HR practices such as hiring, training, appraisal, and rewards. In addition, these practices lead to certain results such as commitment, quality output, and engagement, by using the right outcomes to be measured and monitored, HR practices can be regulated accordingly.

The last two components of the model are related to the performance. HRM outcomes lead to an improved internal performance including productivity, innovation, and quality. This improved internal performance leads to an improved financial performance including improved profit, financial turnover, ROI, etc. This study is conducted based on the Standard Causal model and it is focusing on the sustainable HR practices and their effects on financial performance.

The 8-box model by Paul Boselie includes several internal and external factors that affect the HR effectiveness. This model includes eight main factors including the

organization structure, the external general market environment, the external population market environment, the human resources strategy & practices, the external general institutional environment, the external population institutional environment, critical HR goals, and ultimate business goals.

HR value chain model divides all the HR works into two categories: the first one is HRM activities and the other one is HRM outcomes. The fourth model called HR Value Chain Advanced is similar to the previously mentioned one. However, there are two key differences; the first one is the organizational performance is defined differently based on the balanced scorecard which includes the organizational performance from several perspectives such as financial, customer viewpoint, and a process viewpoint. The second difference is that in this model the chain starts with the HR enablers including processes, budget, marketing, competencies, and technology.
The last model is the Harvard Framework for HRM, which include five components: stakeholders' interest, situational factors, HRM policies, HRM outcomes, and long-term consequences.

HR can be a great driver for the organization's strategies financially and operationally. Through this understanding, HR can ensure aligning the organization's strategies with the current trends keeping it competitive in the market, for example by attracting the high-qualified employees. Furthermore, HR should monitor the market conditions and adjust itself as required. An example of this would be if a warning signs of a recession, increased bankruptcies, reduced tax, and shrinking corporate profits are present – HR can take actions and initiatives early to avoid any serious impact on the organization, which could in turn affect the financial performance.

After defining HR models briefly, in the next section sustainable HRM models will be defined in detail, which is the focus of the study.

2.2.1 Human Resources and Social Sustainability

Table 2.1 below is explaining the approaches and characteristics of HR along with its history up to the concept of sustainability.

Table 2.1. Overview of HRM Characteristics (Boselie, 2010)

	Scientific Management	**Human Relations**	**Revisionism**	**Strategic HRM**	**Second wave of revisionism in Sustainable HRM**
Period	Ca.1918-1945	Ca.1945-1965	Ca.1965-1980	Ca.1980- now	Ca.2010-?
Focus	Labor grouping and close employee supervising	Personal attention and employees in their social context	Creation of autonomy, challenging jobs, and employee engagement	Strategic embeddedness and managerial orientation	Searching for the Human in HRM, HRM from the outside in and long-term HRM orientation
Purpose	Efficiency	Cooperation	Autonomy	Performance	Sustainability

In addition, Beirendonck (2009) summarizes the evolution of HRM practices and aspects as per Table 2.2 below.

Table 2.2. A Typology of Competency, Talent, and Sustainable People Management Approach (Van Beirendonck, 2009)

Competency approach	Talent approach	Sustainability approach
We start with the mission, vision and the 'desired' profile Greater focus on the organizational perspective Attributes are competencies Strengths, based on the competency profile. Focus on job fit, efficiency, ROI Gap analysis	We start with 'what is' in terms of strengths and talents Greater focus on the employee viewpoint Characteristics are 'talents' Strengths as characteristics that are clearly present/easily available. Oriented towards 'utilizing', meaningfulness, development Focus on strengths and 'making use of what is available'	We start with what is and match it to profiles Combined perspectives of both employee and organization Common terminology Apparent characteristics that are useful Meaningful, partly based on objective interpretations Oriented towards using and matching

One more study done by De Vos and Dries (2013) has compared three approaches of HRM mentioned in the below Table 2.3.

Table 2.3. Three Approaches of HRM (De Vos & Dries, 2013)

	Career literature	Talent management literature	Combination perspective on sustainable careers
Philosophy	'Build a career in which I can use and develop my talents in view of my personal career drivers and goals'	'Detect, develop, and deploy employees' talent to obtain greater performance at the individual, group and organizational level'	'An ongoing discussion between organization and employees which leads to customized careers and sustainable value for both sides'
Importance attached to Continuity	Low	High	Low
Focus of career Management	Individual	Organizational	Individual + Organizational

Table 2.3. Three Approaches of HRM (De Vos & Dries, 2013) (Continued)

Accountability for career management	Self (Protean)	Organization	Self + Organization
Mobility reference	Inter-organizational	Intra-organizational (bounded)	Inter-and intra-organizational
Number of formalized CM practices	Low/focus on career self-management	High/focus on organizational career management	Focus on self- and organizational career management

2.2.1 Sustainable Human Resources Management Models

The three pillars model of sustainable HRM constructed by Zaugg, Blum, and Thom (2001) is one of the models that are used to study the importance of sustainable HRM. This model includes three pillars of sustainable HRM as listed below:

1- Work-life balance: It is commonly defined as the growing recognition that individuals require a satisfactory balance between the work responsibilities and social life.

2- Personal autonomy in professional development: This is commonly thought to be positively related to organizational commitment and lower absenteeism. The reason why autonomy is important to workers is that it provides them the feeling of responsibility and freedom to perform their work independently without needing to the management follow-ups. Work autonomy has been defined as the degree to which the job provides substantial freedom, independence, and choices in scheduling the work and in determining the procedures to be used in carrying it out.

3- Employability of the workers: It may be defined as being capable of getting and keeping a fulfilling job. More comprehensively, employability is the capability to move self-sufficiently within the labor market and to realize one's potential through sustainable employment. It should be clarified that workers employability also depends on personal conditions such as social life responsibilities, work autonomy, and flexibility to manage the balance between work, family, and any other responsibilities.

The underlying objectives of this model is to: 1- ensure a harmonious work-life balance, 2- use participatory management models to enhance individual responsibility, and 3- increase the employees' employability.

Another model called as the Holistic Model of Sustainable HRM proposed by De Prins (2011) consists of four perspectives related to sustainable HRM as visualized in Figure 2.2. This model is focusing on optimally utilizing and respecting the human workforce within the organizations. This model is based on four different perspectives:

1- Psychological perspective that oriented to support employees in their work-life balance.

2- Sociological perspective oriented to implement diverse workforce regulations, employee engagement, and family-friendly personnel policies.

3- Strategic perspective, which includes recruitment, employee turnover, etc.

4- Green perspective focusing on the environment and how it is affected by sustainable practices, including green employer branding, environmental awareness training, eco-friendly employee behavior, etc.

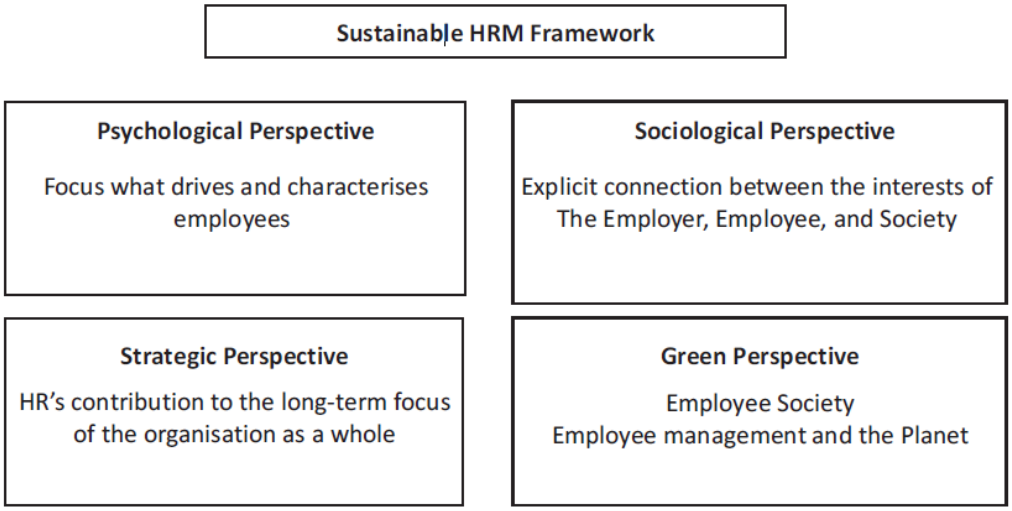

Figure 2.2. Sustainable HRM Framework (De Prins, 2011)

The above mentioned models are looking into the sustainable HRM from a theoretical perspective and questioning both how to improve the social sustainability within the organizations and which aspects should be focused on.

By studying several models and theories related to the HR practices, it is clear that most of the current HR models and approaches focus on sustainable practices and methods how to implement them to bring the organization to a high level of sustainability in all respects. In addition, most of the current theories and models are trying to convey an important message to the decision makers and management that

the employees are the most valuable resources of the organizations, so there should be sustainability-oriented practices to achieve the desired performance financially and non-financially.

2.3 Organizational Performance

It is well known for the directors and decision makers that the most important measurement tool to control the performance is to keep following up with the financial and non-financial performance to assure that the organization is well positioned toward its main objectives. There is no clear-cut definition of organizational performance agreed among researchers (Abu-Jarad, 2010). According to Javier (2002), performance of the organization is the efficiency and effectiveness of the organizational activities. On the other hand, Daft (2002) defined organizational performance as the ability of the organization to use efficiently and effectively its resources to reach it goals. Ricardo (2001) argued that organizational performance is the ability of the organization to achieve its goals and strategic objectives and plans.

Organizational performance is divided into financial performance and non-financial performance. Financial performance of an organization is measured by looking into measures such as return on asset (ROA), profitability, gross profit, return on investment (ROI), return on equity (ROE), market share and liquidity (Abu-Jarad, 2010). On the other hand, non-financial performance can be measured using several scores and indicators including customer satisfaction score, retention rate, conversion rate, employee productivity rate, salary competitiveness ratio etc.

Financial performance is one of the main indicators that guides the management in decision-making and strategic choices. Because of that, it is very crucial for the top management to know how the financial performance can be efficiently measured and monitored. Analysts and investors are using the financial performance to compare two firms in the same industry or to compare one industry with another. There are many stakeholders of organizations including trade creditors, bondholders, investors, employees, management, etc. and each group of these stakeholders has its own interest in tracking the financial performance. One study has been done to examine the impact

of financial performance on the success or failure of companies. This study used a sample of 115 listed companies in the Tehran Stock Exchange over a 7-year period to study the correlation between the financial performance measures and the success or failure of the companies. The results of this study argued that there is no relation between ROE as a measure of financial performance and success or failure of the company. The result of this study might be taken in consideration but at the same time ROE is one of the main measures that usually used to measure the financial performance away from the idea of organization's failure/success. Therefore, the policymakers should know that there are different usages of each financial measurement depending on the organization's objectives. In addition to that, the study argued that the ROA and earnings per share (EPS) are significantly affecting the success or failure of companies. Besides, the size of listed companies has no impact on the success or failure. However, the profitability has an impact on it (Chashmi & Fadaee, 2016).

As mentioned before, in the study ROA is the main dependent variable that will be used to measure the financial performance and it has been chosen in reference to the literature review and similar studies as a commonly used financial measurement beside the control variables. The next sections are focusing on the relationship between sustainable HRM practices and financial performance, which is the core of this study. Several social sustainability-oriented HR practices and their effects on the financial performance will be discussed.

2.4 Literature Review

Financial performance can be affected by several factors within the organization. The social factors, which are mainly related to the HR practices of the organization, are among them. Job performance is defined as reaching a goal or set of goals within a job, role, or organization (Campbell, 1990), but not the actual consequences of the acts performed within a job. Campbell (1990) confirmed that the job performance is not a single activity, but it is a complicated terminology that needs an overall analysis of the employee's situation to extract useful results and recommendations, as it is different from the actual job responsibilities. As previously defined, job performance is a very useful indicator as a measure of the organization's overall performance including the financial performance. Moreover, it is affected by the regulations and practices which

have been established by HR departments and reflecting their effects on the financial performance. Job performance can be easily connected with the financial performance as an outcome of the HR practices.

2.4.2 Sustainable HRM Practices and the Financial Performance

Many studies investigated the importance of the sustainable HRM practices on the organization performance. One of these studies has been done on Swedish hotels to discover the relationship between the innovation and customer satisfaction and if they are affected by the sustainable HRM practices. 195 hotels were the sample to answer a questionnaire including items related to the competence development and employee relations as a part of HRM practices. The results suggested that the sustainable HRM practices enhances the hotel capability to innovate and to have satisfied customers, which is in turn affects the organizational performance financially (Wikhamn, 2019).
Morrison et al. (1999) defined taking charge behavior of employees as the constructive effort of employees to initiate self-improvement, while improving organizational operations, and promoting functional changes in the organization. In reference to this definition, a study done by Li et al. (2019) suggested that high-commitment work practices (HCWP) which means linking several HR practices with the organization's outcomes related to the employee commitment and performance could have a great impact in improving the organization’s competitive advantage, efficiency, and profitability. One of the HR practices affecting the "Taking Charge" behavior in the employees, which means “the constructive effort of employees to initiate self-development, enhance organizational performance and promote functional changes in the organization”, is through increasing engagement within the work environment, and enacting regulations that allow employees to make decisions and take responsibility. The study was conducted through a questionnaire distributed to 96 HR managers in order to evaluate the HCWP used in the organization. On the other hand, 352 employees participated in the employee survey that includes questions to rate the degree of work engagement, feeling of impact, and several control variables, as well as to provide some demographics information. Then, the direct supervisor of each employee was asked to answer a short survey evaluating their employee’s taking charge behaviors. By this approach the three variables were linked together to understand the effects of each one on the other. This study provided an evidence that

the HRM practices could affect all aspects of the organization, which is directly or indirectly related with the organizational performance.

Mostly, sustainable HRM practices are considered a major issue of large organizations having large number of employees and requiring a sustainable HR system to achieve its goals through effective utilization of human resources. On the other hand, sustainable HRM practices have also paramount importance for SMEs aiming to build a strong HRM system that can positively affect the organizational performance. A study done on a Lithuanian family-owned SME through an interview with the employees attempted to discover the employees' opinions towards sustainable HRM practices in daily activities. The qualitative result was showing that this SME is using an informal HRM system as expected. Unfortunately, that was affecting the performance through common job burnouts, lack of expertise, retention of employees, limited career development, and weak leadership (Petruškevičius, 2016).

Another study that investigated the relation between the sustainable HRM practices and the financial performance proposed a model considering the recruitment, selection, planning, rewards, participation, training, and employee maintenance as inputs. On the other hand, the outputs were the profit, market value, increase in sales, productivity, customer satisfaction, and future investments, which are directly related to the financial performance (Jerome, 2013). This study is supporting the research hypotheses as it is connecting the HR practices directly with the financial performance. Another study has argued that there is a positive direct relationship between the HR practices and the financial performance, which means the use of sustainable HRM, is correlated to improved financial outcomes, and this relationship is not mediated by job satisfaction. The study has been done in 162 health care organizations through a questionnaire distributed to 61,061 individuals with a response rate of 42% (Vermeeren, 2014).

2.4.3 ESG Scores and Financial Performance

In this study, the data have been extracted from the ESG scores within Thomson Reuter's database; similar studies have been reviewed to enhance the literature review and to improve the reliability of this study. A panel study has been done on 65 Indian firms covering the period from 2015 to 2017 using ESG ratings published by NSE 100 ESG Index maintained by India Index Services Ltd, and the dependent variables were

ROA and firm value using Tobin's Q. Control variables were leverage and size of the company using total assets. The study clearly concluded that companies having higher ESG scores are performing better financially also the results clearly indicated that investors prefer companies with better carbon footprints, increased social acceptance, and transparent governance policies (Dalal & Thaker, 2019). This leads us to the conclusion that our study could have a significant contribution as we focused on the social variables related to the HR practices in Europe in terms of social sustainability within organizations.

2.4.4 Social & Workforce Scores and Financial Performance

In any workplace nowadays the most important thing for the employees is to feel comfortable and unstressed while the work takes at least 9 hours daily. The stress of working could be decreased through several HR practices such as applying flexibility within the work environment, maintaining diversity from all aspects and equal opportunities for all employees, offering personal development opportunities for the workforce. Social pillar score includes several dimensions related to HR practices, some of them are explicitly related and some of them are implicitly related. These dimensions including workforce, Human rights within the organizations, community, and product responsibility. As this research is studying the HR practices from a social perspective and its effect on the financial performance, the focus will be on the workforce & human rights scores, which were categorized under the social pillar scores. A study has been done to investigate the direct and indirect effects of flexible working arrangements on financial performance using the return on labor (ROL) as a dependent variable. It has been conducted among Australian organizations having five or more employees in public and private sectors. The sample consisted of 5038 employees representing 1509 employers. The results of the study were that the flexible working hours is improving the ROL directly and positively. In addition to that, the study has investigated the indirect relationship between the variables. However, the flexible working hours had no significant effect on job satisfaction but reduced staff turnover. In addition, the flexible arrangements related to the monthly and annual leave enhanced the job satisfaction but had no significant effect on staff turnover, while ROL improved with both job satisfaction and reduced staff turnover (Kotey & Sharma, 2019). By looking into the financial benefits of the high social score as a part of CSR

related to the workforce, Petenella (2010) argued that the potential benefits of CSR could be found in various directions: CSR can improve the productivity of employees by increased motivation, low absenteeism, and reduced turnover and this is directly related to the financial performance. Many studies acknowledged the workforce score as one of the major indicators to measure the sustainable HRM practices level within the organizations. A study targeted 745 companies that implements the "Health and Well-being Best Practices Scorecard" (HERO) as a measurement tool using six years available data. HERO Scorecard was designed to help organizations learn about best practices for promoting workplace health and well-being, and to discover opportunities to improve and measure progress over time. The study shows an evidence that investing in workforce health and well-being is one of the characteristics of high-performing, well-managed companies. In addition, the study shows an evidence that the HERO scorecard is one of the useful tools that can guide investments decisions (Grossmeier, 2015).

2.4.5 Policy Human Rights and Financial Performance

In 1945, United Nations has defined "human rights" as the essential rights to all human beings regardless of race, sex, nationality, ethnicity, language, religion, or any other status. Human rights include the right to life and freedom in most of human decisions and choices, freedom from slavery and abuse, freedom of opinion and expression, the right to work, receiving health services and education, and many more. All humans are entitled to these rights, without discrimination. By looking to contemporary work environment and labor laws, there are many violations causing harms to employees. For this reason, the topic of human resource practices within organizations should be taken seriously to achieve a high level of social-sustainable oriented HR practices.

There are many indicators used to investigate the organizational performance from a human rights perspective. These indicators explained by de Felice (2015) as below:

- A policy statement that includes the responsibility to respect the International Bill of Human Rights.
- The importance of human rights for the company in reference to the regulation related to employees.
- Number of human rights lawsuits against the company.

- General respect for human rights by the organization from the point of view of the human rights experts.

According to Rosga and Satterthwaie (2009), "it is fair to say that there is an emerging market in human rights indicators". This can lead us to the conclusion that the human rights scores and indicators are playing a major role in investment decisions that is in turn affecting the financial performance. One study examined the financial performance of Fortune 500 companies that emphasized the human rights within their company. The study concluded that there are 92 companies having a 'human rights' section as a part of CSR on their websites. These 92 companies were the sample of the study, and the financial performance was measured using ROE, profit margin, price to earnings (P/E) and debt to equity (D/E). These ratios for the sample have been compared with the top 15 industries ratios as measured by market capitalization The finding of the study was that there is no significant difference in the financial ratios between the sample companies and the top 15 industries. The author argued that these findings indicate that socially responsible and ethical business practices are correlated positively with the financial performance, as the investors are always willing to invest in businesses that implement social sustainability practices (Smith et al., 2018). Another study examined the effects of the human rights and work conditions within the organizations on the financial performance. The study targeted 5,100 workers in 185 factories and the data collection over the period between 2010 and 2013. The key findings of the study argued that factories experience 5.9% improvement in profitability when workers perceive improvements in working conditions including physical security and assurance in wage payments. In addition, the study argued that profitability is 7.6% higher when workers experience a comfortable environment and trusting workplace. Lastly, the results stated that the workers in the factories with better working conditions are 40 minutes faster in production than those in the factories with worse conditions. (Bağlayan et al., 2018). Moreover, this is supporting our argument in this research that considering and giving a concern for the human rights within the work environment is positively affecting the financial performance.

2.4.6 Employee Development and Financial Performance

Employee development concept has been existed since 1920s and it has been changing along the history depending on the market situation and trends. However, the most

common definition for this concept is that it is a system of providing opportunities for the employees to improve their skills and abilities by providing them with programs and trainings aligned in interests of both the organization and employees. It is commonly considered by most of the researchers as a factor that directly affects the financial performance of the organizations.

McDonald and Smith (1995) conducted a study targeting 437 publicly traded companies to investigate the relationship between employee development and the organizational performance. The results suggest that the organizations without training and performance management programs tend to under-perform relative to industry financial averages, while the organizations with training and development programs tend to perform at or above industry averages. Kirkpatrick's (1994) model of training evaluation to understand the impact of employee training and development programs on the organizational performance financially and non-financially was used by many organizations. The model includes four levels: 1- Reaction: Did the recipients enjoy the training? 2- Learning: Was the training content delivered to the recipients in the right way? 3- Impact: Did the training change behavior? 4- Results: Did the training influence performance?

A research study has been conducted based on 20 cases in Ireland including interviewing injured employees and their employers to demonstrate the impact of workplace accidents and lost working days and to discover the financial, physical, and psychological aspects of job security. The case studies were a mix of public and private sector organizations in which employees had workplace accidents, including health, manufacturing, construction, and local authority sectors. The findings suggest that the impact of the accidents was felt much more by the employees than the employer as the employee had to bear the negative financial and physical consequences of the accident. Fourteen out of twenty employers have not taken any procedures in any meaningful way to avoid the same accident types in the future. By looking into the direct impact of the workplace accidents from a financial perspective, the study concluded that the cost to the employers varies from €0 and reaching to €3.8 million. In almost all cases, employers underestimate the indirect financial impact such as the productivity losses, while the direct financial losses included salary costs for replacement employees or overtime payments, re-training costs for the new staff, personal injury claim

compensation, repair bills, medical & travel expenses, and increased supervision. The study suggested that the employer should take the advantages of maintaining a higher level of contact with the injured person and proactively managing the absence of employees to avoid any huge losses financially and physically (Hrymak & Pérezgonzález, 2007).

One further study has investigated the impact of HR development on the operational and financial performance of manufacturing organizations. The data collected from several sources for 207 manufacturing organizations in Korea over a five-year period. These organizations had on average 739 employees and represented diverse manufacturing industries. The study concluded that the human resource development practices enhance employee competence and commitment which is improving the operational performance of the organizations, and this is in turn affects the financial performance, employee outcomes, and organizational performance positively (Sun & Choi, 2011). The results from the previous studies lead us to the importance of the workforce development programs and health and safety training programs and their impact on the financial performance. Because workplace accidents are related to the training and development programs provided by the organizations as a sustainability-oriented practice.

2.4.7 Gender Diversity and Financial Performance

Gender diversity is defined as an equal ratio of males and females in the organization. Gender diversity is a different variable than the others discussed earlier in this chapter because it can be affected by several factors related to the culture, traditions, and geographic region. Because of that in this research Europe will be targeted as a sample as one of the regions that has advanced practices related to gender diversity In reference to previous research and studies, gender diversity could influence the organizational performance from different perspectives including financial performance, reputation, customer base, decision-making processes, and diversity of management styles.

A study, which has been conducted on 30 Lebanese organizations, concluded that the presence of women in managerial positions are negatively correlated with the financial performance. Most of women occupying a managerial position are family members.

They are included just for legal purposes and not for their managerial capabilities and skills or the value added they may bring to the performance of the firm. Because of that, they are not directly concerned with the business. In addition to that, most of the sampled women are married and they are giving priorities to their families. The financial measurements in this study were through return on assets, return on investment, and return on sales, while the independent variables were the presence of a female CEO, the number of women present on the board, the number of female managers, and the presence of a female entrepreneur (Salloum & Mercier-Suissa, 2016). For example, France has the highest number of women employees, where they represent 30%, in addition, women earn on average 26% less than men in France (Canepa, 2012). By looking to UK, the contribution of women entrepreneurs to the economic activity has reached 25%, which is mainly due to the growth of the service sector (O'Shea & Redien-Collot, 2012).

One more study examined the effect of board gender diversity on the financial performance in Taiwan. The sample consisted of 1065 organizations listed in Taiwan Stock Exchange Corporation and Taipei Exchange. The financial variable used in this study were Tobin's Q and ROA. The study suggested that having more female directors is affecting the overall organization's performance positively. In addition, the higher ration of female independent directors over total numbers of directors could be improving the financial performance positively (Wang, 2020).

Gender diversity might have different impacts on the financial performance in different countries with different cultures and traditions. Previous studies and statistics can be as a great example to compare the impact of female existence within the organizations. In the Middle East, gender diversity could be negatively affecting the financial performance, because of different tradition and cultures especially in specific countries, while the situation is completely different in Europe, which is dealing with the diversity as a must within the public and private organizations.

This chapter outlined the previous studies similar to this research in order to create a theoretical background. The next chapter will explain in detail the methodology and the empirical model that is used in this study.

Table 2.4. Findings of Previous Studies

Authors	Positive Relationship	Negative Relationship
Dalal and Thaker (2019)	Positive relationship between ESG scores in general and the financial performance.	
Wikhamn (2019).	Positive relationship between HRM practices and financial performance.	
Li et al. (2019)	Positive relationship between high-commitment work practices (HCWP) practices and financial performance.	
Petruškevičius (2016)	Positive relationship between the informal HRM system and the financial performance.	
Jerome (2013)	Positive relationship between HRM practices and the profitability, market value, increase in sales, productivity, and future investments.	

Table 2.4. Findings of Previous Studies (Continued)

Authors	Positive Relationship	Negative Relationship
Vermeeren (2014).	Positive direct relationship between the HR practices and the financial performance, and this relationship is not mediated by job satisfaction.	
Kotey and Sharma (2019)	Positive relationship between flexible working hours and return on labor, job satisfaction.	The flexible working hours had no significant effect on job satisfaction but reduced staff turnover.
Petenella (2010)	Positive relationship between CSR and productivity of employees, increased motivation, low absenteeism, and reduced turnover.	
Grossmeier (2015)	Positive relationship between investing in workforce health & well-being and the organizational performance.	
Smith et. al., (2018)	Positive relationship between socially responsible & ethical business practices and the financial performance.	
McDonald and Smith (1995)	Positive relationship between training and performance management programs and financial performance.	

Table 2.4. Findings of Previous Studies (Continued)

Authors	Positive Relationship	Negative Relationship
Hrymak and Pérezgonzález, (2007)	Positive relationship between workplace accidents that resulted from poor training programs and financial performance.	
Salloum and Mercier-Suissa, (2016)		Negative relationship between presence of females in management and the financial performance.
Bağlayan et al., (2018)	Positive relationship between human rights and work conditions within the organizations and the financial performance.	
Sun & Choi (2011)	Positive relationship between human resource development and the operational & financial performance.	
Wang (2020)	Positive relationship between board gender diversity and the financial performance.	

CHAPTER III

METHODOLOGY

This chapter attempts to explain the empirical model, methodology, time frame and sample of the work in detail. The definition of independent, dependent and control variables in addition to the expected relationship between them and the sources from where the data is retrieved, is depicted. By investigating the relationship between the variables through the methodology, the objective of this study could be achieved.

3.1 Model Specification

The following model specification is used to investigate the effect of sustainability-oriented HR practices on financial performance:

$$FP = f(HRpractices, TA, MC, CE)$$

where financial performance (FP) measured by return on asset (ROA) is a function of sustainability-oriented HR practices and a set of control variables such as organization size measured by total asset (TA), market capitalization (MC) and capital expenditures (CE).

3.2 Sample and Data Span

We use secondary data retrieved from Thomson Reuters Eikon database for five years spanning from 2015 to 2019. The data was collected for the public and private organizations having more than 100 employees over different European countries including Germany, United Kingdom, Italy, Belgium, Spain, Sweden, Denmark, Finland, and France. The targeted industries were industrial machinery and equipment, electrical components and equipment, construction and engineering, computer and electronic retailers, technology equipment and software and IT services.

Return on asset (ROA) was used as dependent variable to measure the financial performance of the organizations. To test the sustainability-oriented HR practices five

independent variables namely social pillar score, training hours score, workforce score, human rights score, and women in management levels within organizations were selected. The definitions of these variables are listed below.

3.2.1 Dependent Variables

The proxy used for financial performance is return on assets (ROA). The company's actual value is normalized to reflect the I/B/E/S default currency and corporate actions (e.g. stock splits). Specifically, ROA measures a company's operating efficiency regardless of its financial structure (in particular, without regard to the degree of leverage a company uses) and is calculated by dividing a company's net income prior to financing costs by total assets. By looking into the previous research and studies, ROA is always one of the financial performance measurements that is commonly used. Comparing it with the ROE, ROE only measures the return on organization's equity, leaving out the liabilities. In other words, ROA measures the organization's debt while ROE does not. Therefore, investors usually prefer to look at ROA to get the required information regarding the financial situation of the organization.

3.2.2 Independent Variables

In order to investigate the impact of sustainability-oriented HR practices five proxy measures were utilized as independent variables which are the gross social pillar score, training score, workforce score, human rights score and the numbers of women in management levels within the organization. All these scores were extracted from ESG scores listed on Thomson Reuters Database. The used calculation methodology of these scores as per Thomson Reuters (2017) is Percentile Rank scoring methodology and it is based on three factors:

• How many companies are worse than the current one?

• How many companies have the same value?

• How many companies have a value at all?

Percentile rank score is based on the rank, and therefore it is not very sensitive to outliers. The distribution of the scores generated with percentile rank score is almost flat, for this reason average and standard deviation of the scores generated with

percentile rank score are not overly useful. Each category score is the equally weighted sum of all the indicators used to create it. The normalized weights are calculated excluding indicators with no data available in the public domain. All the independent variables are defined in detail as below.

1. Social Pillar Score: The social pillar measures a company's capacity to generate trust and loyalty among its workforce, customers, and society, using best management practices. It reflects the company's reputation and social viability that allows it to continue operating based on the necessity to consider sustainability factors. They are key factors in determining its ability to generate long-term value for stakeholders.

2. Workforce Score: Workforce category score measures a company's effectiveness towards job satisfaction, healthy and safe workplace, maintaining diversity and equal opportunities, and development opportunities for its workforce.

3. Policy Human Rights Score: It attempts to answer the question of whether the company has policies to ensure the respect of human rights in general.

4. Average Training Hours Score: It is defined as the average hours of training provided by the organization per year per employee. Calculated by dividing the total training hours by the total number of employees not the trained employees only. This score includes all types of training given to all employees (such as health & safety, environmental, emergency response, skills & career development training).

5. Women Managers: It is defined as the percentage of women managers among total managers within the organization, if there is a breakdown by category in percentage such as top, senior, middle, junior management, then we consider the percentage of middle women managers percentage of women managers = number of women managers/total number of managers*100.

3.2.3 Control Variables

To improve the healthiness of the model, some variables that can influence the organization financial performance have been used as control variables. Looking at previous similar research there are common variables that could be used. In this research, organization size measured by total assets, market capitalization that represents the sum of market value are used as control variables.

Three control variables have been used in this study as critical variables affecting financial performance. The first one is the size of the organization measured by total assets; the second one is the market capitalization that represents the sum of market value for all relevant issue level share types. The issue level market value is calculated by multiplying the requested shares type by latest close price. This item supports default, free float, and outstanding share types. The default share type is the most reported type for a market, and this type of shares is the most issued, outstands, or listed. The last control variable is the capital expenditures of the company as it can significantly impact financial performance. Capital Expenditure are the funds used by a company to acquire or upgrade physical assets such as property, industrial buildings, or equipment or the amount used during a particular period to acquire or improve long term assets such as property, plant, or equipment.

3.3 Econometric Methodology

Mainly there are two types of data: time series and cross-sectional. "Cross-sectional data enables to search into types of units over a definite time whereas time series data measures a unit in a certain period" (Ciftci, 2016). For example, to analyze the impact of the social sustainability-oriented HR practices on the financial performance of more than one country using different scores at a certain period involves a kind of cross-sectional data, while to assess one of the country's sustainability-oriented HR practices social scores during a longer period of time involves time-series data. However, the datasets sometimes bear characteristics of both time-series and cross-sectional data simultaneously that is called pooled or longitudinal data. According to Guris (2015), units in the pooled data can demonstrate differences according to cross-sections or time.

Data that is consistent about cross-sectional and time period is called panel data. This implies that all panel data demonstrates pooled data, yet the opposite is not necessarily right. Meaning that pooled data cannot exemplify all panel data. What is significant about panel data is, it enables the use of many variables for a long period simultaneously. It combines both time-series and cross-sectional characteristics. Baltagi (2005) has claimed that panel data includes "the pooling of observations on a cross-section of households, countries, firms, etc. over several periods." Additionally,

Andreß et al. (2013) stated that having repeated information coming from the same units over many years is defined as panel data. Since our research dataset is combining both time series (5 years ranging from 2015 to 2019) and cross-sectional observations (including 328 organizations), we will be using the panel data methodology that best fits our model. Hsiao (2003) shows that using a panel dataset can have some advantages in comparison with the time-series and cross-sectional datasets. Some of the pros are highlighted below:

i. Using panel data gives a more precise assumption for the model parameters. It provides data that are more helpful, reduce multi-collinearity (which is seen mostly in time series dataset) and increase degrees of freedom in descriptive variables.
ii. Panel data has a higher capacity for building practicable behavioral hypotheses.
iii. Whereas cross-sectional data or time-series data cannot estimate the macro and micro-dynamic impacts, panel data is working better as an estimator in such a dynamic environment.
iv. Panel data is a good estimator that can control the effect of omitted variables. It leads to highly appropriate predictions for individual outcomes. Biørn (1992) argued that panel data helps with controlling unobserved time-specific and/or individual heterogeneity.

On the other hand, Baltagi (2005) pointed out some limitations of panel data. Data design and collection is the most fundamental restriction because panel data combines both time series and cross-sectional remarks that require a longer time for data collection. Some coverage problems may emerge since some variables cannot be part of the research. Further, measurement errors can exist due to faulty responses derived from unclear questions, inappropriate informants, and memory errors and so on.

3.4 Reliability

Reliability is a crucial concern for any study and refers to meeting some research criteria. The consistency in data collection is the first possible concern that needs to be discussed. Most of the data used in research generally come from companies' financial statements. Besides, Thomson Reuters Eikon DataStream is used to select companies and collect data. Eikon "DataStream" is a database that is broadly used by specialists

and scholars. Considering that, the data comes from a reliable institution and follows a specific framework, it can be considered as a reliable source. Moreover, the use of five-years enables us to decrease the risk of having temporal errors affecting our data (Bryman & Bell, 2011). It also strengthens the stabilization of the outcomes of our study, thus affecting positively on the reliability.

3.5 Empirical Models

Since our data comprises of large number of organizations from different countries and data over a period of five years, it forms a panel having individual organizations (i) and time (t) dimensions. Since panel data comprises of heterogeneous organizations having diverse characteristics, the panel data usually suffer from the heterogeneity effect. In this situation, using Ordinary Least Square (OLS) estimates produce biased and unreliable results. Therefore, we use panel data generalized least square (GLS) method to estimate the empirical model that allows for testing individual specific and time specific effects in the model.

Below we present the equation that include the panel data specifications.

$$ROA_{i,t} = \alpha + \beta_1 HRPractices_{i,t} + \gamma_1 TA_{i,t} + \gamma_2 MC_{i,t} + \gamma_3 CE_{i,t} + \mu_i + \vartheta_t + e_{it} \quad (1)$$

In the equation above, the left-hand side of the equation presents the dependent variables ROA measuring the financial performance of organizations. The right-hand side presents a set of independent and control variables. HR practices is a matrix of five independent variables namely, social pillar score, workforce score, human rights score, women managers, and training hours score. Total assets (TA), market capitalization (MC) and capital expenditures (CE) are control variables that can significantly affect financial performance and are used as control variables in many other previous studies. μ_i presents the organization specific unobserved fixed effect; ϑ_t is time trend; β and γ are parameters of independent and control variables respectively; i is the number of cross-sections; t is the time trend component, and e is the error term.

The figure below is comprehensively visualizing the connection between the dependent and the independent variables: The research model will take the following shape as presented in the Figure 3.1.

Our hypotheses are formulated as in the following statements:

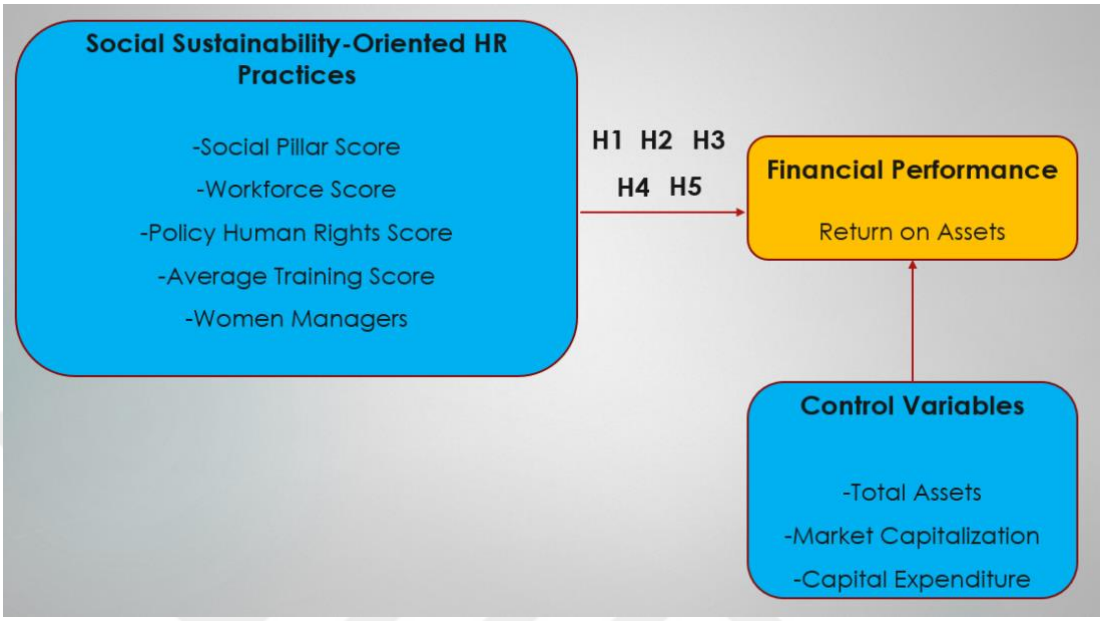

Figure 3.1. Research Framework

H1: Social pillar score is positively and significantly related with organizations' financial performance.

H2: Workforce score is positively and significantly related with organizations' financial performance.

H3: Human rights score is positively and significantly related with organizations' financial performance.

H4: Employees' training and development is positively and significantly related with organizations' financial performance.

H5: Gender diversity is positively and significantly related with organizations' financial performance.

This chapter showed the methodology behind this study including the study variables, empirical model, research hypotheses, and the study sample & data collection. The next chapter will investigate the extracted results depending on the model and the samples used.

CHAPTER IV

RESULTS AND FINDINGS

Based on the methodology outlined in the previous chapter, this chapter presents the empirical findings and results of the study. Firstly, descriptive statistics correlations among variables have been presented. Finally, the Generalized Least Square estimates of random effect and fixed effect has been discussed.

4.1 Descriptive Statistics

The Table 4.1 below presents the descriptive statistics of the study. The descriptive statistics are calculated using normal form of data except for the total assets, market capitalization and capital expenditures that are run using natural log form. Ignoring the data having large values helps in normalizing the dataset by removing sharpness from data.

The dependent variable ROA has a mean value of 8.002 and the standard deviation is 15.217, while the minimum value is 0.096 and the maximum value is 249.232. This shows that the sample is comprised of organizations that are highly efficient in utilizing their assets and the organizations that have low efficiency in utilizing their assets.

The first independent variable, social pillar score has a mean value of 71.372 with a standard deviation of 29.425. This implies that there are organizations that perform very well on the social pillar dimension. The mean value of work force score is 61.61 with standard deviation 31.46. The minimum and maximum value ranges between 2.93 and 99.88. The mean value of human right score is 50.63 with a standard deviation of 38.07, which shows that the sample organizations deviate a lot in terms of the human rights score. The minimum and maximum value ranges between 57.69 and 92.16, which shows that organizations generally score high on the human rights dimension. The mean value of women manager is 15.83 with standard deviation of 12.05. The minimum and maximum values range between 1 and 60. The training hour score has a mean value of 28.24 and standard deviation 28.59. The minimum and maximum

values range between 0.75 and 99. The total assets is a measure of organization size. The mean value for natural log of total assets is 22.136, and the standard deviation is 1.592. A low value of standard deviation means that the organizations do not differ a lot between themselves in terms of total assets. The minimum and maximum value ranges between 17.695 and 26.742. The natural log of market capitalization is an indicator of business valuation of organizations. The mean value of market capitalization is 22.12 and standard deviation is 1.366. The minimum and maximum value ranges between 18.17 and 26.35. Capital expenditures represent the money spent by organization on acquiring and maintaining fixed assets. The mean value of capital expenditures by organizations is 18.60 and standard deviation is 1.927. The minimum and maximum value ranges between 11.7l1 and 24.056.

Table 4.1 Descriptive Statistics

Variable	Obs	Mean	Std.Dev.	Min	Max
Return on Assets	1277	8.002	15.217	0.096	249.232
Social Pillar Score	1637	71.372	29.425	1.680	98.26
Work force Score	1591	61.617	31.462	2.93	99.88
Human Rights Score	1546	50.633	38.071	57.69	92.16
Women Manager	1217	15.839	12.050	1.00	60
Training Hours Score	917	28.246	28.599	0.75	99
Total Assets	1635	22.136	1.592	17.695	26.742
Market Capitalization	1640	22.120	1.366	18.171	26.358
Capital Expenditures	1640	18.600	1.927	11.711	24.056

Turkish organizations were excluded from this study due to the unavailability of data required by the research. The majority of the research sample are German, Finnish, French, Swedish, Swiss, and British companies while Czech Republic, Hungary, Iceland, Isle of Man, Lithuania, and Malta are represented only by one company.

Table 4.2. Number of Companies in Each Country

Country of Headquarter	Number
Austria	6
Belgium	6
Cyprus	3

Table 4.2. Number of Companies in Each Country (Continued)

Czech Republic	1
Denmark	7
Finland	32
France	18
Germany	57
Greece	4
Hungary	1
Iceland	1
Ireland	9
Isle of Man	1
Italy	7
Lithuania	1
Luxemborg	7
Malta	1
Netherlands	16
Norway	10
Poland	7
Portugal	3
Russia	2
Spain	9
Sweden	32
Switzerland	29
United Kingdom	58
Total	**328**

It is also meaningful to check the industries in which the organizations are operating. Table 4.3. Exhibits the distribution of companies under research based on the Thomson Reuter's Eikon Database. Of 328 companies, 90 are from the construction & engineering, industrial machinery & equipment sector, followed by telecommunications, IT and software with 72. On the other hand, only two companies are operating for each of these two sectors: diversified industrial goods wholesalers

and environmental services & equipment, and one company in the phones & handheld devices sector.

Table 4.3. Sector-Wise Classification of Firms.

Sectors	Number of companies
Airlines, Airport Services and Aerospace & Defense	22
Business Related Services	50
Telecommunications, IT and Software	72
Computer Hardware & Electrical Equipment	42
Construction & Engineering, Industrial Machinery & Equipment	90
Logistics & Passenger Transportation	22
Diversified Industrial Goods Wholesalers	2
Environmental Services & Equipment	2
Oil & Gas	22
Phones & Handheld Devices	1
Renewable Energy Equipment & Services	3
Total	**328**

4.2 Correlation

The correlation matrix below in Table 4.2 presents the inter item correlation without controlling of any effects such as serial correlation and heteroscedasticity. Therefore, it can only provide a rough estimation of the relationship among variables. For example, most of independent variables are negatively correlated with ROA except for women managers and market capitalization.

Table 4.4. Correlation Matrix

Variables	Return on Assets	Social Pillar Score	Workforce Score	Human Rights Score	Women Manager	Training Hours Score	Total Assets	Market Capitalization	Capital Expenditure
1.Return on Assets	1.000								
2. Social Pillar Score	-0.0620	1.000							
3. Workforce Score	-0.0212	0.7701	1.000						
4. Human Rights Score	-0.0428	0.4885	0.3364	1.000					
5. Women Manager	0.1383	0.2865	0.3442	0.2333	1.000				
6. Training hours Score	-0.0712	0.3400	0.3896	0.1866	0.1572	1.000			
7. Total Assets	-0.4016	0.4709	0.4062	0.2120	0.2041	0.2289	1.000		
8. Market Capitalization	0.0286	0.4922	0.4028	0.2263	0.2621	0.2457	0.8290	1.000	
9. Capital Expenditure	-0.3413	0.4070	0.3175	0.1665	0.2342	0.2447	0.8558	0.7240	1.00

4.3 Generalized Least Square Estimates

The method employed to test the empirical model is Generalized Least Square Method (GLS). After checking data properties and frequencies, the second stage is to verify the existence of firm specific effect and the heterogeneousity of sample firms. Such preliminary testing is necessary to figure out if a random model exists or if there is a fixed effect in the dataset.

4.3.1 Financial Performance and Social Pillar Score

This section tests the first hypothesis of the study: ***H_1: Social pillar score is positively and significantly related with organizations' financial performance***. Return on assets (ROA) as the dependent variable and three control variables that are total assets as proxy for organization size, market capitalization and capital expenditures were utilized. The first column under model I represents random effect. The findings of the random effect show a significant and positive relationship between dependent variable ROA and social pillar score and market capitalization, except for the total assets that is negatively and significantly related to ROA. The capital expenditure is insignificant in its impact on financial performance using random effect.

The second column under model I represents fixed effect estimates. Accordingly, the relationship between ROA and social pillar is positive and significant at 5% level of significance. The social pillar score is the weighted sum of the Workforce, Human Rights, Community and Product Responsibility category scores, which include several factors related to the HR practices within the organizations. The result shows that when organizations adopt good social practice, their financial performance also increases and when they are ignoring the good social practices, their financial performance decreases. The first control variable, total asset is negatively and significantly related to financial performance in our sample. The second control variable, market capitalization is positively and significantly related to financial performance at 1% level of significance while the third control variable, which is the capital expenditure, is not significantly impacting the financial performance in this model.

Table 4.5. Financial Performance and Social Pillar Score

	Model I (Dependent var: ROA)	
	Random Effect	Fixed Effect
Constant	28.146 (0.000)***	19.074 (0.006)***
SPS	0.0116 (0.010)**	0.009 (0.038)**
lnTA	-3.545 (0.000)***	-2.866 (0.000)***
lnMC	2.482 (0.000)***	2.128 (0.000)***
lnCE	0.1589 (0.326)	0.266 (0.105)
Hausman test	96.33 (0.0000)	
Observations	1258	1258

**** p<0.01, ** p<0.05, * p<0.1*

Table 4.6. Variance Inflation Factor & Serial Correlation

Multicollinearity (vif)	**3.86**
Serial Correlation (F-stat)	0.366 (0.5458)

Table 4.7. Test of Heteroskedasticity

H0: sigma(i)^2 = sigma^2 for all i
chi2 (302) = 2.9e+33
Prob>chi2 = 0.0000

To test whether there is an existence of a random or fixed effect in the sample data the Hausman test has been used. The Hausman test examines the null hypotheses of random effect existence among the sample data against the alternative hypothesis that states that there is an existence of fixed effect. The value of Hausman test is 96.33, which is significant at a level of 1%. This result shows that the null hypothesis is

rejected, and the alternative hypothesis should be accepted H_1: Cov (α_1, X_{it}) $\neq$ 0. Therefore, there exists of a specific fixed effect in the sample data. Hence, the fixed effect estimates are more efficient and reliable.

We also tested for multicollinearity in the data using Variance Inflation Factor (VIF). Multicollinearity test is used to see if two or more variables are highly correlated to each other or not. The VIF mean value is 3.61 shows that there is no multicollinearity in the empirical model. We also tested for heteroscedasticity using Wald test, the Wald test is a way to find out if explanatory variables in a model are significant. "Significant" means that they add something to the model; variables that add nothing can be deleted without affecting the model in any meaningful way. Depending on the Wald test the heteroscedasticity value is significant at 1% level, hence the null hypothesis of no heteroscedasticity in the sample data can be rejected. Therefore, we conclude that there is heteroscedasticity in the sample data set. Lastly, we also tested for the first order serial correlation in the data. The null hypothesis states that there is no first order serial correlation in the data while the alternative hypothesis states that there is first order serial correlation in the data. The F-statistics of serial correlation is insignificant; therefore, we cannot reject the null hypothesis, and conclude that there is no first order serial correlation in our sample data set.

4.3.2 Financial Performance and Workforce Score

This section tests the second hypothesis of the study: ***H_2: Workforce score is positively and significantly related with organizations' financial performance.*** It presents the relationship between financial performance and workforce score using the dependent variable return on assets (ROA) and three control variables, which are total assets as proxy for organization size, market capitalization and capital expenditures. In the model II, the dependent variable is again ROA. The first column under model II represents random effect. The findings of the random effect show a significant and positive relationship between dependent variable ROA and independent variable workforce score. On the other hand, ROA's relationship with control variables market capitalization, total assets and capital expenditure are positive, negative and insignificant respectively.

The second column under model II represents fixed effect estimates. Accordingly, the relationship between ROA and workforce score is positive and significant at 1% level

of significance. The workforce score measures a company's effectiveness towards job satisfaction, healthy and safe workplace, maintaining diversity, equal opportunities, and development opportunities for its workforce. The result shows that when organizations invest for the job satisfaction, health and safety, diversity, and equality of opportunities for its workforce, this leads to an increase in their financial performance and vice versa. The first control variable, total asset is negatively related to financial performance in our sample of organizations. The second control variable, market capitalization is positively and significantly related to financial performance at 1% level of significance. The third control variable, capital expenditure is significant to affect the financial performance in this model.

Table 4.8. Financial Performance and Workforce Score

	Model II (Dependent var: ROA)	
	Random Effect	Fixed Effect
Constant	34.61 (0.000)***	29.233 (0.000)***
WFS	0.009 (0.018)**	0.007 (0.077)**
lnTA	-3.874 (0.000)***	-3.365 (0.000)***
lnMC	2.507 (0.000)***	2.187 (0.000)***
lnCE	0.174 (0.264)	0.253 (0.109)
Observations	1231	1231
Hausman test	93.89 (0.0000)	

**** p<0.01, ** p<0.05, * p<0.1*

Table 4.9. Variance Inflation Factor & Serial Correlation

Multicollinearity (vif)	**3.80**
Serial Correlation (F-stat)	0.388 (0.5339)

Table 4.10. Test of Heteroskedasticity

H0: sigma(i)^2 = sigma^2 for all i
chi2 (297) = 2.8e+33
Prob>chi2 = 0.0000

To test whether there exists a random or fixed effect in the sample data, the Hausman test has been used. The Hausman test examines the null hypotheses of the random effect existence among the sample data against the alternative hypothesis stating that there exists of fixed effect.

The value of Hausman test is 93.89, which is significant at the 1% level. This result shows that the null hypothesis can be rejected, and the alternative hypothesis cannot be rejected H_1: Cov (α_1, X_{it}) $\neq$ 0. Therefore, there is an existence of specific fixed effect in the sample data. Hence, the fixed effect estimates are more efficient and reliable.

We tested for multicollinearity in the data using Variance Inflation Factor (VIF). The multicollinarity test is used to see if two or more variables are highly correlated to each other or not. The VIF mean value is 3.80 shows that there is no multicollinarity in the empirical model. We also tested for heteroscedasticity using Wald test. The Wald test investigates the null hypothesis stating that there is no heteroscedasticity against the alternative hypothesis stating that there is heteroscedasticity. The heteroscedasticity value is significant at the 1% level, hence the null hypothesis of no heteroscedasticity in the sample data can be rejected, and therefore we conclude that there is heteroscedasticity in the sample data set. Lastly, we also tested for first order serial correlation in the data. The null hypothesis states that there is no first order serial correlation in the data, while the alternative hypothesis states that there is first order serial correlation in the data. The F-statistics of serial correlation is insignificant; therefore, we cannot reject the null hypothesis and conclude that there is no first order serial correlation in our sample data set.

4.3.3 Financial Performance and Human Rights Score

This section tests the third hypothesis of the study: ***H_3: Human rights score is positively and significantly related with organizations' financial performance.*** It presents the relationship between financial performance and human rights score using

the dependent variable; return on assets (ROA) and three control variables; total assets as proxy for organization size, market capitalization and capital expenditures In the model III, the dependent variable is ROA. The first column under model III represents random effect. The findings of the random effect show a significant and positive relationship between dependent variable ROA and independent variable human rights score at 1% level of significance. The control variables market capitalization and capital expenditure are positively and statistically significantly related to ROA, except for total assets that is negatively and significantly related to ROA.

The second column under model III represents fixed effect estimates. Using the fixed effect estimates the relationship between ROA and human rights score is positive and significant at 10% level of significance. The human rights score measures companies' policy to ensure human rights of its employees in general. The result shows that when organizations devise a human rights policy and take care of their employees' human rights this leads to a positive impact on their financial performance and vice versa. The coefficient of first control variable total asset is negative and statistically significant at 1% percent of significance to affect the financial performance in our sample of organizations. The second and third control variable, market capitalization and capital expenditures are positively and significantly related to financial performance at 1% and 5% level of significance respectively.

Table 4.11. Financial Performance and Human Rights Score

	Model III (Dependent var: ROA)	
	Random Effect	Fixed Effect
Constant	42.259 (0.000)***	39.713 (0.000)***
HRS	0.005 (0.026)**	0.004 (0.062)*
lnTA	-4.311 (0.000)***	-3.902 (0.000)***
lnMC	2.498 (0.000)***	2.160 (0.000)***
lnCE	0.314 (0.052)*	0.380 (0.020)**

Table 4.11. Financial Performance and Human Rights Score (Continued)

Observations	1213	1213
Hausman test	82.96 (0.0000)	

**** p<0.01, ** p<0.05, * p<0.1*

Table 4.12. Variance Inflation Factor & Serial Correlation

Multicollinearity (vif)	**3.68**
Serial Correlation (F-stat)	0.485 (0.4866)

Table 4.13. Test of Heteroskedasticity

H0: sigma(i)^2 = sigma^2 for all i
chi2 (296) = 2.6e+33
Prob>chi2 = 0.0000

To test whether there is an existence of a random or fixed effect in the sample data, the Hausman test has been used. The Hausman test, examines the null hypotheses of the random effect existence among the sample data against the alternative hypothesis stating that there is an existence of fixed effect. The value of the Hausman test is 82.96 that is significant at 1% level. This result shows that the null hypothesis can be rejected, and the alternative hypothesis cannot be rejected H_1: Cov (α_1, X_{it}) $\neq 0$. Therefore, there is an existence of specific fixed effect in the sample data. Hence, the fixed effect estimates are more efficient and reliable.

We tested for multicollinarity in the data using Variance Inflation Factor (VIF). Multicollinarity test is used to see if two or more variables are highly correlated to each other or not. The VIF mean value of 3.68 suggests that there is no multicollinarity in the empirical model. We also tested for heteroscedasticity using the Wald test. The Wald test investigates the null hypothesis stating that there is no heteroscedasticity against the alternative hypothesis stating that there is heteroscedasticity. The heteroscedasticity value is 2.6 which is significant at the 1% level, hence the null hypothesis of no heteroscedasticity in the sample data can be rejected, and therefore we conclude that there is heteroscedasticity in the sample data set. Lastly, we also

tested for the first order serial correlation in the data. The null hypothesis states that there is no first order serial correlation in the data while the alternative hypothesis states that there is first order serial correlation in data. The F-statistics of serial correlation is insignificant; therefore, we cannot reject the null hypothesis and conclude that there is no first order serial correlation in our sample dataset.

4.3.4 Financial Performance and Training Hours Score

This section tests the fourth hypothesis of the study: ***H_4: Employees' training and development is positively and significantly related with organizations' financial performance.*** It presents the relationship between financial performance and training hour score using the dependent variable; return on assets (ROA) and three control variables; total assets as proxy for organization size, market capitalization and capital expenditures. In the model IV, the dependent variable is ROA. The first column under model IV represents random effect. The findings of the random effect show a significant and positive relationship between dependent variable ROA and independent variable training hours score at 5% level of significance. The first control variable total asset is negatively and significantly related to ROA. The second control variable market capitalization is positively and significantly related to ROA while third control variable capital expenditure is not significantly affecting the ROA in this model.

The second column under model IV represent fixed effect estimates. Using the fixed effect estimates the relationship between ROA and training hours score is positive and significant at 5% level of significance. The training hours score measures average hours of training per year per employee. The result shows that when organizations provide proper training to its employees this leads to a positive impact on their financial performance and vice versa. The coefficient of first control variable total asset is negative and statistically significant at 1% percent of significance to affect the financial performance in our sample of organizations. The second control variable, market capitalization is positively and statistically significantly related at 1% percent level of significance to ROA, while third control variable capital expenditures is not significantly impacting the financial performance in this model.

Table 4.14. Financial Performance and Training Hours Score

	Model IV (Dependent var: ROA)	
	Random Effect	Fixed Effect
Constant	35.202 (0.000)***	27.890 (0.001)***
THS	0.008 (0.038)**	0.007 (0.048)**
lnTA	-4.155 (0.000)***	-3.590 (0.000)***
lnMC	2.835 (0.000)***	2.460 (0.000)***
lnCE	0.111 (0.549)	0.246 (0.194)
Observations	730	730
Hausman test	72.68 (0.0000)	

**** p<0.01, ** p<0.05, * p<0.1*

Table 4.15. Variance Inflation Factor & Serial Correlation

Multicollinearity (vif)	**3.15**
Serial Correlation (F-stat)	2.464 (0.1192)

Table 4.16. Test of Heteroskedasticity

H0: sigma(i)^2 = sigma^2 for all i
chi2 (273) = 1.2e+07
Prob>chi2 = 0.0000

To test whether there is an existence of a random or fixed effect in the sample data the Hausman test has been used. The Hausman test, examines the null hypotheses of random effect existence among sample data against the alternative hypothesis stating that there is an existence of fixed effect. The value of Hausman test is 72.68, which is significant at 1% level. This result shows that the null hypothesis can be rejected, and the alternative hypothesis cannot be rejected H_1: Cov (α_1, X_{it}) ≠ 0. Therefore, there is

an existence of specific fixed effect in the sample data. Hence the fixed effect estimates are more efficient and reliable.

We tested for multicollinearity in the data using the Variance Inflation Factor (VIF). The multicollinearity test is used to see if two or more variables are highly correlated to each other or not. The VIF mean value of 3.15 shows that there is no multicollinearity in the empirical model. We also tested for heteroscedasticity using Wald test. The Wald test investigates the null hypothesis stating that there is no heteroscedasticity against the alternative hypothesis stating that there is heteroscedasticity. The heteroscedasticity value is 1.2, which is significant at 1% level, hence the null hypothesis of no heteroscedasticity in the sample data can be rejected, and therefore we conclude that there is heteroscedasticity in the sample data set. Lastly, we also tested for first order serial correlation in the data, the null hypothesis states that there is no first order serial correlation in data while the alternative hypothesis states that there is first order serial correlation in data. The F-statistics of serial correlation is insignificant; therefore, we cannot reject the null hypothesis and conclude that there is no first order serial correlation in our sample data set.

4.3.5 Financial Performance and Women Manager

This section tests the fifth hypothesis of the study: ***H_5: Gender diversity is positively and significantly related with organizations' financial performance.*** It presents the relationship between financial performance and women manager the dependent variable; return on assets (ROA) and three control variables; total assets as proxy for organization size, market capitalization and capital expenditures. In the model V, the dependent variable is ROA. The first column under model IV represents random effect. The findings of the random effect show a significant and positive relationship between dependent variable ROA and independent variable women managers at 5% level of significance. The first control variable total asset is negatively and significantly related to ROA. The second and third control variables market capitalization and capital expenditures are positively and significantly related to ROA at 1% and 5% level of significance respectively.

The second column under model V represents fixed effect estimates. Using the fixed effect estimates, the relationship between ROA and women manager is positive and

significant at 10% level of significance. The variable "women managers" measures the percentage of women managers among the total managers. It shows the gender diversity in organizations' management. Gender diversity is a positive feature and is expected to influence financial performance positively.

The result shows that when in organizations there is gender diversity the financial performance increases and vice versa. The coefficient of first control variable total asset is negative and statistically significant at 1% percent of significance to affect the financial performance in our sample of organizations. The second and third control variables market capitalization and capital expenditures are positively and significantly related to ROA at 1% and 5% level of significance respectively.

Table 4.17. Financial Performance and Women Manager

	Model V (Dependent var: ROA)	
	Random Effect	Fixed Effect
Constant	49.103 (0.000)***	44.147 (0.000)***
lnWM	1.190 (0.024)**	0.992 (0.065)**
lnTA	-4.769 (0.000)***	-4.079 (0.000)***
lnMC	2.341 (0.000)***	1.824 (0.000)***
lnCE	0.544 (0.017)**	0.660 (0.004)***
Observations	752	752
Hausman test	58.77 (0.0000)	

*** p<0.01, ** p<0.05, * p<0.1*

Table 4.18. Variance Inflation Factor & Serial Correlation

Multicollinearity (vif)	**4.41**
Serial Correlation (F-stat)	0.077 (0.7814)

Table 4.19. Test of Heteroskedasticity

H0: sigma(i)^2 = sigma^2 for all i
chi2 (212) = 1.2e+34
Prob>chi2 = 0.0000

To test whether there is an existence of a random or fixed effect in the sample data, the Hausman test has been used. The Hausman test, examines the null hypotheses of random effect existence among the sample data against the alternative hypothesis states that there is an existence of fixed effect. The value of the Hausman test is 58.77, which is significant at 1% level. This result shows that the null hypothesis can be rejected, and the alternative hypothesis cannot be rejected (H_1: Cov (α_1, X_{it}) $\neq$ 0). Therefore, there is an existence of specific fixed effect in the sample data. Hence, the fixed effect estimates are more efficient and reliable.

We tested for multicollinearity in the data using the Variance Inflation Factor (VIF). Multicollinearity test is used to see if two or more variables are highly correlated to each other or not. The VIF mean value is 4.41, which shows that there is no multicollinearity in the empirical model. We also tested for heteroscedasticity using Wald test. The Wald test investigates the null hypothesis states that there is no heteroscedasticity against the alternative hypothesis states that there is heteroscedasticity. The heteroscedasticity value is 1.2, which is significant at 1% level, hence the null hypothesis of no heteroscedasticity in the sample data can be rejected, and therefore we conclude that there is heteroscedasticity in the sample data set. Lastly, we also tested for first order serial correlation in the data. The null hypothesis states that there is no first order serial correlation in the data while the alternative hypothesis states that there is first order serial correlation in the data. The F-statistics of serial correlation is insignificant; therefore, we cannot reject the null hypothesis and conclude that there is no first order serial correlation in our sample data set.

All previous results are mentioned in details at the end of the text in Appendix A.

4.4 Hypothesis Confirmation

Recalling our hypothesis that have been listed earlier in the previous chapter, the Table 4.20 is presenting the expected relationship between the variables and the actual result.

Table 4.20 Hypothesis Confirmation.

	Expected Relationship	**Rejected/ Accepted**	**Actual Relationship**
H1	The relationship between social pillar score and organizations' financial performance.	Accepted	Statistically significant and positive relationship
H2	The relationship between workforce score and organizations' financial performance.	Accepted	Statistically significant and positive relationship
H3	The relationship between human rights score and organizations' financial performance.	Accepted	Statistically significant and positive relationship
H4	The relationship between Employees' training and development and organizations' financial performance.	Accepted	Statistically significant and positive relationship
H5	The relationship between gender diversity and organizations' financial performance.	Accepted	Statistically significant and positive relationship

As Table 4.20 shows, all hypotheses were confirmed by the results showing a significant and positive relationship between the studied variables.

CHAPTER V

DISCUSSION AND CONCLUSION

5.1 Discussion

Based on the results and findings in the previous chapter, this final chapter presents the discussion, conclusion, and future guidelines. Firstly, we found that the social pillar score is related positively and significantly to the financial performance (see model I). The social pillar score measures the companies' ability to generate trust and loyalty with its workforce, customers, and society. Organizations having a high social pillar score are more likely to generate more value for shareholders than organizations that score low on social pillar score. As organizations are earning the trust and loyalty of the workforce, customers, and stakeholders, it can easily be reflected in its financial performance. Such as a loyal and satisfied workforce will strive to work for the best interest of the organization. Similarly, the trust and loyalty of customers will generate good will for the organization, therefore investors and stakeholders will give more value for the organizations than the organizations with low social pillar scores. Hence, social pillar score is a critical measure that influences the organization performance in a positive manner. The aim of organizations is to generate profit and value for its shareholders, by investing in creating trust and loyalty of workforce, customers, and society the organizations can achieve desired financial goals. Patenella (2010) finds a positive and significant relationship between social scores and financial performance through a study arguing that one of the potential benefits of CSR is that it can improve the productivity of employees by increased motivation, low absenteeism, and reduced turnover. All the three mentioned factors are directly related to HR practices from a social aspect.

Secondly, our findings suggest that workforce score is significant in affecting financial performance of the organizations in our sample. Workforce score measures the organizations effectiveness in creating job satisfaction, equality of opportunities, organization efforts to ensure health and safety of employees. All these factors are

critical in the formation of a healthy work environment and satisfaction of employees. Many studies show that job satisfaction leads to improved employee productivity. Hence, it is critical for an organization to maintain a good workforce score to reduce employee's turnover. Similarly, when the organization provide equal opportunities to its employees to develop their selves, this creates a healthy competition for excellence within organization. Moreover, ensuring health and safety of employees reduces negative feelings of employees and discourage labour unions to rebel against the management's policies. Moreover, Grossmeier (2015) argued the investment in workforce health and well-being is one facet of high-performing, well-managed companies, which is in line with our findings that there is a positive correlation between workforce scores and financial performance.

Thirdly, we find that the human rights score is positively and statistically significantly related with financial performance. The human rights score measures the concerns of organizations towards human rights in general. When organizations ensure the basic human rights of employees and society in which the organization is operating, it creates good will for the organizations. Moreover, that motivates the investors to invest in the organizations, which results in an improvement in financial performance. Our findings are supporting previous studies as argued by Smith et al., (2018) that there is no significant difference in the financial ratios between the study sample and the top 15 industries. Therefore, these findings indicate that socially responsible and ethical business practices are related positively with financial performance, as investors always prefer to support and invest in businesses that have real sustainability-oriented practices in HR and in other departments.

Fourthly, we observed that training hours score, a measure of employee training and development, is positively and significantly related with organizations' financial performance. Training and development are crucial to achieve financial performance targets. Since the sample of organization is taken from the European region, the organizations in these countries maintain a moderate gender diversity and employees' human rights are part of the job description. Therefore, investing in these two dimensions of sustainable HR practices cannot help a lot in increasing financial performance. Due to the changing nature of business environment and technological advancement, the firms continually adopt new ways of manufacturing, procurement,

product deliver services and organizations' internal systems. This requires that organization should continually develop their employees' skill through training and development. The HR department is crucial here to develop training programs providing employees with such skills that are useful and toward the interest of the organization and the employee at the same time. McDonald and Smith (1995) also found a positive and significant relation between training & development programs and financial performance. Accordingly, they argued that the organizations without training and performance management programs tend to under-perform relative to the financial averages of their industry, while the organizations with training and development programs tend to perform at or above industry averages.

Lastly, our results show that gender diversity is positively and significantly related with organizations' financial performance (see model V). The gender diversity within organization is measured by the number of women managers among the total number of managers. Gender diversity is considered to bring creativity and diversity of opinion in the organization. Having gender diversity in top management encourages organization to participate in charitable activities and to create a close bond with the community. It also stimulates the organizations to be concerned with the environment, society and community while undertaking their business activities in the society, which in turn creates good will for the organization. This leads to a higher association of the investors and a higher value for organizations considering the gender diversity as an important practice to reach a sustainable HR system. There are various arguments in the previous studies regarding the relation between gender diversity and the financial performance. These conflicting arguments arose because of the differences in the cultures and traditions in different regions. As concluded by Salloum & Mercier-Suissa (2016), the presence of women in managerial positions are negatively correlated with the financial performance. There are various reasons including that most of the sampled women are married and they are giving priorities to their families, which is affecting the business performance negatively. On the other hand, O'Shea & Redien-Collot (2012) mentioned that the contribution of women entrepreneurs to the economic activity has reached 25% in the UK, which is mainly due to the growth of the service sector and this will lead to an economic growth in the country. This is supporting our findings, as the sample in this research is the European countries that are having a different work environment and work culture than the Middle East region.

Table 5.1. Current Study vs. Previous Studies

Current Study Results	Similar Results	Different Results
Results: **H1:** The relationship between social pillar score and organizations' financial performance is statistically significant and has positive relationship. **H2:** The relationship between workforce score and organizations' financial performance is statistically significant and has positive relationship.	**(Dalal & Thaker, 2019)** **Results:** Companies having higher ESG scores are performing better financially. Investors prefer companies with better carbon footprints, increased societal acceptance, and transparent governance policies. **(Wikhamn, 2019)** **Results:** sustainable HRM practices enhance the hotel capability to innovate and to have satisfied customers, which is in turn affects the organizational performance financially.	**(Chashmi & Fadaee, 2016)** **Results:** no relationship between ROE as a measure of financial performance and success or failure of the company.

Table 5.2. Current Study vs. Previous Studies (Continued)

Current Study Results	Similar Results	Different Results
	(Li et al. 2019) **Results:** High-commitment work practices (HCWP) is related with the organization's outcomes in terms of increasing employee commitment and employee performance which in turn enhancing the organization's efficiency and profitability. **(Petruškevičius, 2016)** **Results:** Informal HRM system is affecting the performance through frequent job burnouts, lack of expertise, retention of employees, limited career development, and weak leadership. **(Vermeeren, et al., 2014)**	

Table 5.2. Current Study vs. Previous Studies (Continued)

Current Study Results	Similar Results	Different Results
	Results: positive direct relationship between the HR practices and the financial performance. **(Kotey & Sharma, 2019)** **Results:** flexible working hours is directly and positively improving the ROL. The flexible working hours had no significant effect on job satisfaction but reduced staff turnover. The flexible arrangements related to the monthly and annual leave enhanced the job satisfaction but had no significant effect on staff turnover. **(Bağlayan et al,. 2018)** **Results:** factories experience 5.9% improvement in profitability when	

Table 5.2. Current Study vs. Previous Studies (Continued)

Current Study Results	Similar Results	Different Results
	workers perceive improvements in working conditions. Profitability is 7.6% higher when workers experience a comfortable environment and trusting workplace. Workers are 40 minutes faster in production in the factories with better working conditions.	

Table 5.3. Current Study vs. Previous Studies (Continued)

Current Study Results	Similar Results	Different Results
H3: The relationship between human rights score and organizations' financial performance is statistically significant and has positive relationship.	**(Smith et. al., 2018)** **Results:** there are 92 companies having 'human rights' section as a part of CSR on their websites. These 92 companies were the sample of the study. There is no significant different in the financial ratios between the sample companies and the top 15 industries. **(Grossmeier, et al., 2015)** **Results:** investing in workforce health and well-being is one of the characteristics of high-performing, well-managed companies.	
H4: The relationship between Employees' training and development and organizations'	**(McDonald and Smith, 1995)** **Results:** organizations without training and performance management programs	

Table 5.3. Current Study vs. Previous Studies (Continued)

Current Study Results	Similar Results	Different Results
financial performance is statistically significant and has positive relationship.	tend to underperform relative to industry financial averages and vice versa. **(Sun & Choi, 2011)** **Results:** human resource development practices enhance employee competence and commitment, which is improving the operational performance of the organizations, and this is in turn affects the financial performance. **(Hrymak & Pérezgonzález, 2007)** **Results:** The cost of the employers varies from €0 and reaching to €3.8 million related to workplace accidents, in almost all cases employers underestimate the	

Table 5.3. Current Study vs. Previous Studies (Continued)

Current Study Results	Similar Results	Different Results
	indirect financial impact such as the productivity losses.	
H5: The relationship between gender diversity and organizations' financial performance is statistically significant and has positive relationship.	**(Wang, 2020)** **Results:** having more female directors is affecting the overall organization's performance positively. The higher ration of female independent directors over total numbers of directors could be improving the financial performance.	**(Salloum & Mercier-Suissa, 2016)** **Results:** presence of women in managerial positions are negatively correlated with the financial performance.

5.2 Conclusion

This study intended to investigate the relationship between sustainability-oriented HR practices by organization and its impact on organizations' financial performance. We gathered data from 328 organizations from European countries for the time span of 2015-2019. In order to answer our research questions, we used return on assets measuring the organizations' financial performance as a dependent variable, and five dimensions of sustainability-oriented HR practices that are social pillar score, workforce score, human rights score, training and development, and gender diversity. We used generalized least square (GLS) estimates of random and fixed effect to run the empirical model. The Hausman test suggest that there is an organization specific fixed effect in our sample of organization, therefore we interpreted and rely on the fixed effect estimates. The fixed effect estimates suggest that our independent variables social pillar and training hour score are affecting organizations' financial performance at a significance level of 5 %. We also find that workforce score, human rights score and gender diversity are statistically significant at 1% level of significance to impact organizations' financial performance.

The findings suggest that investing in social pillar score that measures the employees, customers and society's loyalty and trust towards organizations and investing in employees' training and development is critical to affect the organizations' financial performance. Since our sample is from European countries where employees are educated and aware of their human rights and women participation at managerial levels are common, these factors are important but less strongly related with organizations' financial performance. By looking into other regions such as the Middle East, the labour law and regulations are still developing to achieve an acceptable level of sustainability. This leads to a well-based result that by applying the methodology of this research and using the same variables in other regions, the result mostly will differ in reference to the environment, culture and traditions. Therefore, we conclude that investing in training and development by devising effective programs and achieving trust and loyalty of employees and customers through transparency are crucial for organizations. This study can be beneficial for the HR managers in European countries as it presents important results. An organization can achieve sustainable development

by adopting sustainable HR practices and by creating value for the shareholders, stakeholders, and broad community.

Theoretically speaking this study provides a comprehensive understanding of social sustainability-oriented HR practices including several scores and assesses their impact on financial performance using ROA as a measure. Using the example of organizations in Europe having more than 100 employees in the technological and industrial fields is considered as a major contribution of this study to the literature by targeting Europe in general, as in the literature there are few studies that focus on European countries. . Unlike previous studies, which have only focused on HR practices as a tool to improve the organization performance without focusing on the sustainability side, this study has focused on specific HR practices and scores to provide an evidence that taking sustainability in consideration within the HR departments will mostly improve the performance from all perspectives. This study specifically focused on financial performance as the most important outcome for an organization. Additionally, taking organizations with over 100 employees as sample in order to test the impact of social sustainability-oriented HR practices within organizations is another distinguishing feature of this study, as it is reflecting real HR practices and HR management that deals with large numbers of employees.

Practically speaking, not only HR management and organization management but also the employees, investors, and all stakeholders of the organizations may benefit from the findings of this study. As an example, investors nowadays started to pay attention to the CSR and sustainability implementation within the organization when making investment decisions. For the employees it is important to know that the organization is trying to consider sustainable HR practices, this will increase employee satisfaction and the employees will feel more secure. By taking one of the studied variables, training hours score as a variable reflecting the importance of employee development within the organizations, the result of this study is showing that the employee development is positively affecting the financial performance. Therefore, HR management will take a positive step regarding this point without being worried about the training costs and the employee turnover issues. Looking into another variable that has been studied, workforce score, which measures a company's effectiveness towards job satisfaction, healthy and safe workplace, maintaining diversity and equal opportunities, and development opportunities for its workforce, the results show that

the higher the workforce score is the higher the financial performance will be. This can be useful also for the HR management to make them pay more attention regarding the job offers and to avoid going for the minimum offers. This means that all job offers should include all the employee rights as per the labor law. While this section shows the theoretical and practical contribution of this study, in the next section the study limitations and future recommendations will be mentioned.

5.3 Limitations and Recommendations

Based on the limitation this study makes certain recommendation for future studies. In this study, we only consider a sample of organizations in European countries. These developed countries adopt sustainable practices more often than developing countries. The researchers can take a sample from underdeveloped regions such as Asia or Africa to investigate if the same results are true in these regions. Future studies can do a comparison of two different regions to see which dimension of sustainability-oriented HR practices are important in increasing organizations' financial performance in different regions. In this study we only considered the social dimension of ESG, future studies can combine all three dimensions of ESG that are environmental, social and governance aspects of it. We test the impact of sustainable HR practices on organizations' financial performance using ROA that measures the accounting performance of an organization, future studies can test the impact of sustainable HR practices on firm's market performance by using ratios such as TOBIN Q and earning per shares (EPS).

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APPENDICES

APPENDIX A

STATA RESULTS

Descriptive Statistics

Variable		Mean	Std. Dev.	Min	Max	Observations
ROA	overall	8.002948	15.21737	.096	249.321	N = 1277
	between		14.23258	.42	236.7026	n = 303
	within		1.781535	-7.440652	22.45628	T-bar = 4.21452
GPM	overall	43.8674	23.61895	0	100	N = 1204
	between		23.64606	3.708	100	n = 304
	within		6.374914	-17.9026	100.7282	T-bar = 3.96053
SPS	overall	51.3757	29.42594	0	98.26	N = 1637
	between		25.30334	3.608	97.234	n = 328
	within		15.0825	-12.4363	103.5557	T-bar = 4.99085
WFS	overall	61.61722	31.46212	0	99.88	N = 1591
	between		26.98854	2.27	99.602	n = 328
	within		15.95815	-11.15878	121.1732	T-bar = 4.85061
HRS	overall	50.63309	38.07192	0	92.16	N = 1546
	between		29.6174	0	89.726	n = 327
	within		24.2085	-19.00091	115.3291	T-bar = 4.72783
WM	overall	15.83955	12.05051	0	60	N = 1217
	between		10.87781	0	47.18	n = 316
	within		7.034169	-12.84045	51.03955	T-bar = 3.85127
THS	overall	28.24654	28.5992	0	99	N = 915
	between		23.78329	0	98.604	n = 315
	within		14.6086	-33.75546	91.93454	T-bar = 2.90476
lnTA	overall	22.13699	1.592965	17.69542	26.74253	N = 1635
	between		1.582103	18.30756	26.69315	n = 328
	within		.2177901	20.57735	23.29008	T-bar = 4.98476
lnMC	overall	22.12061	1.366717	18.17146	26.35806	N = 1596
	between		1.33278	18.97633	26.12389	n = 328
	within		.2716389	20.56211	23.76661	T-bar = 4.86585
lnCE	overall	18.60044	1.927049	11.71169	24.05665	N = 1563
	between		1.900886	12.40125	23.89785	n = 328
	within		.3845438	16.2875	20.84899	T-bar = 4.76524

Correlation Matrix

	ROA	GPM	SPS	WFS	HRS	WM	THS	lnTA	lnMC	lnCE
ROA	1.0000									
GPM	0.0498	1.0000								
SPS	-0.0620	0.0250	1.0000							
WFS	-0.0212	0.0355	0.7701	1.0000						
HRS	-0.0428	0.0231	0.4885	0.3364	1.0000					
WM	0.1383	0.2530	0.2865	0.3442	0.2333	1.0000				
THS	-0.0712	0.1718	0.3400	0.3896	0.1866	0.1572	1.0000			
lnTA	-0.4016	-0.0189	0.4709	0.4062	0.2120	0.2041	0.2289	1.0000		
lnMC	0.0286	0.0765	0.4922	0.4028	0.2263	0.2621	0.2457	0.8290	1.0000	
lnCE	-0.3413	0.0305	0.4070	0.3175	0.1665	0.2342	0.2447	0.8558	0.7240	1.0000

GLS Estimates Appendix

1. Financial Performance and Social Pillar Score

```
Random-effects GLS regression                   Number of obs     =       1,258
Group variable: id                              Number of groups  =         302
R-sq:                                           Obs per group:
     within  = 0.0936                                         min =           1
     between = 0.2473                                         avg =         4.2
     overall = 0.2469                                         max =           5

                                                Wald chi2(4)      =      155.54
corr(u_i, X)   = 0 (assumed)                    Prob > chi2       =      0.0000

------------------------------------------------------------------------------
         ROA |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         SPS |   .0116748   .0045478     2.57   0.010     .0027613    .0205882
        lnTA |  -3.545888   .3182073   -11.14   0.000    -4.169563   -2.922213
        lnMC |   2.482669   .2446093    10.15   0.000     2.003243    2.962094
        lnCE |   .1589634   .1619908     0.98   0.326    -.1585327    .4764596
       _cons |   28.14622   6.013173     4.68   0.000     16.36061    39.93182
-------------+----------------------------------------------------------------
     sigma_u |  12.151261
     sigma_e |  1.9517506
         rho |  .97484967   (fraction of variance due to u_i)
------------------------------------------------------------------------------
```

```
Fixed-effects (within) regression               Number of obs      =       1,258
Group variable: id                              Number of groups   =         302

R-sq:                                           Obs per group:
     within  = 0.0947                                         min =           1
     between = 0.2576                                         avg =         4.2
     overall = 0.2586                                         max =           5

                                                F(4,952)           =       24.91
corr(u_i, Xb)  = 0.3938                         Prob > F           =      0.0000

------------------------------------------------------------------------------
         ROA |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         SPS |   .0094386   .0045414     2.08   0.038     .0005264    .0183509
        lnTA |  -2.866891   .3420693    -8.38   0.000    -3.538188   -2.195594
        lnMC |   2.128692    .247949     8.59   0.000     1.642102    2.615281
        lnCE |   .2663672    .164323     1.62   0.105    -.0561099    .5888444
       _cons |   19.07477   6.892722     2.77   0.006     5.548088    32.60146
-------------+----------------------------------------------------------------
     sigma_u |  13.265916
     sigma_e |  1.9517506
         rho |  .97881279   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0: F(301, 952) = 183.78                     Prob > F = 0.0000
```

```
 hausman fe re

                ---- Coefficients ----
             |      (b)          (B)            (b-B)     sqrt(diag(V_b-V_B))
             |       fe           re         Difference          S.E.
-------------+----------------------------------------------------------------
         SPS |   .0094386    .0116748       -.0022361               .
        lnTA |  -2.866891   -3.545888        .6789966        .1255209
        lnMC |   2.128692    2.482669       -.3539768        .0405584
        lnCE |   .2663672    .1589634        .1074038        .0275867
------------------------------------------------------------------------------
                           b = consistent under Ho and Ha; obtained from xtreg
            B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                  chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                          =       96.33
                Prob>chi2 =      0.0000
                (V_b-V_B is not positive definite)
```

```
Modified Wald test for groupwise heteroskedasticity
in fixed effect regression model

H0: sigma(i)^2 = sigma^2 for all i

chi2 (302)  =   2.9e+33
Prob>chi2 =      0.0000

Wooldridge test for autocorrelation in panel data
H0: no first-order autocorrelation
    F(  1,     246) =      0.366
           Prob > F =      0.5458
```

vif

Variable	VIF	1/VIF
lnTA	6.56	0.152465
lnCE	3.92	0.255074
lnMC	3.47	0.288220
SPS	1.47	0.678400
Mean VIF	3.86	

2. Financial Performance and Workforce Score

```
Random-effects GLS regression                   Number of obs     =       1,231
Group variable: id                              Number of groups  =         297

R-sq:                                           Obs per group:
     within  = 0.1237                                         min =           1
     between = 0.2311                                         avg =         4.1
     overall = 0.2378                                         max =           5

                                                Wald chi2(4)      =      190.19
corr(u_i, X)   = 0 (assumed)                    Prob > chi2       =      0.0000
```

ROA	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
WFS	.0095204	.0040371	2.36	0.018	.0016079	.017433
lnTA	-3.874391	.3070587	-12.62	0.000	-4.476215	-3.272567
lnMC	2.50716	.2349241	10.67	0.000	2.046718	2.967603
lnCE	.1745932	.1561488	1.12	0.264	-.1314529	.4806393
_cons	34.61171	5.815627	5.95	0.000	23.21329	46.01013
sigma_u	12.182238					
sigma_e	1.8558973					
rho	.97731758	(fraction of variance due to u_i)				

```
Fixed-effects (within) regression               Number of obs      =       1,231
Group variable: id                              Number of groups   =         297

R-sq:                                           Obs per group:
     within  = 0.1242                                         min =           1
     between = 0.2345                                         avg =         4.1
     overall = 0.2419                                         max =           5

                                                F(4,930)           =       32.96
corr(u_i, Xb)  = 0.3389                         Prob > F           =      0.0000

------------------------------------------------------------------------------
         ROA |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         WFS |   .0071161   .0040239     1.77   0.077    -.0007809     .015013
        lnTA |  -3.365171   .3285299   -10.24   0.000    -4.009917   -2.720425
        lnMC |    2.18711   .2378726     9.19   0.000     1.72028    2.653939
        lnCE |   .2535275   .1582584     1.60   0.109    -.0570575    .5641125
       _cons |   29.23349   6.608179     4.42   0.000     16.26482    42.20217
-------------+----------------------------------------------------------------
     sigma_u |  13.114175
     sigma_e |  1.8558973
         rho |  .98036576   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0: F(296, 930) = 203.60                     Prob > F = 0.0000


 hausman fe re

                 ---- Coefficients ----
             |      (b)          (B)            (b-B)     sqrt(diag(V_b-V_B))
             |       fe           re         Difference          S.E.
-------------+----------------------------------------------------------------
         WFS |   .0071161     .0095204       -.0024044                .
        lnTA |  -3.365171    -3.874391        .5092195        .1168196
        lnMC |    2.18711      2.50716       -.3200505        .0373369
        lnCE |   .2535275     .1745932        .0789343         .025754
------------------------------------------------------------------------------
                           b = consistent under Ho and Ha; obtained from xtreg
            B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                  chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                          =       93.89
                Prob>chi2 =      0.0000
                (V_b-V_B is not positive definite)
```

```
Modified Wald test for groupwise heteroskedasticity
in fixed effect regression model

H0: sigma(i)^2 = sigma^2 for all i

chi2 (297)  =   2.8e+33
Prob>chi2 =      0.0000

Wooldridge test for autocorrelation in panel data
H0: no first-order autocorrelation
    F(  1,     241) =      0.388
           Prob > F =      0.5339

. vif

    Variable |       VIF       1/VIF
-------------+----------------------
        lnTA |      6.51    0.153521
        lnCE |      3.95    0.253218
        lnMC |      3.42    0.292379
         WFS |      1.32    0.760239
-------------+----------------------
    Mean VIF |      3.80
```

3. Financial Performance and Human Rights Score

```
Random-effects GLS regression                   Number of obs     =       1,213
Group variable: id                              Number of groups  =         296

R-sq:                                           Obs per group:
     within  = 0.1396                                         min =           1
     between = 0.2115                                         avg =         4.1
     overall = 0.2191                                         max =           5

                                                Wald chi2(4)      =      208.21
corr(u_i, X)   = 0 (assumed)                    Prob > chi2       =      0.0000

------------------------------------------------------------------------------
         ROA |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         HRS |   .0053367   .0023992     2.22   0.026     .0006344    .0100389
        lnTA |  -4.311331   .3201656   -13.47   0.000    -4.938844   -3.683818
        lnMC |   2.498914   .2386518    10.47   0.000     2.031165    2.966663
        lnCE |   .3145612   .1619289     1.94   0.052    -.0028135    .6319359
       _cons |   42.25942   6.066521     6.97   0.000     30.36926    54.14958
-------------+----------------------------------------------------------------
     sigma_u |  12.231714
     sigma_e |  1.8432584
         rho |  .97779526   (fraction of variance due to u_i)
------------------------------------------------------------------------------
```

```
Fixed-effects (within) regression               Number of obs      =       1,213
Group variable: id                              Number of groups   =         296

R-sq:                                           Obs per group:
     within  = 0.1400                                         min =           1
     between = 0.2067                                         avg =         4.1
     overall = 0.2147                                         max =           5

                                                F(4,913)           =       37.17
corr(u_i, Xb)  = 0.2713                         Prob > F           =      0.0000

------------------------------------------------------------------------------
         ROA |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         HRS |   .0044668   .0023889     1.87   0.062    -.0002215    .0091552
        lnTA |   -3.90241   .3471668   -11.24   0.000    -4.583748   -3.221073
        lnMC |    2.16085   .2421884     8.92   0.000     1.685539    2.636161
        lnCE |   .3809568    .164005     2.32   0.020     .0590863    .7028273
       _cons |   39.71323   7.024104     5.65   0.000     25.92796    53.49849
-------------+----------------------------------------------------------------
     sigma_u |  13.081057
     sigma_e |  1.8432584
         rho |   .9805308   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0: F(295, 913) = 207.37                     Prob > F = 0.0000

. hausman fe re

                ---- Coefficients ----
             |      (b)          (B)            (b-B)     sqrt(diag(V_b-V_B))
             |       fe           re         Difference          S.E.
-------------+----------------------------------------------------------------
         HRS |   .0044668     .0053367       -.0008698                .
        lnTA |   -3.90241    -4.311331        .4089203        .1342341
        lnMC |    2.16085     2.498914       -.3380639        .0412378
        lnCE |   .3809568     .3145612        .0663956        .0260129
------------------------------------------------------------------------------
                           b = consistent under Ho and Ha; obtained from xtreg
            B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                  chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                          =       82.96
                Prob>chi2 =      0.0000
                (V_b-V_B is not positive definite)
```

```
Modified Wald test for groupwise heteroskedasticity
in fixed effect regression model

H0: sigma(i)^2 = sigma^2 for all i

chi2 (296)  =   2.6e+33
Prob>chi2 =      0.0000


 vif

    Variable |       VIF       1/VIF
-------------+----------------------
        lnTA |      6.39    0.156376
        lnCE |      3.92    0.255282
        lnMC |      3.34    0.299298
         HRS |      1.08    0.928400
-------------+----------------------
    Mean VIF |      3.68
```

4. Financial Performance and Training Hours Score

```
Random-effects GLS regression                   Number of obs = 730
Group variable: id                              Number of groups = 273
R-sq:                                           Obs per group:
      within = 0.1992                                         min = 1
      between = 0.2370                                        avg = 2.7
      overall = 0.2426                                        max = 5
                                                Wald chi2(4) = 171.83
corr(u_i, X) = 0 (assumed)                      Prob > chi2 = 0.0000
------------------------------------------------------------------------------
         ROA |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       THS|     .008214   .0039678     2.07   0.038     .0004372    .0159907
       lnTA |  -4.155286   .3735969   -11.12   0.000    -4.887522   -3.423049
        lnMC  |   2.835244   .2619646    10.82   0.000     2.321803    3.348685
        lnCE  |   .1118583   .1866485    0.60   0.549    -.2539661    .4776827
       _cons |   35.20284   6.92633     5.08   0.000      21.62749    48.7782
-------------+----------------------------------------------------------------
     sigma_u |  11.94455
     sigma_e |  1.4759067
         rho |  .98496174 (fraction of variance due to u_i)
------------------------------------------------------------------------------
```

```
Fixed-effects (within) regression               Number of obs      =       730
Group variable: id                              Number of groups   =       273
R-sq:                                           Obs per group:
     within  = 0.2006                                         min =         1
     between = 0.2384                                         avg =       2.7
     overall = 0.2457                                         max =         5
                                                F(4,453)           =     28.42
corr(u_i, Xb)  = 0.2111                         Prob > F           =    0.0000

------------------------------------------------------------------------------
         ROA |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         THS |   .0077797   .0039263     1.98   0.048     .0000637    .0154956
        lnTA |  -3.590676   .4159258    -8.63   0.000    -4.408059   -2.773292
        lnMC |   2.46006    .2668529     9.22   0.000     1.935637    2.984483
        lnCE |   .2460147   .1891191     1.30   0.194     -.125645    .6176744
       _cons |   27.89043    8.368487    3.33   0.001     11.44456     44.3363-
-------------+----------------------------------------------------------------
     sigma_u |  12.790317
     sigma_e |  1.4759067
         rho |  .98685954   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0: F(272, 453) = 72.99                     Prob > F = 0.0000
```

```
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                ---- Coefficients ----
             |      (b)          (B)            (b-B)     sqrt(diag(V_b-V_B))
             |       fe           re         Difference          S.E.
-------------+----------------------------------------------------------------
         THS |    .0077797       .008214       -.0004343                 .
        lnTA |   -3.590676      -4.155286        .5646099           .1828105
        lnMC |     2.46006        2.835244       -.3751839           .0508429
        lnCE |    .2460147       .1118583        .1341564           .0304692
------------------------------------------------------------------------------
                           b = consistent under Ho and Ha; obtained from xtreg
            B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                  chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                          =       72.68
                Prob>chi2 =      0.0000
                (V_b-V_B is not positive definite)
```

```
Modified Wald test for groupwise heteroskedasticity
in fixed effect regression model

H0: sigma(i)^2 = sigma^2 for all i

chi2 (273)  =   1.2e+07
Prob>chi2 =      0.0000


Wooldridge test for autocorrelation in panel data
H0: no first-order autocorrelation
    F(  1,     241) =      2.464
           Prob > F =      0.1192
vif

    Variable |       VIF       1/VIF
-------------+----------------------
         lnTA |      6.51    0.153521
         lnCE |      3.95    0.253218
         lnMC |      3.42    0.292379
          WFS |      1.32    0.760239
-------------+----------------------
    Mean VIF |      3.15
```

5. Financial Performance and Women Managers

```
Random-effects GLS regression                   Number of obs     =       752
Group variable: id                              Number of groups  =       212

R-sq:                                           Obs per group:
     within  = 0.1127                                         min =         1
     between = 0.2110                                         avg =       3.5
     overall = 0.2353                                         max =         5

                                                Wald chi2(4)      =    110.25
corr(u_i, X)   = 0 (assumed)                    Prob > chi2       =    0.0000

------------------------------------------------------------------------------
         ROA |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
        lnWM |   1.190131   .5265127     2.26   0.024     .1581852    2.222077
        lnTA |  -4.769894   .4644177   -10.27   0.000    -5.680136   -3.859652
        lnMC |   2.341867   .3463312     6.76   0.000     1.663071    3.020664
        lnCE |   .5446214    .228216     2.39   0.017     .0973263    .9919164
       _cons |   49.10342   8.478634     5.79   0.000      32.4856    65.72124
-------------+----------------------------------------------------------------
     sigma_u |  14.117691
     sigma_e |  1.8350826
         rho |  .98338473   (fraction of variance due to u_i)
```

```
------------------------------------------------------------------------------
Fixed-effects (within) regression               Number of obs     =        752
Group variable: id                              Number of groups  =        212

R-sq:                                           Obs per group:
     within  = 0.1142                                         min =          1
     between = 0.2022                                         avg =        3.5
     overall = 0.2264                                         max =          5

                                                F(4,536)          =      17.28
corr(u_i, Xb)  = 0.3198                         Prob > F          =     0.0000

------------------------------------------------------------------------------
         ROA |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
        lnWM |   .9922463   .5363419     1.85   0.065    -.0613437    2.045836
        lnTA |  -4.079742   .5091643    -8.01   0.000    -5.079944   -3.07954
        lnMC |   1.824385   .3535545     5.16   0.000     1.129863    2.518908
        lnCE |   .6606179   .2312641     2.86   0.004     .2063228    1.114913
       _cons |   44.14726   9.975898     4.43   0.000     24.55061    63.74391
-------------+----------------------------------------------------------------
     sigma_u |  15.192536
     sigma_e |  1.8350826
         rho |  .98561996   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0: F(211, 536) = 268.26                     Prob > F = 0.0000


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                 ---- Coefficients ----
             |      (b)          (B)            (b-B)     sqrt(diag(V_b-V_B))
             |       fe           re         Difference          S.E.
-------------+----------------------------------------------------------------
        lnWM |   .9922463     1.190131       -.1978849        .1022108
        lnTA |  -4.079742    -4.769894        .6901516         .208721
        lnMC |   1.824385     2.341867       -.5174819        .0711022
        lnCE |   .6606179     .5446214        .1159966         .037424
------------------------------------------------------------------------------
                           b = consistent under Ho and Ha; obtained from xtreg
            B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                  chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                          =       58.77
                Prob>chi2 =      0.0000
                (V_b-V_B is not positive definite)
```

```
Modified Wald test for groupwise heteroskedasticity
in fixed effect regression model

H0: sigma(i)^2 = sigma^2 for all i

chi2 (212)  =   1.2e+34
Prob>chi2 =      0.0000

Wooldridge test for autocorrelation in panel data
H0: no first-order autocorrelation
    F(  1,      143) =      0.077
           Prob > F =      0.7814
```

vif

Variable	VIF	1/VIF
lnTA	8.02	0.124725
lnCE	5.23	0.191364
lnMC	3.35	0.298652
lnWM	1.05	0.948335
Mean VIF	4.41	

CURRICULUM VITAE

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