

**ISTANBUL TECHNICAL UNIVERSITY ★ GRADUATE SCHOOL OF SCIENCE**  
**ENGINEERING AND TECHNOLOGY**

**HIGH PERFORMANCE HUMAN RESOURCE PRACTICES AND  
FIRM PERFORMANCE : THE MEDIATION EFFECT OF  
CORPORATE ENTREPRENEURSHIP**

**M.Sc. THESIS**

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**Department of Industrial Engineering**

**Industrial Engineering**

**MAY 2018**



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**İSTANBUL TEKNİK ÜNİVERSİTESİ ★ FEN BİLİMLERİ ENSTİTÜSÜ**

**YÜKSEK PERFORMANSLI İNSAN KAYNAKLARI UYGULAMALARI  
VE ŞİRKET PERFORMANSI ARASINDAKİ İLİŞKİDE KURUMSAL  
GİRİŞİMCİLİĞİN ARACILIK ETKİSİ**

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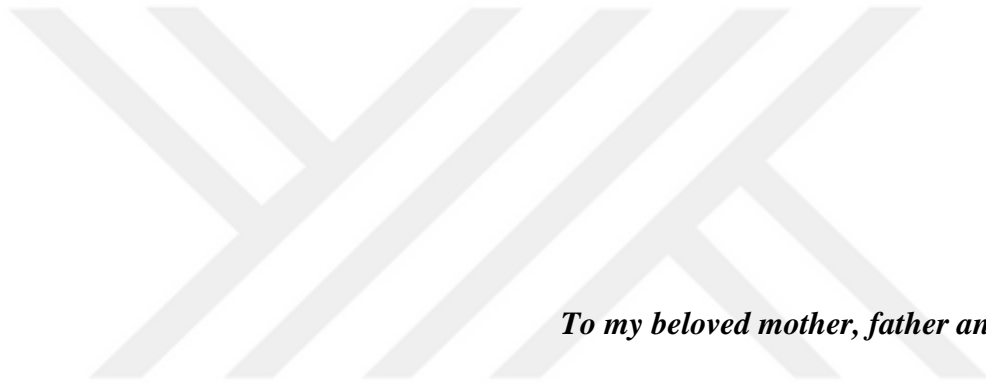
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*To my beloved mother, father and husband,*



## **FOREWORD**

The aim of study is examining the impact of high performance human resource practices on firm performance and to recognize special human resource practices according to their significance in firm performance. Also the role of corporate entrepreneurship between high performance human resource practices on firm performance and firm performance was analyzed. In addition to that the moderator role of organization culture on the relation between high performance human resource practices and firm performance with the mediation effect of corporate entrepreneurship was investigated.

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## **ABBREVIATIONS**

<b>App</b>	: Appendix
<b>SEM</b>	: Structural Equation Modelling
<b>HPHRM</b>	: High performance human resource management
<b>CE</b>	: Corporate Entrepreneurship
<b>EFA</b>	: Exploratory factor analysis
<b>CFA</b>	: Confirmatory factor analysis





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# **HIGH PERFORMANCE HUMAN RESOURCE PRACTICES AND FIRM PERFORMANCE: THE MEDIATION EFFECT OF CORPORATE ENTREPRENEURSHIP**

## **SUMMARY**

Corporate entrepreneurship is one of the key factor that effects the growth and profitability of the organizations and it provides an advantage over the ongoing technological change and increasing global competition. Corporate entrepreneurship directly affects company performance with factors such as the adoption of a change-oriented structure, the development of products, processes and services. High performance human resource management helps to increase interior entrepreneurial behavior and organizational outcomes. When combined with the power of entrepreneurship, the high performance human resource management systems creates better organizational performance. In this study, the impact of specific high performance human resource practice on firm performance examined. In addition, the role of corporate entrepreneurship between high performance human resource practice and firm performance analyzed. In addition to that, the moderator role of organization culture on the relation between high performance human resource practice and firm performance mediated by corporate entrepreneurship investigated.

In the present study, the accepted dimensions used because of literature survey. Extensive training, selective staffing, reward, performance appraisal, participation, clear job description, employer's employment commitment and internal mobility dimensions were adopted the measure the HPHRP. Corporate entrepreneurship calculated with the value of innovation, new business venturing, proactiveness and self-renewal dimensions. Data gathered from different industries in Turkey and total participation number was 199. Exploratory factor analysis (EFA) used for data analysis. In addition to that, confirmatory factor analysis conducted to confirm the result of exploratory factor analysis. The reliability and validity tests conducted. The analysis of the proposed model done through covariances and the maximum-likelihood estimation method with using AMOS program. The help of hypothesis and mediation test compared the final model compared with the proposed one. In addition, moderation effect of organization culture examined in the relationship path between HPHRP and firm performance though the mediation effect of corporate entrepreneurship. Cross-cultural differences examined through path analysis and Z score test.

As a result of path analysis, the mediation effect of corporate entrepreneurship between high performance human resource practice and firm performance confirmed. In addition to that, the results shows that hierarchy and market culture moderates the proposed model through two different paths.



# YÜKSEK PERFORMANSLI İNSAN KAYNAKLARI UYGULAMALARI VE ŞİRKET PERFORMANSI ARASINDAKİ İLİŞKİDE KURUMSAL GİRİŞİMCİLİĞİN ARACILIK ETKİSİ

## ÖZET

Kurumsal girişimcilik, kurumların büyümesini ve karlılığını sağlayan en önemli faktörlerden biridir. Aynı zamanda hızlı bir şekilde değişen teknolojik gelişmelere ve artan küresel rekabette avantaj sağlanamsı açısından da şirketler için oldukça önemli bir yere sahiptir.

Kurumsal girişimcilik şirketlerdeki değişimin odak noktası olarak görülebilir. Hizmet, ürün ve servisler yapılacak yenilemeler, organizasyon içerisindeki yeniden yapılandırmalar, sektörde öncü işler yaratılması ve riskli işlerin göze alınarak performansın artırılmasının sağlanması girişimciliğin temel unsurlarını yansıtmaktadır.

Genel olarak rekabetin fazla olduğu sektörler için rekabet gücünün korunması önem arz etmektedir. Piyasadaki rekabet gücünün artırılması şirketlerin piyasaya sunduğu farklı ve yeni ürün veya hizmet ile gerçekleşmektedir. Bu sebeple şirketlerin performansı arttırımı haricinde ayakta kalabilmeleri için de girişimcilik faktörünü desteklemeye ihtiyaçları bulunmaktadır.

Girişimci bir ortamının teşvik etmedilmesinde çeşitli stratejiler bulunmaktadır. Bu stratejiler içinde yüksek performanslı inksan kaynakları yönetimi uygulamalarının başarılı bir şekilde uyarlanabilirliği açısından en etkili olanlardan birisidir. Çünkü kurumsal girişimcilik, bir örgütün hem yeni bilgi keşfedilme hem de mevcut bilginin kullanımını öğrenme yeteneğine dayanır. Bu öğrenme süreçleri şirketlerin insan kaynaklarına bağlıdır. Bu sebeple insan kaynaklarının yönetimi insaların girişimciliğe teşvikini sağlayabilmek açısından çok önemli bir strateji olarak görülmektedir. İnsan kaynakları yönetimi çalışanların bilgi becerilerini, karar alma süreçlerine katılımlarını ve şirket içerisinde sorumluluk alma duygularını geliştirdiğinde doğrudan girişimcilik kavramıyla bağlıdır.

Bu çalışmadan literatür araştırması sonucu doğruluğu daha önce defalarca kanıtlanmış olan boyutlar insan kaynakları uygulamaları, kurumsal girişimcilik ve şirket performansın açıklamak için kullanılmıştır. İnsan kaynakları uygulamaları sekiz ayrı faktör ile ölçümlenmiştir. Bunlar, çalışanlara kapsamlı eğitim verilmesi, çalışan hareketliliği, iş güvencesinin sağlanması, net iş tanımı, performansa yönelik değerlendirme , ödüllendirme ve kararlara katılım olarak belirlenmiştir. Bahsedilen bu sekiz faktör 3 grup altında toplanmaktadır. Bireysel faz olarak tanımlanan grupta çalışan eğitimleri, etkili işe alım yapılması, şirket içerisinde transfer yollarının açıklığı ve iş güvencesi gibi faktörler yer almaktadır. Ödüllendirme ve değerlendirme grubunun içerisinde performans değerlendirme süreci ve çalışanlara verilen ödüller yer almaktadır. Son olarak ise iş ilişkileri grubunda ise net iş tanımlarının bulunması ve kararlara katılımın teşviki maddeleri yer almaktadır.

Kurumsal girişimciliğin ölçümü için dörk farklı boyut kullanılmıştır. Bunlardan ilki inovasyondur. İnovasyon kısaca yeni hizmet, ürün ,süreç, pazar yada teknoloji geliştirmeye yönelim eğilimleri ifade etmektedir. Proaktiflik, şirketlerin risk almaya olan istekliliği olarak değerlendirilmektedir. Şirketlerin rakiplerine göre daha aktif ve dinamik yapıda olma, mevcut paazarlarda öncü rolü üstlenme yönelimleri proaktif boyutunu açıklamaktadır. Bir diğer boyut örgütsel yenilenme olarak tanımlanmaktadır. Örgütsel yenilenme şirketlerin, örgütsel boyutta yenilenmesi olarak tanımlanmaktadır. Misyon yenileme çalışmaları ya da yenilenmeye yönelik kapsamlı değişikliklerin yapılması örgütsel yenilenme boyutu içerisinde yer almaktadır. Son olarak ise yeni iş girişimi, kurumsal girişimciliği ölçen son boyut olarak belirlenmiştir. Bu boyut literatürde şirketlerde yeni iş alanlarının, pazarlarının yaratılması ya da yeni iş kollarının oluşturulması olarak ifade edilmektedir.

Şirket performansı ölçümünde nicel ve nitel performansı ölçümleyecek sorular kullanılmıştır Son olarak şirket kültürünün etkisini analiz edebilmek için sorulan sorular dört ayrı kültürü ölçümleyecek şekilde sorulmuştur. Sorulara verilen cevaplar gruplandırılarak kişilerin çalıştıkları kültür hakkında bilgi edinilmiştir.

Türkiye’de hizmet ve üretim sektöründe çalışan 199 kişiden anket yoluyla verilerin toplanması sağlanmıştır. Anket katılımı yeterli büyüklüğe ulaştığında açılımcı faktör analiz ile faktörleri veri seti ile doğrulanıp doğrulanmadığı araştırılmıştır.

Faktör analiz sonucunda yüksek performanslı insan kaynakları uygulamalarının beş ayrı boyutta açıklandığı sonucuna varılmıştır. Bunlar, çalışanlara kapsamlı eğitim verilmesi, iş güvencesinin sağlanması, net iş tanımı, performansa yönelik değerlendirme/ödüllendirme kararlara katılım olarak belirlenmiştir.

Performansa yönelik değerlendirme ve ödüllendirme literatürde iki ayrı boyut olarak değerlendirilirken, örneklemimizde bu iki boyutun aynı etkiye sahip olduğu ortaya çıkmıştır.

Kurumsal girişimcilik boyutu ise faktör analizi sonrasında 2 faktör ile ölçülmüştür. Yapılan analizde inovasyon ve yeni iş alanı girişimi ortak bir faktör altında toplanmıştır. Örgütsel yenilenme boyutu da hesaplamalarda kullanılacak ikinci boyut olarak belirlenmiştir.

Açılımcı faktör analizi sonrasında elde edilen faktörler doğrulayıcı faktör analizine sokulmuştur. Doğrulayıcı faktör analizleri AMOS programı aracılığıyla gerçekleştirilmiştir.

Literatürde belirlenen model uyumluluk ölçümlerine uygunluğu saptanan faktörlerin hepsi güvenilirlik ve geçerlilik testlerine sokulmuştur. Bu testlerdeki değerlerinde pozitif çıkması ile oluşturulan hipotezlerin araştırmak için yapısal eşitlik modeli oluşturulmuştur.

Yapısal eşitlik model testleri de AMOS programı aracılığıyla gerçekleştirilmiştir. Yapılan analizler sonucunda inovasyon/ yeni iş alanı girişimi aracılığıyla çalışanlara eğitim verilmesi , katılım, ödüllendirme ve iş güvencesinin sağlanması faktörlerinin şirket performansına etkisi olduğu ortaya çıkmıştır. Örgütsel yenilenme aracılığıyla örgüt içi katılım, net iş tanımları ve ödüllendirme insan kaynakları uygulamalarının şirket performansı ile bağlantılı olduğu ortaya çıkmıştır.

Doğruluğu sağlanan modeldeki örgüt kültürü etkileri de ayrıca incelenmiştir. Klan ve adhokrasi kültürü için yeterli veri sayısına ulaşamadığından kültür analizleri sade market ve hiyerarşi kültürü bazında yapılmıştır.

Market ve hiyerarşi kùltùrlerde örgùt içi katılım ve ödùllendirme insan kaynakalari uygulamalariinin inovasyona olan etkisinin belirgin bir şekilde farklılařtıđı tespit edilmiřtir. Market kùltüründe belirgin bir şekilde ödùllendirmenin etkisi artarken, hiyerarşi kùltüründe řirk içi katılımın teřviki önemli rol oynamaktadır.





## 1. INTRODUCTION

Today's global economic environment is causing enterprises to face changes at internal and external dimension. First, the companies must adjust to the changes on external dimension of ever-changing and evolving markets to keep up with fast and instant technological changes, and game-changer competitors. Secondly, they must cope with changes in the internal challenges on the frequent economic distress and the competitive effects of hierarchical structure and operation, which can make firm slow and inability to adjust quickly to new situations. (Miller & Friesen, 1982) In this context, it appears that enterprises with static structures are required to demonstrate a strategically innovative and proactive approach to their operations in order to survive, to achieve profitability and to grow in a competitive environment, and to enable exchange of organizational structures. For this reason, corporate entrepreneurship seen as a tool for protecting position and competitive power, increasing organizational growth, strategic renovation, organizational change and customer value-added services by doing new and different things. Entrepreneurship described as a tool of creating change in society. Schumpeter argued that the process of change should take place within business' internal structures. Entrepreneurship is defined as the development of a new commodity or service, the development of a new production method, the discovery of a new market opportunity, and the redefinition and restructuring of the industry (Ağca & Kandermir, 2008; Fiş & Wasti, 2009).

The corporate entrepreneurship approach offers an environment that supports businesses to improve their performance by creating a dynamic business approach based on innovation that can bring new competitive areas, transform opportunities in the business environment against growing and floating market demand. The tendency of corporate entrepreneurship observed to be influential on the company's performance as it provides the adaptation that the environment brings. A considerable extent number of studies conducted in the literature to determine the relationship between corporate entrepreneurship propensity and business performance, especially since the 1990s. A significant number of the work has come to the conclusion that corporate

entrepreneurship practices have increased business performance (Covin & Slevin, 1989; Lumpkin & Dess, 1996; Zahra & Covin, 1995). In addition, when the work on the subject generally evaluated, it is important that corporate entrepreneurship is an important factor in the emergence of successful organizations and economic development and profitability seem to have significant consequences of corporate entrepreneurship.

One of the most important applications in the creation of an entrepreneurial environment is human resources management practices (Holt, Rutherford, & Clohessy, 2007). High-performance human resource applications increase employee motivation of self-effort, involvement in decision-making process, and skills of employees and so, it becomes an important driving force of corporate entrepreneurship. (Appelbaum et al., 2000). An effective high performance human resource practices involves activities and operations for developing and sustaining a company's human capital (Lado and Wilson, 1994). Because of the work carried out in recent years, it has become clear that there is a significant relationship between human resources management practices and corporate entrepreneurship. (Hayton, 2005; Hornsby, Kuratko, Shepherd, & Bott, 2009; Kaya, 2006; Zhang, Wan, & Jia, 2008). However, only a few studies have examined the impact of human resource practices on company performance through the overall corporate entrepreneurship of a company.

This study aims to contribute to the current literature in multiple ways. First, the impact of high-performance human resources practices such as personnel selection, employee training, internal mobility, employer's employee commitment, clear employee's job definition, performance evaluation, reward and participation are examined (Zhang and Jia, 2010). Secondly, we use the corporate entrepreneurship point of view to try to explain the link between human resource practices and company performance. In this study, the contribution of HPHRM to firm performance by supporting corporate entrepreneurship is examined. In this respect, it aimed to contribute to the literature of both corporate entrepreneurship and high performance human resources management.

The aim of study is examining the impact of specific HPHRP on firm performance and recognizing special human resource practices according to their significance in firm performance. In addition, the role of corporate entrepreneurship between HPHRP and firm performance is analyzed. In addition to that, the moderator role of organization

culture on the relation between HPHMP and firm performance mediated by corporate entrepreneurship was investigated.

## **1.1 Literature Review**

### **1.1.1 Entrepreneurship**

Although entrepreneurship and its key role in the economies recognized for a very long time, the contemporary entrepreneurship research started with the economist Joseph Schumpeter. The French economist Richard Cantillon was the first person to use the word entrepreneur in the economic context, while Jean-Baptiste Say was the first economist to assign a specific role to the entrepreneurial economic process (Antoncic & Hisrich, 2001). The Schumpeter described the entrepreneurs who produces new products or the same product with new methods that stimulate economic activity. Schumpeter's distinctive contribution to the entrepreneurship literature has been to add the “new” word. According to him, creating a combination in a continuous structure was not different from routine management. According to Schumpeter's understanding, entirely new people could produce entirely new combinations with completely old tools. Destruction of the old product or methods of production with new products represent an improvement as a result create bigger buyer interest and improve economic activities. As a result, the entrepreneurship described as a ‘creative destruction’ process by the Schumpeter.

Although Schumpeter focused on the activities on the individual entrepreneur, entrepreneurship research has considerably focused on the organisational perspective entrepreneurship (Miller, 1983; Miller & Friesen, 1982). Organisational perspective supports the view of Schumpeter. He presume that entrepreneurship have to managed by organizations that can allocate more resources to entrepreneurial attempts or practices. According to Schumpeter (1942), also firms should enhance their innovative activities because entrepreneur-driven economic practices leads to higher income levels and that the transformation will benefit to the economy. Because of that researcher continues to investigate that entrepreneurship can affect an economy by increasing productivity, creating new industries and processes, and increasing competition capacity (Wennekers & Thurik, 1999).

According to researchers, entrepreneurship increased the organization performance and because of that entrepreneurship have an important role in the high-performance organizations (Covin & Slevin, 1989, 1991; Zahra, 1995). According to Antoncic and Hisrich (2004b) activity based approach on the corporate entrepreneurship have significant effect on the organization's growth and profitability. Continuous and rapid changes on technology, widespread globalization, effects of the global competition and decreasing of trade barriers are factors that makes difficult to achieve competitive advantages. Therefore, the organizations have to seek better alternatives to gain advantages on the market. For this reason, entrepreneurial entrepreneurship (CE) continues to be seen as a strategy for improving the organizational growth and profitability and competitive position.

Corporate entrepreneurship (CE) is briefly referred to activities that intended to the entrepreneurship in the existing organization (Bazhal, 2016). The study of Antoncic (2000) shows that the concept of intrapreneurship defined in various forms. These definitions include " a process in which individuals within an existing organization chase opportunities independently of the resources they control", "developing new jobs and giving up old habits ", "entrepreneurial thought and spirit within the organization " and " creation of new organizations or encouraging activities for renewal and innovation activities in the organization "

Innovation, self-renewal and venturing are the key factors of CE according to Zahra's point of view. Alternatively, Bulgelman (1983) CE is a process in which organisations are attempting to diversify through internal development. In addition, CE seen as a process that follows the opportunities without looking at the resources that individual currently control. The individuals could be inside an organization or organization owners. (Dyduch, 2005). Sharma & Chrisman (1999) has similar thought on CE definition. According to them CE is a process of creation a new organization or encouraging renewal or innovation in existing organization by the individuals or a group of individuals in an organization. But according to the general idea among researchers is CE must interested in the entrepreneurial actions inside the organization regardless of its size (D. F. Kuratko, 2007)

While enterprise entrepreneurship can be broadly defined as "entrepreneurship in an existing enterprise", the tendency and direction of entrepreneurial activities described as ' entrepreneurial orientation'. (Lumpkin & Dess, 1996). The entrepreneurial

orientation can be seen as an evaluation mechanism that measures the tendency and orientation of firms and their senior managers to entrepreneurial activities and places them in a chart ranging from very conservative to very entrepreneurial. (D. F. Kuratko, 2007).

According to Lumpkin & Dess (1996b) Entrepreneurial direction and tendency of an organization is a key component for the organization's success. As a result, Covin & Slevin (1991) and Wiklund (1999) put the hypothesis on strong relation between EO and organizational performance forward. While Covin et al. (2006) have a positive relation between organization's performance through the sales rate, Morris and Sexton (1996) point out that there is a meaningful positive correlation, especially between entrepreneurial intensity and increased growth. In addition, it has been indicated that the increases in organizational performance that related with EO are sustainable for a long time. (Rauch, Wiklund, Lumpkin, & Frese, 2009; Zahra & Covin, 1995)

In recent years, ongoing technological development and growing global competition between large and long-established organizations have forced them to be more innovative in their approach to management. Corporate entrepreneurship or intrapreneurship makes organizations more dynamic and competitive. For this reason, intrapreneurship is seen as a means of revitalizing organizations. In general, it has been suggested that entrepreneurship has three main characteristics: innovation, risk taking and proactivity (Miller, 1983; Miller & Friesen, 1982; Zahra & Covin, 1995). Lumpkin and Dess (1996a) argue that a corporate entrepreneurial orientation can be evaluated with the dimension of innovation, autonomy, proactivity, competitive aggressiveness and risk taking.

According to Lumpkin and Dess (2001), corporate innovation presents the tendency to enter and encourage new ideas, innovations, experiments and innovative practices that may result in producing new products, technological processes and services or and the risk taking view of an organization refers to risky projects and the tendency of managers to use their preferences for bold and cautious moves to achieve organizational performance. Besides, proactivity is the tendency to support innovative projects even in cases where results and its gains are unclear while competitive aggressiveness of the organization is only about how the organization responds to existing demands in the marketplace.

In the meantime, autonomy orientation of an organisation is independent activities about bringing out a business idea, developing it and taking it to the by an individual or a team. Therefore Lumpkin explained the EO as the set of minds of companies that carry out new initiatives or undertake organizational renewal (Lumpkin & Dess, 1996). From EO perspective, the risk-taking dimension explained as the tendency of executives to take risks related to business, the innovation dimension expressed as contributing to changes and innovations to gain competitive advantage for organization and competitive position or aggressive attitude towards the submission of a threat refers to the proactiveness dimension.

Researchers discussed that entrepreneurship orientation has a significant impact or effect on organizational productivity (Covin & Slevin, 1991; Zahra, 1993; Zahra & Covin, 1995). Previous empirical researches shows that in some instances, organisations that have a high degree of entrepreneurial orientation will deliver performance increment to organisations that have low-level entrepreneurship oriented. Marketing orientation, strategy formation and employee satisfaction are the another factors of organisation performance that linked with entrepreneurial orientation (Knight, 1997). Covin and Slevin (1991a) argued that an organisation must be innovative, risk-taking and proactive in order to achieve high performance, but Lumpkin and Dess (1996a) claims that an organization can be improve its performance with one of the sub-dimensions. In sum, the ability and desire to sustain entrepreneurial activity is refers as the entrepreneurial orientation of the organization and that activities will lead to better company performance.

### **1.1.2 Corporate entrepreneurship**

Corporate entrepreneurship is an organization level phenomenon in order to identify new opportunities for sustained competitive advantage in the global competition. The research on this matter has grown in theoretically. In those studies, the authors describe the corporate entrepreneurship as a firm's attitude toward risk taking propensity, tendency to act in competitive aggressiveness and proactively, and reliance on product innovation. (Covin & Slevin, 1991) In short, corporate entrepreneurship defined as orientation of the firms to become proactive, innovative and risk taking (Barringer & Bluedorn, 1999). In addition to these factor, business venturing and organizational renewal are another dimensions of CE (Zahra & Covin, 1995). A review of the

literature by Zahra concluded that corporate entrepreneurship is a set of global practices that occurring of discovering and following new opportunities with the help of introducing new business models inside the organization , innovation or creating new business chances.

Such kind of innovations gives companies a sustainable competitive advantage, creates new business opportunities, expedite growth, new employment opportunities and generate wealth. CE requires companies to generate and operate of new resources of knowledge. In this way CE, support to pursue new business opportunities. (Hayton, 2005). Because of that, there is requirement to research and enhance the concepts and methods for execution.

Drucker (1985) mentioned that innovation is at the heart of CE. An organization-wide entrepreneurship can manage and take benefit from complex and dynamic environments only if innovation commitments are established. When these attempts supported within the organization, the results gained as sustained superior performance through innovation in the form of new product development, product improvement and production methods and procedures. (Hayton, 2005; Hornsby, Kuratko, & Zahra, 2002; Zahra & Covin, 1995) Innovativeness is explained as “firm’s tendency to engage in and support new ideas, novelty, experimentation, and the creation process that may result in new products, services or technological processes” (Lumpkin & Dess, 1996).

In the existing studies the relation between corporate entrepreneurship and a organization performance has been analyzed (Zahra, 1993). The proven relation between corporate entrepreneurship and company performance is enhancing the general desirability for corporate entrepreneurship. In addition, these relation effects the researchers view. The conceptualization of the entrepreneurship phenomenon moved from new company to the established companies.

The strategic and behavior-based understanding are two different understanding of corporate entrepreneurship. The strategic based concept point out to company philosophy to act entrepreneurially(Lumpkin & Dess, 1996). In the meantime, behavioral based understanding analyze the entrepreneurial activities and actions. (Birkinshaw, Hood, & Jonsson, 1998). We follow the behavior based approach because of that it gives an advantage on the issue of measurability, more manageable. (Covin & Slevin, 1991).

The literature on CE suggests that CE interpreted in various forms. According to Zahra (1991), the reason to improve organization's competitive position and profitability is organization's need to corporate venturing. Guth & Ginsberg (1990) sees CE as strategic renewal. According to Miller (1983), CE refers as product and process innovation, proactiveness, and risk-taking. With similar perspective Covin & Miles (1991) described CE as product innovation, risk-taking and proactiveness. Kuhn (1993) explain CE the development of institutional cultures and institutional processes embraced by the organizations. Chung and Gibbons has a different point of view to CE as processes in which the ideas of individuals transformed into corporate actions through the management of ambiguity. Morris and Kuratko (2002) describe actions that lead to entrepreneurship within existing organizations.

To sum up there is consistency in the researcher's explanations of CE. CE is defined as entrepreneurial activity, an entrepreneurial process or behavior, and as a strategy to strengthen sectoral competitive position. Based on the literature, activity based approach, strategy based approach, process based approach and organization based approach are the different perspective of CE.

#### **1.1.2.1 Activity based approach**

The factors that introduction of new good, opening of new market, new establishment and new sources of supplies are described as combinations covers making new things or doing things that are already being done in a new way. (Bazhal, 2016). Sharma & Chrisman (1999) sees entrepreneurship as organizational creation, renewal, or innovation within an established organization. Schollhammer (1982) suggests that internal entrepreneurship or intrapreneurship is all about formalized entrepreneurial activities within established business organizations, and it may be in the managerial, imitative, venturing form of the organization. In addition, Zahra (1991) argues that CE can be the product and process innovation and market development activities that aimed to increase organization profit. After that, Zahra (1995) sees corporate entrepreneurship as the sum of a company's innovation, renewal and entrepreneurial efforts.

According to Antoncic & Zorn CE as an entrepreneurial activity within an established organization, including new business initiatives and other innovative activities, as well as development of new products, services, administrative strategies.

McFadzean (2005) described CE as an effort to encourage innovation from an internal point of view, through the assessment of potential new opportunities, the configuration of resources.

#### **1.1.2.2 Process based approach**

First, Gartner (1988) suggests that entrepreneurship is the new entry of organisations to the market. Then the author change his view and comprehend the entrepreneurship as the process by which new organizations emerge. Morris (1998) agrees that entrepreneurship is a value-creating process, bringing resources together to evaluate opportunities in the environment that will lead to various possible outcomes, such as new initiatives, new products, new services, new processes, new markets and new technologies. Burgelman (1983) sees the entrepreneurship as a process in which it is engaging in diversity through internal development. According to some researchers, CE is a process that an individual or a group of individuals creates a new initiative in an established organization, which could be any size or renew re-creation of an organization. (Antoncic & Hisrich, 2001; Lumpkin & Dess, 2001). Wright (2001) proposed that CE has two dimension. One of them is building new businesses in the market by undertaking product, process, technological and administrative innovations. The other dimension is redefining the organizational concept, restructuring and making changes that effect the whole system for the renewal.

In recent years, Kuratko and Morris (2006) argue that corporate entrepreneurship is a process that a person in an existing business chases opportunities for venturing regardless of the level and quality of available resources

#### **1.1.2.3 Strategy based approach**

Key strategic variables of CE and the effects of these variables on the company's entrepreneurial activities discussed and researched extensively among entrepreneurship scholars. Nonetheless, the entrepreneurial orientation is associated with the innovation and new product entry strategies. (Lumpkin & Dess, 1996) In general, researchers who works on the organizational behavior field believed that a firm's competitive strategy could support entrepreneurial activities. As a result, Porter's low-cost strategy and diversification strategy addresses strategic issues in CE (Dess et al., 1999). The researcher's discussed that financial-based strategies needs related with increment of global competition demands so they proposed that a successful CE

could withstand the ability of a firm to comply with strategic approaches that underline quality and effectiveness. For this reason, strategic approaches that is related with the organizational entrepreneurial activities in the established organisations continues to create a great deal of interest among organizational academicians, although empirical studies have not yet been made on whether CE can be perceived as a strategy.

#### **1.1.2.4 Firm behaviour approach**

Covin & Slevin defined entrepreneurship as firm behavior for hr first time and this appraoch accepted in the literature and the researcher have begun to carry out deep research on this subject. In the literature, to improve the firm performance and competitive position with using innovarioni new busines venturing acitivites CE, seen as a behaviour or acitivites or strategies that performed by the group of people inside the organization. In the firm behavior approach, CE aims to increase organizational growth, competitive position and increasing the overall financial performance of firms with the help of innovation, strategic renewal and corporate venture activities. Therefore, the employer's entrepreneurial behavior, entrepreneurial activity. As a result, the employer's inside the organization defines CE as entrepreneurial activity, process or behavior of a business that have to proceed.

#### **1.1.2.5 Corporate entrepreneurship dimensions**

The intensity of CE in an organization can be described by five different dimetion; innovativeness, risk taking, proactiveness (Covin & Slevin, 1991) , self renewal (D. F. Kuratko, 2007), new business venturing (Frederick & Kuratko, 2009) It is assumed that these dimention of the CE are independent.(Lumpkin & Dess, 1996)

According to Lumpkin and Dess (1996), an entrepreneurial orientation identified with the following factors:

- Innovativeness
- proactiveness
- risk-taking
- competitive aggressiveness
- autonomy

**Table 1. 1 : Entrepreneurship dimensions.**

<b>Author name (year)</b>	<b>Dimensions</b>
Khandvalla (1977)	Proactivity, Risk Taking
Mintzberg (1973)	Innovation, risk taking, proactiveness
Covin ve Covin (1990)	Competitive aggressiveness
Jeffrey G. Covin, J.E. Prescott, and D.P. Slevin (1990)	Risk taking, proactiveness, and innovation
G.T. Lumpkin and Gregory G. Dess (2001)	Innovativeness, risk taking, proactiveness, and competitive aggressiveness
Jeffrey G. Covin et al. (2006)	Innovation, risk taking, and proactiveness
Shaker A. Zahra (1991)	Innovation, risk taking, and proactiveness
Shaker A. Zahra and Dennis M. Garvis (2000)	Innovation, proactiveness, and risk taking
Shaker A. Zahra (1993)	Innovation
Shaker A. Zahra (1996)	Innovation, venturing, and strategic renewal
Jeffrey G. Covin and Dennis P. Slevin (1986)	Risk taking, innovativeness, and proactiveness
Knight (1997)	innovativeness, and proactiveness
Hilton Barrett and Art Weinstein (1998)	Innovativeness, proactiveness, and risk taking

**Table 1.1 (continued) : Entrepreneurship dimensions.**

<b>Author name (year)</b>	<b>Dimensions</b>
Lumpkin ve Dess (1996)	Autonomy, Innovativeness, risk taking, proactiveness, and competitive aggressiveness
Richard C. Becherer and John G. Maurer (1999)	Autonomy, Innovativeness, risk taking, proactiveness, and competitive aggressiveness
Barringer ve Bluedorn (1999)	Proactiveness
Antoncic ve Hisrich (2001)	Innovation, proactiveness, and risk taking
Antoncic ve Hisrich (2004)	New business venturing ,Innovation, Self renewal, Proactiveness, competitive aggressiveness, risk taking

Innovativeness defines as innovation in the product and service that covers the new product and process development, product improvements and new production process and techniques. The critical point of the innovation is changing of currently available activities or products. The concept of innovation measured by what the company has done new, original or different. It said that if the company responds to an unfamiliar need, changes the way it needs to handle it, or makes changes in traditional solutions, the organization is innovative.

Firms with entrepreneurial tendencies are often measured with the risk taking tendencies through entering into high-level borrowing or risky behaviors like allocating tremendous resources, in order to obtain high returns due to market opportunities. For this reason, risk taking at organizational level needs to move quickly to appreciate the opportunities in the market, to make fast resource combinations and to be in bold actions. The courage shown in the pursuit of opportunities and new product or service experiments emphasized as the nature of corporate

entrepreneurship. Entrepreneurs and entrepreneurial firms often try to manage risks better by developing new product and service options at frequent intervals, making low-risk market trials targeting different market areas and gaps (Antoncic & Hisrich, 2003; Hornsby et al., 2002).

Proactiveness is a confrontational posturing relative to competitors. In the new borderless competitive environment, firms are disposed to take risks through experimentation. Proactive companies are bold and aggressive in following opportunities. It attempts to make the first move to gain competition rather than follow competitors. Miller (1987) associates proactiveness with assertiveness and pointed out that entrepreneurial companies take initiatives rather than reacting to their environment. According to Venkatraman (1989) proactiveness is the firm's process that has two phases. First, one is anticipating changes and continuously searching for market opportunities in the environment and the other one is acting according to these changes and experimentation with potential responses and future needs. Instead of dealing in saturated markets, being first and the first by finding out the new demands or introducing new products and services frequently helps firms to take new positions on the way of sustainable competitive advantage (Wennekers, Sander; Thurik, 1999)

Risk taking is conceptualized as the organization's willingness to pursue new risky opportunities that can be a cause for losing of competition position or significant performance degradation. Nevertheless, it is stated that entrepreneurship does not cause reckless decision-making. It involves a calculated and reasonable awareness of the risks involved. The entrepreneur can calculate the risk by testing the market or running trials. In this way, the risks can be manageable and ensure more sustainable long-term success. Organizations that do not innovate cannot provide competitive advantage so they lose their market position (Morris & Kuratko, 2002; Porter, 1979)

New business venturing includes practices that guide to creating new business within an existing organization or externally in organization spin off. New business creation internally can be defined as developing new markets or changing and developing the company's products or services. (W D Guth, 1990; William D Guth & Ginsberg, 1998; D. Kuratko, Hornsby, & Biship, 2005)

Self-renewal is defined as transformation of organizations through the renewal of key ideas on which they are built. (William D Guth & Ginsberg, 1998) Self-renewal has

strategic repositioning of company and includes reproducing of the business concept, reconstruction of organization, and the introduction of system-wide changes for innovation. (Zahra, 1995) Self-renewal involves entrepreneurial efforts that result in changing preexisting relationships inside the organisation or between the organisations. The difference between self-renewal and venturing is that new business venturing contains the creation of new businesses whereas self-renewal leads to the reconfiguration of existing businesses within a corporate environment.

Autonomy means that independent activities of an individual or a team's in order to put out and implement an idea or vision. In general, it refers to the ability and desire to self-manage for following opportunities. In the organizational context, it means that individuals move freely beyond the stifling organizational boundaries (Lumpkin & Dess, 1996)

The firms, as a trend maker, are contact with each other in their sectors and follow a different path based on their own research and forecasts and cause differentiation within the sector, instead of following other competitors. In other words, it creates a new trend in the sector and it provides the opportunity to seize the market share that this trend provides, which will create a monopoly in the adaptation process of the competitors.

Competitive aggressiveness defines as tendency to challenge their opponents directly and deathly to enter the competitor's market or improve its current position (Lumpkin & Dess, 1996). It has the capability of responding to the moves of competitors in a competitive aggression which includes non-limiting method in competition that is opposite of the traditional competition methods. Focusing on high value-added products while watching arbitrary expenditures carefully, challenging sector leaders with unusual tactics (A. C. Cooper, Willard, & Woo, 1986), analyzing competitors and targeting their weaknesses can be the examples of competitive aggressiveness.

There are three approaches to explain the ways of encouragement of CE within the established companies. Strategic approach focus on the management activities. Second, organizational-oriented approach assumes that establishing new bussines units or reorganization of existing business unit are the ways of enhancing corporate entrepreneurship. (Covin & Slevin, 1989) Finally, the human resource based approach

consider HRM practices as the main factors for implementing entrepreneurship within the existing company.

### **1.1.3 Human resources management practices**

CE is need for HR systems to support employee who act and think informally, to prevent unnecessary bureauratic constraints on behavior. (Hayton, 2005) In this way, HRM seen from three different aspects. First, management of employees by selecting entrepreneurial employees according set of knowledge, skills, abilities, and other characteristic. Willingness to take responsibility, solution oriented, strong teamwork assosiation, creative behavior, risk propensity are the main results of knowledge, skill, ability that directly can be associated with CE. (Schuler, 1986)

Secondly, HRM sistem reflected from the view of company culture. Company culture helps CE wth the empowering, emotinal attachment to the company, high ethic standart or earned respect. (Delaney & Huselid, 1996)

Third, the HRM examined as management activies, which change the organization on employee base. Similarly, Schuler (1986) suggested that organizational level entrepreneurship can be influenced by several HRM related operations and polices (Hayton, 2005). Hayton (2003) suggested that HRM practice could promote the entrepreneurial behavior in the company. Also HRM practices enhance the intensity of CE dimention through practices (Kaya, 2006)

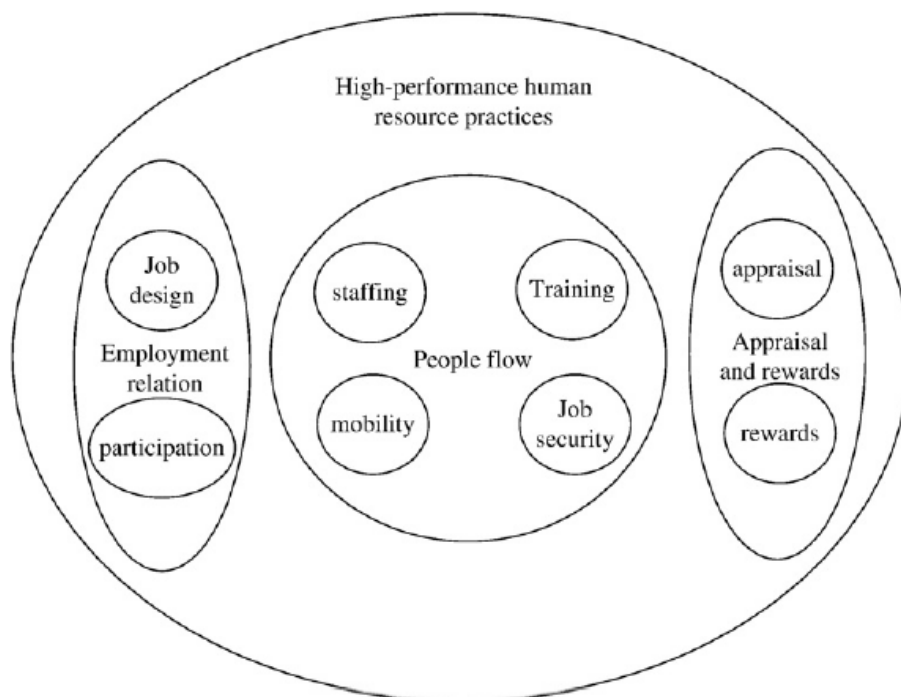
Resource based approach support the idea that firms is inner worthy, unique and unusual resources ensure an achievement of continuous advantage and efficiency. HRM practices of firms are one of the examples of these resources. (Ngo, Lau, & Foley, 2008). Therefore, an organization have to invest in human resources to ensure long-term success.

HRM practices covers the staff selecting, empolyee training activities, performance evaluation and appraisal. Because of that, HPHRPs are activities that can provide a great deal of technical skills and knowledge for employees and increase the flexibility of the organization to improve organizational performance. In the HPWPs point of view, employees are the most important assets of the organizations. According to Shih, Chiang, and Hsu (2006) continuous employee's training to improve the knowldge and skills, creation opportunities to participation and motivation provide improved work capabilites in the organization.

According to Bamberger and Meshoulam (2000), three main human resource subsystems are:

- People flow (selective staffing, mobility of employee and extensive education)
- Appraisal and Reward (performance appraisal and payment)
- Employment relation (employment participation and clear job description)

According to Sun, Aryee and Law (2007), HPHRPs can reinforce common perceptions about a supportive organizational habitat that motivates employees to engage in voluntary behavior and contributes to organizational performance. For this reason, continuous organizational competitive superiority has become the common purpose of many businesses through HPHRPs.



**Figure 1.1 :** High performance human resource practice groups (adapted from bamberger and meshoulam, 2000).

Five human resource practices have strongly positive effect on corporate entrepreneurship. These are recruitment (Hayton, 2005), training and development (Schuler, 1986), reward (Hayton, 2005), team activities (Kaya, 2006) and employment security (Ordiz & Fernández, 2005)

### **1.1.3.1 Staff selection**

The successful CE process requires highly skillful employees to select by firm. For organizational innovation in terms of corporate entrepreneurship, the aim of recruitment is constituting a suitable resource base of human capital to enhance entrepreneurial sight. During the hiring process, the company have to analyze employee's attitude and behaviors about teamwork and problem solving. Successful selection process provides skillful employee who make and initiate appropriate decisions toward the firm's values and goal. Therefore, an important practice can influence the CE level of the firms. Kaya (2006) suggested that the companies that supply talented and skillful people can response quickly when unexpected opportunities or changes occur. There are some measurement to be pay attention while performing the selection proceses. Creative, team working and problem solving skills are the main measurement that affect the CE level in the company. (Schuler, 1986). In general, the selection process should be align with the entrepreneurship dimensions of innovativeness, risk propensity, proactiveness, corporate venturing, and self-renewal (Zehir, Muceldili, & Zehir, 2012)

### **1.1.3.2 Training and development**

In general, personel education and development have an essential role for the firm's performance and competitive advantage. In addition, employees' low job performance and satisfaction can fixed by training of employees. Berthel and Becker (2003) expressed the personel development as activities that increase employees' skills and performance at all organizational levels through training, career management, and business structure. Training operations can induce entrepreneurial behavior to the extent that they apply to a range of job situations and encourage employee participation (Schuler, 1986). Unstable job demands and developing technology reveals the need for continuous and individual training needs (Hornsby et al., 2009). With the elimination of training needs, employees can take immediate action against uncertainties and quickly adapt to environmental conditions. The training progra updates must comply with the company's strategy and goals. While training plans are being developed, employees' expertise knowledge and social skills must be taken into account to facilitate the emergence of corporate entrepreneurship (Khandwalla, 2006; Morris & Jones, 1993). Various training and development items support

entrepreneurship oriented. First, implementation of training programs to improve the teamwork skills of people directly encourages entrepreneurship. Second, training programs that supports creativity will strengthen innovativeness and potentially strengthen self-renewal and new business development. Third, training sessions to transfer new ideas into business will lead to higher intensity for risk propensity and proactiveness.

### **1.1.3.3 Internal mobility**

Internal mobility refers to the possibilities of upward movement within an organization and the transition of people with in organization.(Ngo et al., 2008). Internal mobility increases employee loyalty to the company by providing motivation. Wide career paths and promotion are the examples of the internal mobility. (Li-Yun, Aryee, & Law, 2007)

### **1.1.3.4 Reward**

A general objective of incentives is to change attitudes and motivate employees. Many studies have found that incentives that enhance positive attitudes and employee motivation can contribute to the firm's growth and performance (Kaya, 2006) Regarding CE, objective staff reports have stated that adequate incentives can increase employees' risk propensity and motivation for innovation (Amabile, 1988; Huselid, 1995). Incentives are both financial and non-financial rewards in exchange for the employee's work performance (Morris & Kuratko, 2002). In this study's context, we are specifically interested in the employee's entrepreneurial performance regarding the five CE dimensions. Appropriate rewards build on a performance evaluation that considers entrepreneurial activity. Thus, the staff evaluation should include explicit measures of innovativeness and risk propensity. This implies using qualitative and subjective measures of performance in addition to quantitative performance measures (D. F. Kuratko, 2007; Lumpkin & Dess, 1996). Accordingly, performance appraisals will need to emphasize results as well as ideas and methods used to achieve those results (Delaney & Huselid, 1996; Donald F. Kuratko, Hornsby, & Covin, 2014; Schuler, 1986). Previous studies have not agreed on how to design staff rewards, because financial and nonfinancial rewards have different effects on encouraging entrepreneurial orientation (Zehir et al., 2012). In part, these rewards are in line with and even complement one another (D. F. Kuratko, 2007) but may even be

counterproductive (Amabile, 1988; Saly, 2001). Studies have agreed, however, that staff rewards must be formed flexibly in order to react to extraordinary situations (Morris & Jones, 1993) and innovative environments. In addition, some studies have concluded that financial rewards must be appreciable in order to incentivize entrepreneurial employees to remain with the company (Miller & Friesen, 1982). Links between the items for measuring staff rewards and the CE scale can be made. Creativity, risk propensity, investing time in innovative projects, and an increase in reputation based on entrepreneurial activities are all facets of the measurement construct for staff rewards.

#### **1.1.3.5 Performance appraisal**

Performance appraisal is the human resource practice that is commonly used by companies. The performance appraisal can be done over an individual or group. According to Gardner et al. (2004), performance appraisals are considered as a way for the company to communicate performance problems with workers. Appropriate evaluation and rewarding of employee results causes an improvement in the organization's performance.

Rewarding employees' good performances ensures that they are motivated and keep their goals parallel to those of the company. Delery & Doty (1996) mentioned about social exchange theory for the first time in literature. According to this theory, trade between the employer and employee produces an improvement in the firm's performance depending on the assessment based on behavior or outcomes. In this theory, the employer evaluates performances and allows personnel to be recognized. The employee refers to a person who helps to improve the performance to get better evaluations and bigger prizes. The researcher suggested that contributions of employees are linked to incentives. Because of some researches, there was no significant direct relationship between performance evaluation and firm performance. Studies have been carried out on performance evaluation to reduce staff turnover (Wright, Gardner, & Moynihan, 2003). Also, performance appraisal practices on labor productivity and sales have been proven effective (Huselid, 1995; Truss, 2013). According to research, specific, difficult but achievable purposes and standardized performance appraisal processes significantly increase the productivity of employees.

### **1.1.3.6 Employer's employment commitment**

Job security is a kind of commitment given to employees on employment. Some researcher's express this dimension as an investment in employees. Employment security closely related to education. If people do not stay in the company for long enough to yield, employers do not invest in training. Ensuring adequate training opportunities for employees will increase employee motivation and employee commitment (Becker, 1964). Employer's employment commitment enhances cooperation between employee and company and increased the productivity. Because workers are know the fact that firm performance results are associated with a balanced job and the possibility of developing a career in the company (Delery & Doty, 1996)

### **1.1.3.7 Clear job description**

An explicit proposal of the tasks an employee has to do in his / her work represents a job description in this work. An open job description should allow a worker to be productive in his daily tasks. However, when the role and tasks of an employee are uncertain, they may feel unsatisfied and inefficient. Role conflict and role ambiguity can lead to the emergence of work stress. An employee may develop a negative attitude toward work if he or she considers that the tasks have a different interpretation than others and that their tasks are not open. If the firm does not understand the expectations of someone about their job duties, the employee's job motivation will fall. In addition, lack of a challenging job description can have a motivational effect (Hackman & Oldham, 1976). The expectations about the company's business scope clearly reflected to the employee with the job description. Because of that open job definition ensures minimal role conflict and role ambiguity. These factors should ensure that employees are productive and effective in their work, develop a commitment to work, and be able to absorb new training at work

### **1.1.3.8 Participation**

High-performance HR practice, which promotes employee participation, emerges as a strengthening practice in the literature, playing a role similar to job description and employment security in terms of contribution to organizational performance (Li-Yun et al., 2007) Providing chance to participate in organizational determination can enable employees to feel the sense of relevance and ownership as a result of decisions. In this way, employees develop a sense of responsibility by evaluating the performance and

productivity of their work. According to agency theory, it causes the employees to pay much more attention to work-related outcomes and thus to increase the productivity of the labor force. By participating in organizational decisions, the employees' ownership improved by making the goals of the employees parallel to the company's goals. Meeting the attendees' expectations of participation can alleviate any potential concern about very few opportunities for the company to participate. (Porter, 1979) With the opportunity of participation, the employees are given the freedom of doing business and getting authorization about the business is supported (Combs, Liu, Hall, & Ketchen, 2006)

#### **1.1.3.9 Team activities**

Some researcher expressed that supporting group activities was crucial to enhance organizational competitiveness and innovation. (Lui, Lau, & Ngo, 2004) Group activities develop communication and business association feelings. In addition to that, it help to creation of desirable work culture. Giving feedback about the performances to employees by the managers is important for increasing the efficiency between the manager and the employee. It is a means of improving communications between supervisors and employees. Team activities seen as an important human resource application due to the development of relations between employees and managers.

#### **1.1.4 HPHRPs and entrepreneurship**

HPHRPs are a package of HR practices that can improve employee motivation, involvement in decision-making processes and spontaneous self-motivation (Zhang & Jia, 2010). As the skill levels of employees improve, the knowledge and capability to participate an innovation are also increasing. In addition, if they authorized in their daily work, their employees take more responsibilities and chase new opportunities. (Zhang & Jia, 2010). To increase organizational capability for innovation, institutions will use staff selection factor to obtain high-quality and experienced human capital with HPHRPs and these employees will have more capacity and will have a higher potential to develop newer and more initiative products (Zhang et al., 2008). In addition, organizations are also implementing a variety of comprehensive training programs to improve current employee productivity and job creation and renewal capacities (Gartner, Carter, & Reynolds, 2010). This employee talent improve practices will contribute to the company's participation in entrepreneurial activities

Organizations that run HPHRPs see their employees as internal entrepreneurs and encourage employees to participate in decision-making processes to discover new opportunities and increase their tendency to try new prospects more proactively and spontaneously. Organizations have also clearly identified entrepreneurial activities as a consequence of performance appraisal (Zhang & Jia, 2010)

### **1.1.5 The Corporate entrepreneurship and performance**

The sustainability of competitive positions of enterprises in a global competitive environment is a vital priority. Professional management, skilled workforce, advanced technology, quality, performance, efficiency, resource efficiency, quality, flexibility, innovation, etc. are all essential to strengthening the competitive position of businesses. As one of these factors, performance is an important concept in terms of determining the competitive positions of the enterprises, making their own historical progress, or making comparative comparisons with other sectoral firms (Kılıç, B. ve Eleren, 2009). Salt (2002) describes the quantitative or qualitative expression of the targeted point reached by an individual, a group or an organization. These definitions and explanations indicate that performance is a component of the level and ability to achieve the goal, and it refers to the need to achieve the set goal in order to accept as successful.

In other definitions in the literature, performance is a concept that quantitatively or qualitatively determines what achieved because of a purposeful and planned activity in the general sense. In this context, Seymen, Erdem and Gul (2008) describe performance as an indicator that quantitatively and qualitatively demonstrates to what extent each set of objectives achieved. It stated that the concept of performance used to determine the achievement of the aimed work, as a determining factor of the activities that performed towards the desired activity with the concepts such as efficiency, effectiveness, productivity, ability and satisfaction.

When the literature on performance measurement examined, it seems that there is no compromise on how performance should measured. When the historical process of performance measurement examined, it observed that performance measurement initially based on financial indicators. It observed that the monopolistic usage of increasingly competitive financial indicators has been inadequate since the 1980s. It observed that factors such as productivity, quality, and customer satisfaction that

ensure long-term goals are included in the evaluations (Oyman, 2002). According to Akal (2002), either the output of an operator over a certain period or the result of a process within a period. According to Akal'a (2002), the performance of a business is output it has obtained over a certain period, or the result of a process within a process. This result means the extent to which the entity achieves its purpose or the performance of a particular task. In this case, performance is the assessment of the efforts made to improve business objectives.

### **1.1.6 Organizational culture**

It can be defined as a complex whole including talent and habits, belief, art and morality, customs being a member of the community in which the person lives. According to Schein's (1992) definition: "a pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid, and, therefore, to be taught to new members as the correct way to perceive, think and feel in relation to those problems". Organization culture can be defined as assumptions that are considered group-bound. Reflections of organizational culture are seen in behaviors, movements, attitudes and expectations of organizational personnel. Culture of an organization; reflects what is distinguished as being valuable, the dominant leadership style, language and symbols, valued objects, procedures and achievement. According to Terzi (2000), organizational founders have an important place in the formation process of the organization. It is natural that the values and beliefs of the founders have influence on the organization they are structuring. Cohen (1993) deals with organizational culture formally and informally. Accordingly, formal culture includes leadership features, organizational structure, policy, incentive system, socialization mechanism and decision-making processes. Informal culture includes non-normative norms of behavior, role models, rituals, historical anecdotes and language. As a result, organizational culture can reduce ethical issues both formal and informal. Researchers have made different classifications about organizational culture. The model of Cameron and Quinn is one of the commonly used models in the literature, and the study of Cameron and Quinn is discussed in this study. Cameron & Quinn (2006) have demonstrated the influence of culture on organizational performance. Researchers refer to organizational culture as a model of value judgments, assumptions, and interpretations. This model is called "Competitive Values" and analyzed the value

judgments of employees for organizational effectiveness. There are four different culture types according to K. S. Cameron & Quinn, (1999) model. These are clan culture, adhocracy culture, hierarchy culture and market culture. The culture of a brand explained by its characteristics in two different polar dimensions. The first dimension defined as the inner and outer focus in the two opposite poles. There is differentiation and competition against unity and integration. One of the two opposing poles of the second dimension is stagnation, order and control, while the others flexibility and change. Four different culture types are emerging from the intersection points of these two different sizes

## **1.2 Hypothesis**

### **1.2.1 Corporate entrepreneurship and performance**

Corporate entrepreneurship is one of the key factor that effects the growth and profitability of the organizations and because of that successfull business must absolutely take into consideration (Pinchot, 1985). Past literature has supported the relationship between corporate entrepreneurship and economic improvement. Development of new product or entrence to the new markets are the results of the entrepreneurship and this results gives company's competitive advantage which has a direct effects on the company performance. Entrepreneurship noted as a creative process that contain the creative of new product or services, enhancement of the supply chain, new combination of overall efficiency (Birkinshaw et al., 1998).

Entrepreneurial firms need a culture and procedures that support to be innovate, proactive and encouraged to take risks. Willingness to create new products, services and market entrence and stimulate market prospects to test new and obscure products, services and markets are the characteristic features of the entrepreneurial businesses (Rauch et al., 2009). Innovation, which is a common factor among entrepreneurial companies, is the core of entrepreneurship described as creation new products, services, process. So Innovativeness can have influence on the performance of the businesses and give them a competitive superiorities. According to Barrett, (2000) in a competitive marketplace, innovation represents the continuous development of entrepreneurial companies. As a result, innovativeness effects the sales of the products and provide positive support to performance. Willing to capture the opportunities in the market and fund the resources be shows the risk taking characteristic of the

companies. Performance of the companies estimated with the levels of risk taking which can be related with the creating new product, services or getting competitive advantages (Lumpkin & Dess, 2001). The change in the environment in which entrepreneurs actively confronted and they know they will succeed described as proactivity.

Past research shows the positive effects between the profitability of large firms and CE (Covin & Slevin, 1989; Zahra, 1993, 1995) Also positive corporate entrepreneurship-profitability and growth correlation was detected in the small, medium-sized companies by the Antoncic & Hisrich, (2001). Both of these studies have been conducted in the USA and the developed western countries, and in these studies, it has been achieved that there is a considerably relevant relationship between corporate entrepreneurship and business performance. As a result, it can be said that corporate entrepreneurship is an important factor for the successful organizations also growth and profitability are the important consequences of corporate entrepreneurship (Alpkan et al., 2005).

### **1.2.2 HPHRPs and corporate entrepreneurship**

CE's management holds greater uncertainty and information density. Because of that management approach of CE is different from the classic management strategies. This approach has to cover centralization of administration, encouragement to contribute to the decision-making process, collaboration, abstinence of the bureaucracy (Hornsby, Kuratko, & Montagno, 1999)

HR practices influence each other and this total effect has a positive effect on the desired employee behavior. Hayton, (2005) emphasized the importance of voluntary and self-directed behavior for corporate entrepreneurship. The researchers emphasized the importance of voluntary and self-directed behavior for corporate entrepreneurship. (Hayton, 2005; Zhang & Jia, 2010) Also they claimed that human resource practices foster high-quality relationships and enable employees to support the role of good organizational agents (Chen, Zhu, & Anquan, 2005). According to Sun et al., (2007) HR practices enable employees to create organizational environments that encourage voluntary entrepreneurship and risk taking behavior. The relationship between in-house entrepreneurship and human resources practices described as the development of employee skills and motivation that leads to creativity. High-performance human

resource practices consist of finding ways to invest in employees' knowledge and skills. In conclusion, employees will not only use their abilities to improve basic business jobs, but they will also offer innovative ideas that will increase corporate performance (Li-Yun et al., 2007)

### **1.2.3 Mediation effect of entrepreneurship on HPHRP and firm performance**

It is believed that HRM could help entrepreneurs discover more risk-taking behaviors. For this reason HRM practices and strategy are thought to have a significant impact on creating competitiveness (Zhao, Lynch, & Chen, 2010). Entrepreneurship is a strategic factor of the company, which includes the specific HRM system used to help interior entrepreneurial behavior and organizational outcomes (Covin & Slevin, 1991). When combined with the power of entrepreneurship, the HRM system creates better organizational performance. The researchers pointed out HRM practices, such as education and incentives, promote entrepreneurial behavior and entrepreneurship. (Twomey & Harris, 2000)

While staff selection plans enable recruitment of employees with strong innovation and risk-taking characteristics, training is designed to ensure that employees are innovative and risk-takers. Performance evaluation and incentives are also used to contribute to the development of desirable behaviors. (Schuler, 1986)

For this reason, HRM helps to develop entrepreneurship for the business. The manager of the business has to decide on the needs of HRM practices to endorse the size of expected entrepreneurship by the organization and to obtain entrepreneurial performance (Morris & Jones, 1993). According to Hayton (2005), businesses should improve their ability to take risks, become more innovative and take more initiative through HRM in order to reach higher levels of entrepreneurship and sustain their high performance.

### **1.2.4 Culture and human resource management**

The human resources of the business are antagonized as the main factor determining the efficiency and effectiveness of an enterprise and organizational culture plays a major role in the effectiveness of human resources. Human resource management practices and organizational culture adaptation are important for achieving goals and obtaining desired results for an organization. The research conducted by Cawood,

(2008) confirms that the organization related to the culture of HRM. Organizational culture can encourage employees to work and coordinate to achieve organizational development (Florea, Goldbach, & Goldbach, 2011). Organizational culture is highly valued in organizations focused on strategic human resources management. Recruitment, selection and placement of candidates effects the organization culture while organizational culture influences recruitment processes at the same time (Condrey, 2010). Earl (2003) found that recruitment; training, wage and performance appraisal of HRM practices had an impact on organizational culture

Therefore, we propose the following:

H<sub>1</sub>: High-performance human resource practices related to firm performance.

H<sub>2</sub>: Corporate entrepreneurship mediates the effects of high-performance human resource practices on firm performance.

H<sub>3</sub>: Organizational culture moderates the effect of high-performance human resource practices on firm performance though mediation effect of corporate entrepreneurship.



## **2. RESEARCH METHODOLOGY**

### **2.1 Introduction**

Organizations use corporate entrepreneurship as a tool to gain competitive advantage and increase company performance. However, they need high performance human resource applications to encourage entrepreneurship inside the firm. For this reason, in this study we analyze the impact of human resources practices directly on corporate performance or through corporate entrepreneurship. In order to demonstrate this effects, analyzes that will be described in the following sections have been made.

### **2.2 Data Collection and Method**

We employed an online questionnaire survey in Turkey to test the validity of our research model and hypotheses. Initially 561 firms selected and distributed thorough internet with mail over a two-month period in 2018. Firms randomly selected. As a result, 359 employee participated to the survey but only 199 participant complete the entire survey and send the result. Therefore, the response and complete rate of the survey is approximately 48,5%. Measurement

Survey questions identified in English translated into Turkish and the Turkish version of questionnaire sent to the participants. Before the distribution of the questionnaire, second translation of the survey questions that translated in Turkish, translated back to the English. (Brislin, 1980) Because of the back translation process prevented of any misunderstanding and interpretation from occurring.

#### **2.2.1 High-performance human resource practices**

High-performance human resource practices measured with the 26-item scale that developed by the Zhang, Wan and Jia (2008) though the work of Bamberger and Meshoulam (2000). Resource-based approach of the Delery and Doty's (1996) measure and control-based approach of the Snell and Dean (1992) measure were provided the initial pool of items that were created by Bae and Lawler's (2000). The

eight dimensions used to measure the high-performance human resource practice in the business: selective staffing, extensive training, internal mobility, employer's employment commitment, broad job design, results-oriented appraisal, rewards, and participation.

In the literature high-performance human resource practices composed of three main parts: people flow, appraisal, rewards, and employment relations. Selective staffing, training, employment mobility and guarantee of the job security are the dimensions in the group of people flow. Training covers education for the development of skills that needed. Employee mobility refers as wide career paths and promotion possibilities within the company. Guarantee of job security covers the employer's employee commitment. Performance appraisal and rewards are the dimensions in the group of appraisal and reward. The performance appraisal can be explained as long-term, result-oriented valuation. Reward dimension covers the compensation and open-ended awards. Job design and participation are the dimensions in the group of employment relation. Job design includes broad job descriptions, flexible job tasks. On the other hand, participation explained as encouragement of the contribution within the company. HPHRM constructs measured using five-point Likert scales with anchors strongly disagree (1) and strongly agree (5). The Appendix shows the texts of the items in our high-performance human resource practices scale.

### **2.2.2 Corporate entrepreneurship**

Corporate entrepreneurship classified into four dimensions: new business venturing, innovation, self-renewal and proactiveness. New business venturing refers as new business creation in the organization by creating new markets or recreation of the existing products or services (Zahra, 1995). Covin and Slevin (1991) expressed the innovation as density of the product innovation as a result closeness to technological leadership. Zahra, (1993) included that product innovation is also an aspect of the innovativeness. As a result, innovativeness can be expressed as product and service renewal through developing and innovation in technology. The self-renewal dimension is expressed as organizational changes with emphasis on the renovation of the key ideas in the organization (Zahra, 1995). In addition, it involves the redefinition of the organizational concepts, renewal of the organization and changes in the entire system for innovation. (Zahra, 1995). As a result, activities that related with the renovation of

the established business described as self-renewal activities in the organization. The last dimension is associated with the aggressive stance with competitors. (Knight, 1997). Proactiveness refers as the tendencies and activities of being initiative, being risk taking and being competitive. (Antoncic & Hisrich, 2001). Knight suggested that risk taking and competitive aggressiveness dimension that proposed as separate dimension by Lumkin and Dess (1996) should be included with proactiveness. (Knight, 1997). As a result proactiveness dimension present the administration orientation in following developed competitiveness and involved risk taking, competitive aggressiveness and boldness. (Antoncic & Hisrich, 2001). Corporate entrepreneurship dimension (innovation, new business venturing and self renewal) was measured by items from the corporate entrepreneurship scale (Zahra, 1993). CE dimensions measured with 26 items, five of them measure the new business-venturing dimension, 10 items of them measure the innovation dimension and the rest of the seven used to calculate self-renewal dimension. The Proactiveness measured by using the ENTRESALE scale (Knight, 1997). Four items used the measure the proactiveness dimension. CE constructs measured using five-point Likert scales with anchors strongly disagree (1) and strongly agree (5).

### **2.2.3 Performance**

In this study, in order to measure qualitative and quantitative performance, a subjective performance measurement method adopted by asking how participants saw their companies in terms of various performance criteria. Firm performance measured with three different items. Customer satisfaction item used to measure the qualitative performance. Overall profitability and market share growth was used the measure the quantitative performance of the firms. Participants asked to compare with a competitor of their own firm over the past 3 years, using five-point scales anchored at much worse than competition (1) and much better than competition (5). Expressions related to qualitative and quantitative performance criteria were taken as (Alpkan et al., 2005).

### **2.2.4 Organizational culture**

Organizational culture was identified with four dimension: clan, hierarchy, market and adhocracy (K. S. Cameron & Quinn, 1999) Organizations with clan cultures have characteristic features such as team work, employee participation programs, and corporate loyalty to employees instead of hierarchical rules and procedures.

Employees in such organizations share intimate relationships and share each other's knowledge and experience. Organizational orientation and stagnation / control dimensions shape hierarchy culture. It represents mechanical and bureaucratic organizations. Market culture emphasizes external focussing, competitiveness and productivity and refers to organizational environments that have static and control aspects. Adhocracy culture represents entrepreneurial, flexible, innovative and creative organizational cultural environments. Organizational culture measured with 16 items. The questions that were used to measure organizational culture were taken from Cameron and Quinn (1999), "Diagnosing and Changing Organizational Culture, Based on the Competing Values Framework".



### 3. DATA ANALYSIS AND RESULTS

In this section, the impact of the corporate entrepreneurship approach on corporate performance, which allows corporate entrepreneurial practices, will be explored and the role of high-performance human resource applications on this interaction will be assessed. In this stage, the determined variables will be grouped first by factor analysis, the load values of the variables in the factor groups will be calculated and the factors will be named according to the load values of the variables. The weight of each factor group will be determined by factor analysis. Subsequently, hypothesis-testing will be performed using the structural equation model.

#### 3.1 Demographic Profile of Respondents

Analysis of the demographic characteristics revealed that 113 were male and 86 were female out of 199 respondents. For this sample, manufacturing (34%) and information technology (39%) are the most frequent industry classifications. The rest of the participants work in the banking, sales, tourism, marketing and other industries. Table 3.1 shows the demographic information of the participants.

**Table 3.1 : Demographic information.**

	<b>N=199</b>	<b>%</b>
<b>Number of Employees</b>		
Less Than 49	30	15,07
50-99	20	10,05
100-500	149	74,87
<b>Industries</b>		
Manufacturing firms	76	38,10
Service firms	123	61,81
<b>Position of the employee</b>		
Manager	68	34,17
White Collar Worker	131	65,82

### **3.2 Exploratory Factor Analysis**

Exploratory factor analysis (EFA) is statistical technique for data analysis and it identify the structure of the factors to examine. (Abdul-Halim, Che-Ha, & Geare, 2009).

Rietveld & Van Hout 1993 explained that the goal of EFA to reduce “the dimensionality of the original space and to give an interpretation to the new space, spanned by a reduced number of new dimensions which are supposed to underlie the old ones”. Exploratory factor analysis provides a clear view of the data. Also, factor analysis presents the likelihood of using output in subsequent analyzes (Rietveld & van Hout, 2017). According to Abdul-Halim and Che-Ha (2009), EFA also used to specify the convergent validity and dimensionality of the relationship between items and variables. Because of that to test the construct validity of the study, EFA is performed separately on the items of corporate entrepreneurship, high performance human resources and performance.

Factor analysis works in two stages. In the first stage, based on the variables observed load values calculate variance and covariances. These loading values are they do not match up with expectations or they are not easily interpretable. For this reason, the loading values rotated in the second step to obtained interpretable values.

The extraction method of maximum likelihood analysis and varimax rotation method used to examine the scales. The Varimax rotation method tries to find the factors that affect all variables and it allows each factor to affect several variables. The varimax method reduced the inequality in the percentage of variation of factors and it do not change the percentage of total variability explanation of the factors. In this method, which prioritizes the columns of the factor load matrix in achieving a simple structure, some load values in each column are approximated to one while the remaining multiple load values are approximated to zero. In this way, the determination and interpretation of the factors done objectively and there are many more ways that lead to different interpretations and conclusions.

Some basic rules proposed to determine how many factors must kept. (J.F. Hair, Black, Babin, Anderson, & Tatham, 2006). According to Guttman-Kaiser rule, the factors whose eigenvalues are equal to or greater than one must selected. Accordingt to other rule, the scree plot is important and have to keep all factors before the breaking point

or elbow. It has been determined how much variability explained by the selected factors. The other rule is to protect the factors that make up 60-70% of the total variance. It is the first factor explaining the largest part of the total variance. The variance of the second factor is smaller than the first factor but larger than others. However, as the number of factors increases, the contribution of total variance to explanation power decreases for every added factor. When factor groups are determined, factor loadings greater than 0.40 generally needed for practical significance. Thus, it is judged that there is a significant and important relationship between the variable and the common factor.

Following the Hair et al. (2006) Bartlett's Test and Kaiser-Meyer-Olkin (KMO) statistical test conducted to measure the sample adequacy criterion and the degree of correlations between variables. The Bartlett's Test of Sphericity (Bartlett's Test) calculate the sampling adequacy and if the value is less than 0.05 the factor analysis considered appropriate. According to Consistent with Pallant (2007), if the KMO value is between 0.5 and 0.7, the sampling adequacy is fair. If the KMO value is between 0.8 and 0.9, the sampling adequacy is great. If the KMO value is higher than 0.9, the sampling adequacy is excellent.

Before testing the hypothesised model, the reliability and validity of the measures have to perform which are the key indicators of the quality of a measuring instrument.

The exploratory measurement assessment contains exploratory factor analyses, validity and reliability. The process of developing reliability and validity methods is in large part focused on reducing the measurement errors (Churchill & Iacobucci, 2004) Reliability assess the stability of the measures and internal consistency of the measurement tools. Validity state the extent of validity and validity of the measurement instruments used in study. In order to state the reliability of all variables, Cronbach's alpha values for each factors was calculated (Lee, 2000). In order to achieve convergent validity, Average Variance Extracted (AVE) value is considered and it is requested that this value is greater than 0,50 (Joseph F Hair, Black, Babin, & Anderson, 2010). However, composite reliability is a more conservative measure the AVE even if the variance due to the error is greater than 0.50. It stated that convergent validity could be accepted only considering the CR value. A value of  $CR > 0.6$  needed in order to obtain composite reliability for a construct. (Fornell & Larcker, 1981).

### 3.2.1 Factor analysis of high performance human resource practice

As a result of the factor analysis, the items collected in the five-factor. The reward and performance appraisal supposed to be different factor but in our sample these factors create a new factor that is called reward/performance appraisal. The questions to measure these separate factors was quite similar. Because of that, the combination can explained. Minimum factor loading value was 0,489. The results shows in the table 3.2

**Table 3.2 :** Factor loads and variances.

<b>Factor Name</b>	<b>Items</b>	<b>Factor Loads</b>	<b>Variance explained</b>	<b>Cumulative percent</b>
<b>Extensive Training</b>	Longterm employee potential is emphasized.	0,902	39,936	39,936
	Great effort is taken to select the right person	0,816		
	Considerable importance is placed on the staffing process.	0,764		
	Very extensive efforts are made in selection.	0,700		
<b>Participation</b>	Employees are provided the opportunity to suggest improvements in the way things are done	0,870	11,863	51,799
	Individuals in this job are allowed to make decisions	0,856		
	Supervisions keep open communications with employees in this job	0,742		

**Table 3.2 (continued) : Factor loads and variances.**

<b>Factor Name</b>	<b>Items</b>	<b>Factor Loads</b>	<b>Variance explained</b>	<b>Cumulative percent</b>
<b>Clear job description</b>	The job description for a position accurately described all of the duties performed by individual employees	0,813	7,365	59,164
	The duties in this job are clearly defined	0,734		
	This job has an up-to-date description	0,674		
<b>Appraisal &amp; Reward</b>	Close tie or matching of pay to individual/group performance	0,831	6,383	65,547
	Individuals in this job receive bonuses based on the profit of the organization	0,665		
	Every employee has performance objectives.	0,636		
<b>Employment Security</b>	Job security is almost guaranteed to employees in this organization	0,975	5,292	70,839
	Employees in this job can be expected to stay with this organization for as long as they wish.	0,516		
<b>Kaizer Meyer Olkin Measure of Sampling Adequacy</b>			<b>0,875</b>	
<b>Bartlett Test of Sphericity Approx. Chi-Square</b>			<b>2170,733</b>	
<b>df</b>			<b>153</b>	
<b>Sig.</b>			<b>0,000</b>	

### 3.2.2 Factor analysis of corporate entrepreneurship

As a result of the factor analysis the items collected in the two factor. The innovation and new business venturing supposed to be different factor but in our sample these factors create a new factor that called innovation / new business venturing. The

research and development questions of new business venturing loaded in the innovation factor. Because of that, the combination can explained. In addition to that because proactiveness is not loaded with a high value on a single factor, we elimante the factor. The results shows in the table 3.3

**Table 3.3 :** Factor loadings for corporate entrepreneurship.

<b>Factor Name</b>	<b>Items</b>	<b>Factor Loadings</b>	<b>Variance explained</b>	<b>Cumulative percent</b>
<b>Innovation and New Business Venturing</b>	Company's spending on new product development activities	0,868	52,346	52,346
	Rate of new product introduction into the market	0,857		
	Company's emphasis on developing new products	0,831		
	The number of new products added by the company	0,767		
	Entering new businesses by offering new lines and products	0,720		
	Investment in developing proprietary technologies	0,607		
	Finding new niches for products in current markets	0,566		
	Pursuing new businesses in new industries that are related to current business.	0,489		
<b>Self Renewal</b>	Establishing procedures to examine new innovation ideas	0,823	13,419	65,765
	Rewarding employees for creativity and innovation	0,780		
	Training employees in creativity techniques	0,755		
	Making resources available for experimental projects	0,717		

**Table 3.3 (continued) : Factor loadings for corporate entrepreneurship.**

<b>Factor Name</b>	<b>Items</b>	<b>Factor Loadings</b>	<b>Variance explained</b>	<b>Cumulative percent</b>
<b>Self Renewal</b>	Reorganizing units and divisions to increase innovation	0,613		
	Defining the company's mission	0,599		
<b>Kaizer Meyer Olkin Measure of Sampling Adequacy</b>			<b>0,912</b>	
<b>Bartlett Test of Sphericity</b>			<b>1922,392</b>	
<b>Approx. Chi-Square</b>				
			<b>df</b>	<b>91</b>
			<b>Sig.</b>	<b>0,000</b>

### 3.2.3 Factor analysis of firm performance

As a result of the factor analysis of firm performance, the KMO values is acceptable all items loaded to one factor as predicted. The results shows in the table 3.4

**Table 3.4 : Factor loadings for performance.**

<b>Factor Name</b>	<b>Items</b>	<b>Factor Loadings</b>	<b>Variance explained</b>	<b>Cumulative percent</b>
<b>Performance</b>	Company's spending on new product development activities	0,889	72,343	72,343
	Rate of new product introduction into the market	0,735		
	Company's emphasis on developing new products	0,677		
<b>Kaizer Meyer Olkin Measure of Sampling Adequacy</b>			<b>0,689</b>	
<b>Bartlett Test of Sphericity</b>			<b>Approx. Chi-</b>	<b>203,170</b>
<b>Square</b>				
			<b>df</b>	<b>3</b>
			<b>Sig.</b>	<b>0,000</b>

### 3.2.4 Reliability analysis

First, the evaluation of the reliability of scale items followed to determine the internally coherent of factors and degree of independence from error. The scale which loaded

less than 0,5 was removed from calculations to because this factor loadings do not contribute to the alpha coefficient significantly. The explanatory factor analysis conducted for HRHRM, CE and performane seperately. The final solution shows that HPHRM explained with the five factor, corporate entrepreneurship explained with two factor. Cronbach's alpha coefficients and composite reliability values used to examine the reliability scale.The results shown in the table 3.5

Table 3.6 shows that minimum Cronbach's alpha value is 0,734 and maximum value is 0,919. The results shows that internal consistency was accurate in the factors (J.F. Hair et al., 2006)

**Table 3.5 : Reliability and validity analysis result of EFA.**

<b>Variables</b>	<b>Factors</b>	<b>AVE</b>	<b>Cronbach Alfa (<math>\alpha</math>)</b>	<b>Composite Reliability</b>
<b>HPHRM</b>	Extensive Training	0,637903	0,919	0,874787
	Participation	0,680245	0,905	0,863974
	Clear job description	0,551717	0,886	0,785891
	Appraisal & Reward.	0,512332	0,811	0,756446
	Employement Security	0,608137	0,734	0,739265
<b>Corporate Entrepreneurship</b>	Innovation and new venturing	0,526531	0,916	0,850912
	Self Renewal	0,517749	0,896	0,86405
<b>Performance</b>	Performance	0,596026	0,808	0,81366

**Table 3.6 : Cronbach's alpha results.**

<b>Construct</b>	<b>Number of Items</b>	<b>Cronbach's alpha</b>
<b>HPHRM</b>	15	0,902
<b>CE</b>	14	0,928
<b>Performance</b>	3	0,808

### 3.3 Structural Equation Modelling (SEM)

The proposed model tested using SEM technique. The proposed model includes five exogeneous variables that are the items of the HPHRM construct (i.e., extensive training, participarion, clear job description, reward and appraisal, employment security) and three endogenous variables (i.e., Innovation and new business venturing, self-renewal, company performance). The analysis of the given model done primarily through covariances and the maximum-likelihood estimation method with using AMOS program. After that model, re-identification method used to obtain better fit indexed and identify the source of incompatibility. As a result, the model which has better fit indexes was obtained (Byrne, 2010). Finally, the mediation analysis conducted to identify the mediation role between the independent variables and the company performance (D. R. Cooper & Schindler, 2003)

According to Hair et al. (2006), In order to obtain goodness of fit for the empirical data, both the measurement and the structural model must meet the requirements of the selected indices. In this study, the proposed model tested through multiple indices. According to Hair et al. (2006), a model can fit well with a specific fit index, but inadequate elsewhere. According to Marsh, Balla and McDonald (1988) the ideal model fit indices depend on independence of the sample size, accuracy and consistency that defined by different models and ease of interpretation supported by a well-defined preset range. Because of that the nonnormed fit index (NNFI); the comparative fit index (CFI), and the root mean squared approximation of error (RMSEA) values are proposed by the Garver and Mentzer (1999). The lower points for NNFI and CFI is identified as 0,90. For RMSEA, the model have to greater than 0.08 to reach the acceptable fit. The Tucker-Lewis index (NNFI) compares the proposed model's fit indexes with the null model. In additon, NNFI measures parsimonium by evaluating the level of freedom of the proposed model according to the level of freedom of the null model. If the NNFI is greater than 0.9, it indicates good fitness level. The Root Mean Square Error of Approximation (RMSEA) ensures strong results between different estimation approaches for the badness-of-fit index. It measures the inconsistency between the observed and estimated covariance matrices per level of freedom in terms of the population. (Steiger, 1990) The RMSEA value less than 0.05 shows good fit, values up to 0.08 acceptable fit and values between 0.08 and 0.10 shows medium fit. CFI was avoids developed by Bentler (1990) as a non-centrality

measure to overcome the underestimation of fit often noted in small samples. CFI has ranges from 0 to 1, with 0.90 or greater shows an acceptable fit. The chi square test sensitive to sample size particularly higher than 200 and that shows the limitation of the test. Because of that  $\chi^2 / \text{d.f.}$  ratio was suggested which normalize the chi-square with degrees of freedom (d.f.). The suitable ratio value for degrees of freedom ( $\chi^2/\text{df}$ ) must be less than 3.0 (J.F. Hair et al., 2006). The Table 3.7 provides a summary of the recommended values for model fit indices used in the present study.

**Table 3.7 : Model fit indices and limit values.**

<b>Fit index</b>	<b>Recommended value</b>
<b>Absolute Fit Index</b>	
$\chi^2$	The lower, the better
$\chi^2/\text{df}$	$\leq 3$
RMSEA	$\leq 0.08$
<b>Incremental Fit Index</b>	
TLI	$\geq 0.90$
CFI	$\geq 0.90$

### 3.3.1 Confirmatory factor analysis

Structural Equation Modelling is confirmatory method that gives wide information to validate and verify the measurement model of latent constructs. Confirmatory factor analysis is the validating procedure of SEM that calculate the unidimensionality, validity and reliability of a latent construct. While evaluation of unidimensionality the other traditional factor analysis failed. So confirmatory factor analysis (CFA) used for the evaluation of proposed model fit and unidimensionality to come through this limitation. In the confirmatory factor analysis, the items that have low factor loading and not fit the measurement model have to remove from the proposed model. The total removed item number must not exceed 20 percent of the total number of items in the model. The CFA can run for every construct separately or run the total measurement models at once.

The researchers could run the CFA for every measurement model separately or run the pooled measurement models at once. In the confirmatory factor analysis, the items that have low factor loading and not fit the measurement model have to remove from the proposed model. For this reason, pooled measurement models was conducted to identify measurement model of all latent constructs will be indicated.

### 3.3.1.1 Identification issues

In SEM, there must be adequate pieces of information to determine a solution and give unique estimates for all unknown parameters (factor loading, path coefficient) and known parameters (covariences). So identification express whether a solution for proposed model can obtained. (J.F. Hair et al., 2006). From the model summary in AMOS output, the present hypothesised model was over-identified with 430 degrees of freedom. The sample covariance matrix involves a total of 528 number of distinct sample moments and only 98 number of parameters were free to be estimated

### 3.3.1.2 Model specification

One of the items of each variable is setted to one in the model to create sclae for the latent variable. This process made by AMOS 21.0.0 software program automatically. Nevertheless, if the item that loaded to one removed, one of the remaining items must be set to one.

### 3.3.1.3 The measurement model for pooled constructs

First measurement model conducted with eight (8) latent variables identified with the spesified items. All latent variables that used in the confirmatory factor analysis drawn as in 3.1.

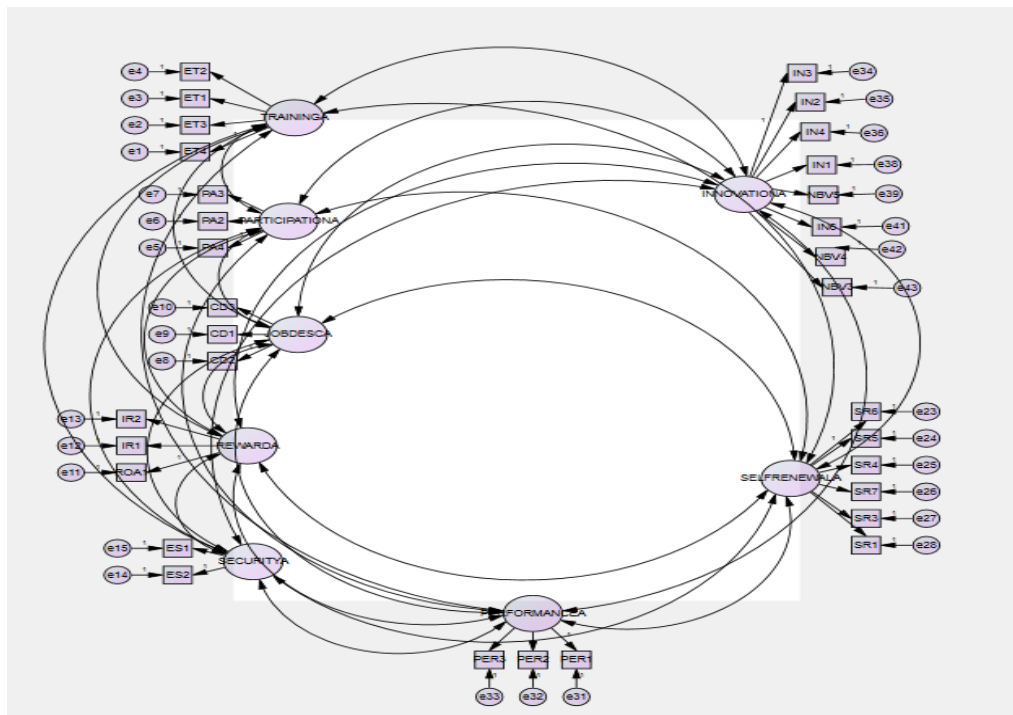


Figure 3.1 : Confirmatory factor analysis result in AMOS (CFA\_1).

The latent variables that used for pooled confirmatory factor analysis are extensive training, participation, clear job description, reward and appraisal, employment security, company performance, innovation and new venturing and self-renewal. The model fit indexes are shown in the below table.

**Table 3.8 : Model fit indexes for CFA\_1.**

Model	Goodness-of-Fit Results					
	$\chi^2$	$\chi^2/df$	P	CFI	TFI	RMSEA
CFA_1	900,32	2,06	0,00	0,89	0,88	0,073

The measurement model should satisfy the necessities of certain fit indices. Consequently, the first measurement model values ( $\chi^2 = 900,32$ ,  $\chi^2/df = 2,06$ , TLI = 0,88, RMSEA = 0,073, CFI = 0,89) of the study did not meet the requirements of model fit indexes. The fitness index for CFI and TLI is still below the required level.

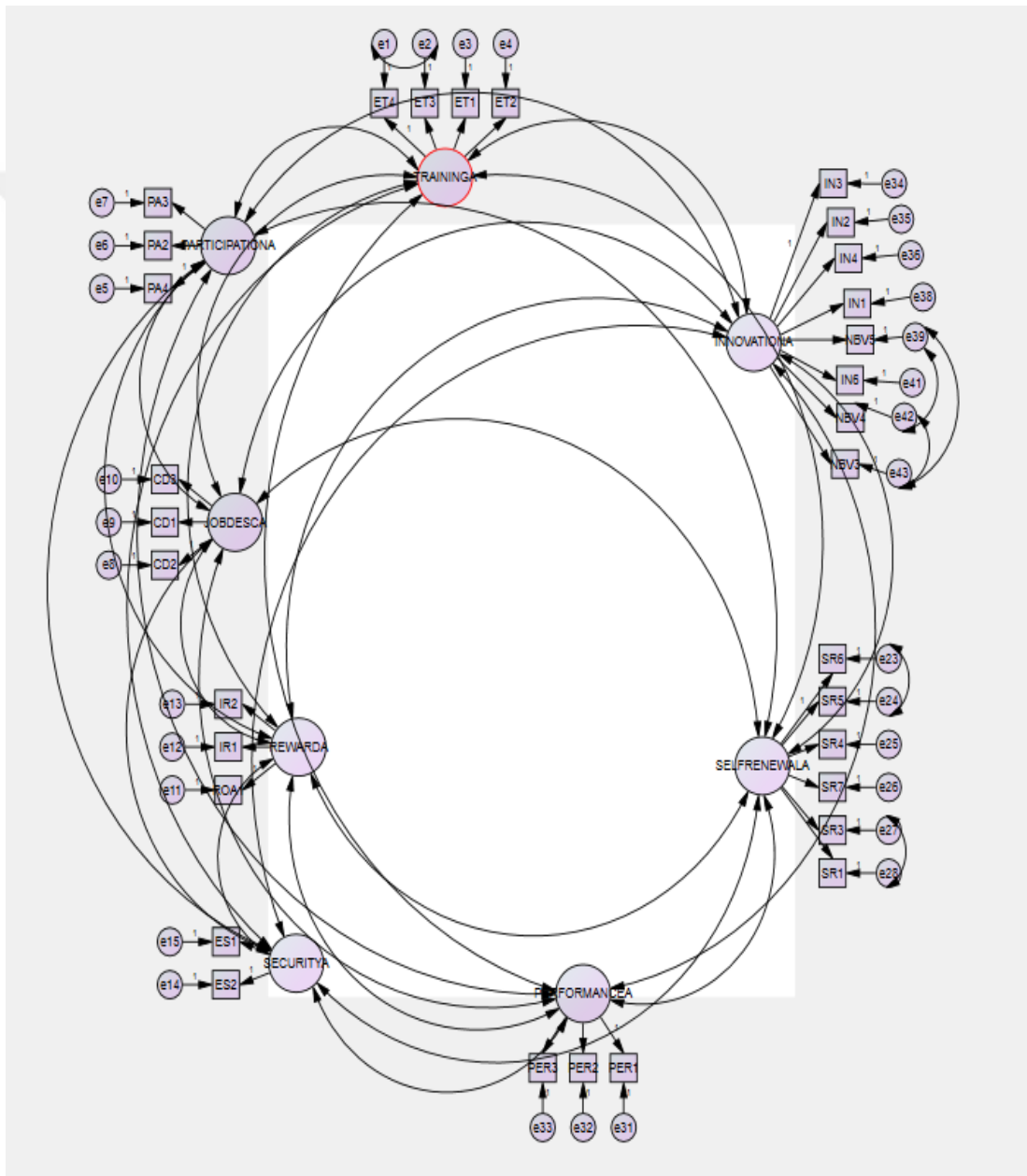
For first confirmatory factor analysis (see Table 3.8), the normed chi-square ( $\chi^2/df$ ) calculated as 2,06. This value is acceptable which needed to be less than 3.0 (Hair et al. 2006). For the badness-of-fit index, Root Mean Square Error of Approximation (RMSEA), the value of 0,073 was below 0.08. However, TLI and CFI were calculated as 0,88, 0,89. Both TLI and CFI are incremental fit indices under the recommended level of 0.90. It seen that model modifications needed to identify a model that would better fit the data (Byrne, 2001).

The modification indices (MIs) are shows a pair of correlated errors that reflect redundant items exist in the model. In the modification indeces list it can be seen there are some misspecification of error terms related to extensive training 1 item and extensive training 8 item (e1↔e2). Becuse of the redundancies between these two items the measurement model have a poor fit values. If the fittnes index (CFI, TFI) do nor meet the requirement due to redundant items, the model needed to modify. To deal with redundant items in the proposed model, the researcher has two choices:

- Remove one of the two redundant items and run the new measurement model again.

- Set these two correlated measurement errors of redundant items as a “free parameter” and run the new measurement model again.

After this information gained from the MIs screen, in the proposed model we added a covariance between the error terms of the item ET3 and ET4. In addition, to meet the model fit requirement, we added 4 more covariance between the errors of redundant items. The modified model presented in figure 3.2.



**Figure 3.2 :** Confirmatory factor analysis result in AMOS (CFA\_1).

Modificaiton indexes includes the correleated errors that supported by strong empirical justification. In this study because of the desireable fit index values cannot reached the model respecification considered. Error covariances created by considering content of factor that have too much similary.

Therefore, Goodness-of-fit statistics related to modified model (Figure 3.2) shows that error covariance between items that have some similar content made enhancement to model fit. As a reult, the overall chi square value reduced from 900,32 to 796,651 and the RMSEA from 0,073 to 0,065. Also the CFI value increased from 0,89 to 0,918 and TLI 0,88 to 0,906. The summary of Goodness-of-fit Results of CFA for modified model is presenten in the table 3.9.

**Table 3.9 : Model fit indexes for CFA\_2.**

Model	Goodness-of-Fit Results					
	$\chi^2$	$\chi^2/df$	P	CFI	TFI	RMSEA
CFA_2	796,651	1,852	0,00	0,918	0,906	0,065

### 3.3.1.4 Unidimensionality

This requirement achieved through the item-deletion procedure for low factor loading items. The new model run and the item deletion process repeated until the fitness indexes achieved the required level. Also all factor-loadings have positive values. All processes demonstrated. All items have positive factor loading

Besides, of the model fit values reached to the obtimum level, the item unidimensionality must supported with the path estimations and signicance values. The values for all items was shown in the below table. Variances of the compared parameters between the groups are shown in the Estimation column. The results shows that all items are positive and the range of the value was 0,6008 to 1,23. Cirritical ratio values are significant at the 0,05 level (Byrne, 2001). The minumum value for cirritical ratio was 7,055 and the maximum value is 15,508.

**Table 3.10 : Unidimensionality measures.**

			<b>Estimate</b>	<b>S.E.</b>	<b>C.R.</b>	<b>P</b>
ET4	<---	TRAININGA	1,000			
ET3	<---	TRAININGA	1,047	0,073	14,264	***
ET1	<---	TRAININGA	1,154	0,081	14,235	***
ET2	<---	TRAININGA	1,235	0,080	15,410	***
PA4	<---	PARTICIPATIONA	1,000			
PA2	<---	PARTICIPATIONA	1,009	0,066	15,091	***
PA3	<---	PARTICIPATIONA	1,017	0,065	15,508	***
CD2	<---	JOBDESCA	1,000			
CD1	<---	JOBDESCA	1,043	0,075	13,804	***
CD3	<---	JOBDESCA	1,073	0,080	13,408	***
ROA1	<---	REWARDA	1,000			
IR1	<---	REWARDA	0,953	0,101	9,421	***
IR2	<---	REWARDA	1,170	0,114	10,253	***
ES2	<---	SECURITYA	1,000			
ES1	<---	SECURITYA	0,735	0,104	7,055	***
SR6	<---	SELFRENEWALA	1,000			
SR5	<---	SELFRENEWALA	0,997	0,069	14,403	***
SR4	<---	SELFRENEWALA	1,098	0,077	14,256	***
SR7	<---	SELFRENEWALA	0,814	0,076	10,580	***
SR3	<---	SELFRENEWALA	0,833	0,078	10,744	***
SR1	<---	SELFRENEWALA	0,905	0,080	11,192	***
PER1	<---	PERFORMANCEA	1,000			
PER2	<---	PERFORMANCEA	1,220	0,135	9,004	***
PER3	<---	PERFORMANCEA	1,463	0,151	9,711	***
IN3	<---	INNOVATIONA	1,000			
IN2	<---	INNOVATIONA	1,087	0,056	19,417	***
IN4	<---	INNOVATIONA	0,964	0,063	15,323	***
IN1	<---	INNOVATIONA	0,955	,0557	17,153	***
NBV5	<---	INNOVATIONA	0,791	0,063	12,651	***
IN6	<---	INNOVATIONA	0,944	0,078	12,188	***
NBV4	<---	INNOVATIONA	0,605	0,064	9,402	***
NBV3	<---	INNOVATIONA	0,601	0,075	8,049	***

\*\*\*p &lt;0.001

In summary, when the whole parameter is significant and its estimation values is positive, it can said that items are significant positive relationship with their latent variables. In addition to that the the item's positive relations confirm the appropriateness of the model fit values.

### 3.3.1.5 Validity and reliability analysis

After confirmatory factor analysis performed, the validity and reliability of the structure must assessed. In literature, three type validity measurement exist. We conduct two of them (convergent, construct) in this study. These are; the convergent validity measured with using AVE values. If the value greater than 0,5, the validation is confirmed. Construct validity measured by fitness indexes. If the fitness index achieve the requirement limitation, the construct validation expressed as positive. (Thatcher, 2010)

Average variance extraction and composite reliability measure the reliability of the model. According to average variance extraction method if the AVE values greater than 0,5, the reliability was confirmed. The limit value for composite reliability measure determined as 0,60. All item must exceed the limit value. (Twycross and Shields, 2004)

**Table 3.11** : Reliability and validity results for CFA.

<b>Factor Name</b>	<b>Items</b>	<b>Stand. Regression Weights</b>	<b>AVE</b>	<b>Composite Reliability</b>
<b>Extensive Training</b>	Longterm employee potential is emphasized.	0,788	0,71	0,90
	Great effort is taken to select the right person	0,808		
	Considerable importance is placed on the staffing process.	0,818		
	Very extensive efforts are made in selection.	0,942		
<b>Participation</b>	Employees are provided the opportunity to suggest improvements in the way things are done	0,820	0,77	0,90
	Individuals in this job are allowed to make decisions	0,891		
	Supervisors keep open communications with employees in this job	0,915		

**Table 3.11 (continued) : Reliability and validity results for CFA.**

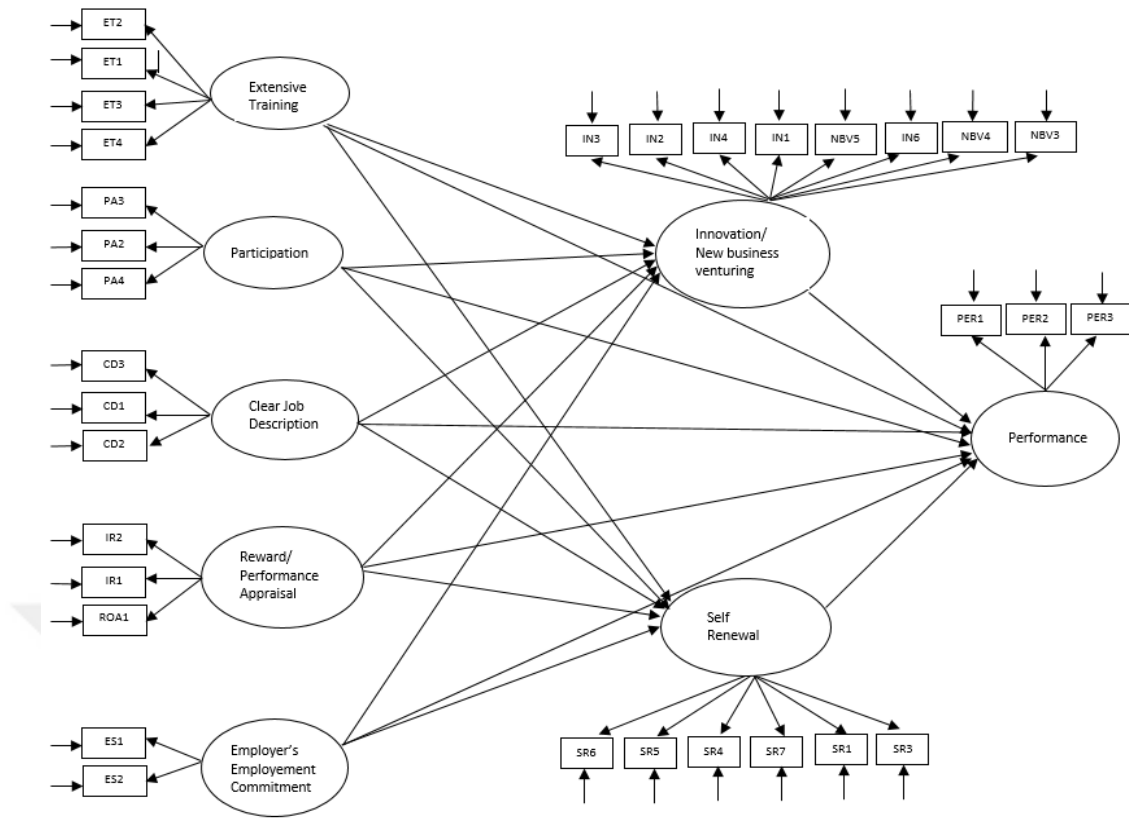
<b>Factor Name</b>	<b>Items</b>	<b>Stand. Regression Weights</b>	<b>AVE</b>	<b>Composite Reliability</b>
<b>Clear job description</b>	The job description for a position accurately described all of the duties performed by individual employees	0,796	0,72	0,89
	The duties in this job are clearly defined	0,888		
	This job has an up-to-date description	0,863		
<b>Appraisal &amp; Reward</b>	Close tie or matching of pay to individual/group performance	0,740	0,59	0,81
	Individuals in this job receive bonuses based on the profit of the organization	0,732		
	Every employee has performance objectives.	0,839		
<b>Employment Security</b>	Job security is almost guaranteed to employees in this organization	0,874	0,60	0,74
	Employees in this job can be expected to stay with this organization for as long as they wish.	0,663		
<b>Innovation and New Business Venturing</b>	Company's spending on new product development activities	0,900	0,58	0,91
	Rate of new product introduction into the market	0,901		
	Company's emphasis on developing new products	0,806		
	The number of new products added by the company	0,852		
	Entering new businesses by offering new lines and products	0,723		
	Investment in developing proprietary technologies	0,707		
	Finding new niches for products in current markets	0,592		
	Pursuing new businesses in new industries that are related to current business.	0,526		

**Table 3.11 (continued) : Reliability and validity results for CFA.**

<b>Factor Name</b>	<b>Items</b>	<b>Stand. Regression Weights</b>	<b>AVE</b>	<b>Composite Reliability</b>
<b>Self Renewal</b>	Pursuing new businesses in new industries that are related to current business.	0,526	0,57	0,89
	Establishing procedures to examine new innovation ideas	0,800		
	Rewarding employees for creativity and innovation	0,696		
	Training employees in creativity techniques	0,876		
	Making resources available for experimental projects	0,698		
	Reorganizing units and divisions to increase innovation	0,708		
<b>Performance</b>	Defining the company's mission	0,731	0,60	0,81
	Company's spending on new product development activities	0,685		
	Rate of new product introduction into the market	0,738		
	Company's emphasis on developing new products	0,879		

### 3.3.2 Structural model

The hypotheses testing conducting through SEM after the proposed model validated and verified with the CFA. In this chapter the hypothesised relations between 8-construct examined by one by. Figure 3.3 shows the porposed structural model that tested using SEM technique.



**Figure 3.3 :** Proposed model.

The overall model fit values analyzed for the proposed model. Same model fit indices that used to evaluate the measurement model utilised for the structural model testing (Byrne, 2010). The model fit of the structural model shown in table 3.12.

The chi-square value was less than 3.0 and significant. TLI and CFI values were above the 0.90 limit. The absolute fit measure of RMSEA was less than the recommended threshold. So that results demonstrate the model, have a good model fit values. These general fit indices significant according to desired fit index limit and the model is acceptable with the observed data.

**Table 3.12 :** Model fit indexes of structural model.

Model	Goodness-of-Fit Results					
	$\chi^2$	$\chi^2/df$	P	CFI	TFI	RMSEA
Structural Model	815,824	1,892	0,00	0,914	0,901	0,067

### 3.3.3 Hypothesis testing

#### 3.3.3.1 Direct effects

In table 3.13, extensive training, clear job description, participation, employer's employee commitment, reward/performance appraisal were used as independent variables and firm performance was used as dependent variable and also, firm performance was defined as an independent variable. Therefore, the hypothesis testing summary and structural coefficients results shown is the table 3.13.

The tested hypotheses tested are as follows:

H<sub>1</sub>: High-performance human resource practices related to firm performance.

H<sub>1a</sub>: There is a significant effect of extensive training on firm performance.

H<sub>1b</sub>: There is a significant effect of clear job description on firm performance.

H<sub>1c</sub>: There is a significant effect of participation on firm performance.

H<sub>1d</sub>: There is a significant effect of reward/performance on firm performance.

H<sub>1e</sub>: There is a significant effect of employer's employee commitment on firm performance.

**Table 3.13** : Estimation and significant level of hypothesis.

Path	$\beta$	SE	Critical Ratio	Significance level	Supported
H <sub>1a</sub>	-0,07	0,11	-0,45	0,654	NO
H <sub>1b</sub>	-0,05	0,07	-0,44	0,657	NO
H <sub>1c</sub>	0,02	0,06	0,17	0,864	NO
H <sub>1d</sub>	0,04	0,07	0,33	0,738	NO
H <sub>1e</sub>	0,32	0,07	2,89	0,004	YES

### **The relationship between extensive training and firm performance**

The hypothesis examined in order to find out whether extensive training and firm performance related.

H<sub>1a</sub> : There is a significant effect of extensive training on firm performance

The coefficient value for the path from extensive training to firm performance is - 0,074 (SE= 0,106; C.R= -0,448). Because the significant level higher than 0.05 and 0.1, the relation between extensive training and firm performance found not acceptable. In other words, H<sub>1a</sub> supported in the model.

### **The relationship between clear job description and firm performance**

The following hypothesis to analyse the relationship between clear job description and firm performance.

H<sub>1b</sub>: There is a significant effect of clear job description on firm performance

With a coefficient value of -0,050 and significance value of 0,657 the association between clear job description and firm performance is found not significant (SE= 0,073; C.R= -0,444) As a result, hypothesis H<sub>1b</sub>, which stated that clear job description is related to firm performance, was not supported.

### **The relationship between participation and firm performance**

Hypothesis H<sub>1c</sub> stated in order to analyse the association between participation and firm performance.

H<sub>1c</sub>: There is a significant effect of participation on firm performance.

The coefficient value that was produce by the model for relation between participation and firm performance is 0,017. The hypothesis significant level is 0,864 which is much higher than 0.05 treshold (SE= 0,062; C.R= 0,171). Therefore, this path considered that participation is not associated with firm performance at a significance level of 0.05, which provides support for rejecting of Hypothesis H<sub>1c</sub>

### **The relationship between reward/ performance appraisal and firm performance**

The relationship between clear reward/performance appraisal and firm performance examined with the following hypothesis

H<sub>1d</sub>: There is a significant effect of reward/performance on firm performance.

The coefficient value that produced by the model for relation between reward/performance appraisal and firm performance is 0,036. The hypothesis' significance value found as 0,738 which is higher than 0.1 treshold (SE= 0,065; C.R= 0,334). As a result, hypothesis H<sub>1d</sub>, which stated that reward/performance appraisal related to firm performance, not supported. In other words, the results not support H<sub>1d</sub>

### **The relationship between employer's employment commitment and firm performance**

The employer's employment commitment predicted to have a positive relationship with firm performance. Because of that, the research hypothesis developed as follows:

H<sub>1e</sub>: There is a significant effect of employer's employee commitment on firm performance.

The link between employer's employment commitment and firm performance as shown in table 3.13. Generated a coefficient value of 0,316 and with the 0,004 significant value the hypothesis found significant at 0.05 treshold (SE= 0,069; C.R 2,895). As a result, hypothesis H<sub>1e</sub> supported. In other word, the employer's employment commitment positively related to firm performance.

#### **3.3.3.2 Mediation effect analysis**

In the following part, the mediation effect of the corporate entrepreneurship between HPHRM and firm performance analyzed. The accuracy of the following hypotheses investigated.

H<sub>2</sub>: Corporate entrepreneurship mediates the effects of high-performance human resource practices on firm performance

H<sub>2a</sub>: Innovation/New business venturing mediates the effects of extensive training on firm performance

H<sub>2b</sub>: Self renewal mediates the effects of extensive training on firm performance

H<sub>2c</sub>: Innovation/New business venturing mediates the effects of participation on firm performance

H<sub>2d</sub>: Self-renewal venturing mediates the effects of participation on firm performance

H<sub>2e</sub>: Innovation/New business venturing mediates the effects of clear job description on firm performance

H<sub>2f</sub>: Self renewal mediates the effects of clear job description on firm performance.

H<sub>2g</sub>: Innovation/New business venturing mediates the effects of reward/performance appraisal on firm performance

H<sub>2h</sub>: Self renewal mediates the effects of reward/performance appraisal on firm performance

H<sub>2j</sub>: Innovation/New business venturing mediates the effects of Employer's employment commitment on firm performance

H<sub>2k</sub>: Self renewal mediates the effects of Employer's employment commitment I on firm performance.

Two kind of mediation analysis conducted. First, the effect of mediation was first analyzed by bootstrapping method. The results shown in the table 3.16 and table 3.17. After that, the mediation type decided with the Baron and Kenny approach. The results shown in the table 3.14 and table 3.15.

**Table 3.14** : Mediation results of innovation/new business venturing.

Independent Variable	Direct effect without Innovation/ new business venturing mediation		Direct effect with Innovation/ new business venturing mediation		Mediation Type
	$\beta$	p	$\beta$	p	
Extensive Training	0,248	0,009	0,022	0,801	Full mediation
Participation	0,103	0,27	0,035	0,706	Indirect effect
Clear Job Description	0,029	0,79	-0,028	0,789	No
Reward/ Performance Appraisal	0,161	0,09	0,067	0,475	Full mediation
Employer's employment commitment	0,347	0,009	0,317	***	Partial mediation

**Table 3.15 : Mediation results of self renewal.**

Independent Variable	Direct effect without self renewal mediation		Direct effect with self renewal mediation		Mediation Type
	$\beta$	p	$\beta$	p	
Extensive Training	0,248	0,009	-0,074	,636	Full mediation
Participation	0,103	0,270	0,033	,171	Indirect effect
Clear Job Description	0,029	0,793	-0,044	,695	Indirect effect
Reward/Performance Appraisal	0,161	0,097	0,054	,575	Full mediation
Employer's employment commitment	0,347	,0096	0,316	***	No

**H<sub>2a</sub>:** Innovation/New business venturing mediates the effects of extensive training on firm performance

According to condition suggested by Baron and Kenny (1986), independent variable have to have an association with mediator variable, also there must be relation between the independent and dependent variable. If the relation between extensive training and firm performance with the mediator effect of Innovation/New business venturing was insignificant, there must be a full mediation. It can be seen that the path from extensive training to firm performance is statistically significant without the mediation effect ( $\beta=0,248$ ;  $p=0,009$ ). In addition to that, with the mediation effect, the significance level was decrease, and the effect became insignificant. ( $\beta=0,022$ ;  $p=0,801$ ). Because of that according to Baron and Kenny, (1986) Innovation/New business venturing fully mediates the effects of extensive training on firm performance. So, H<sub>2a</sub> supported in the model.

**H<sub>2b</sub>** : Self renewal mediates the effects of extensive training on firm performance

In this study, the results show that the extensive training is associated with firm performance regardless the effect of mediation ( $\beta=0,248$ ,  $p=0,009$ ). In addition, the path from extensive training to firm performance through the self renewal medaiton effect was not significant ( $\beta=0,022$ ,  $p=0,801$ ). According to condition suggested by Baron and Kenny (1986), since the path from independent variable (extensive training) to dependent variable (firm performance) through the mediator variable (self-renewal) is not significant, therefore, there is a full mediation effect. So, **H<sub>2b</sub>** supported in the model.

**H<sub>2c</sub>**: Innovation/New business venturing mediates the effects of participation on firm performance

Direct effect between participation on innovation/new business venturing ( $\beta=0,248$ ) and the direct effect between innovation/new business venturing on firm performance ( $\beta=0.528$ ) are significant. Indirect effects results are shown in the table 3.16 and it is indicated that the indirect path which links participation to corporate performance through innovation/new business venturing is 0,131. Because of significant indirect effect result, innovation/new business venturing plays a significant medaiting role on the relationship between participation and firm performance. **H<sub>2c</sub>** supported in the model

**H<sub>2a</sub>**: Self renewal venturing mediates the effects of participation on firm performance

The paths between participation and self-renewal ( $\beta=-0,115$ ) and between self-renewal and firm performance ( $\beta=0,034$ ) are both significant. The indirect effect between participation and firm performance is 0,040 that found by the multiplication of two direct influences. Therefore, these results approve that self-renewal plays a significant mediating role on the the relationship between participation and performance. **H<sub>2a</sub>** supported in the model

**H<sub>2e</sub>**: Innovation/New business venturing mediates the effects of clear job description on firm performance

For a variable to be identified as a mediator, the independent variable must have a significant effect on the mediator variable (Baron & Kenny, 1986). The results show that there is no significant relation between clear job description and innovation/new business venturing and that clear job description is not associated with firm performance. Because the paths between clear job description with firm performance are not significant, innovation/new business venturing as a mediator is not supported in this relationship. In addition, there are no significant relations between dependent and independent variables.

**H<sub>2f</sub>:** Self-renewal mediates the effects of clear job description on firm performance.

Direct effect between clear job description on Self-renewal ( $\beta=0,203$ ) and the direct effect between self-renewal on firm performance ( $\beta=0,374$ ) are significant. Indirect effects results are shown in table 3.17 and it is indicated that the indirect path which links clear job description to corporate performance through self-renewal is 0,131. Because of significant indirect effect result, self-renewal plays a significant mediating role on the relationship between clear job description and firm performance. **H<sub>2f</sub>** is supported in the model.

**H<sub>2g</sub>:** Innovation/New business venturing mediates the effects of reward/performance appraisal on firm performance.

In this study, the results show that the reward/performance appraisal is associated with firm performance regardless of the effect of mediation ( $\beta= 0,161$ ,  $p= 0,09$ ). Also the path from reward/performance appraisal to firm performance through the innovation/new business venturing mediation effect is not significant ( $\beta= 0,067$ ,  $p= 0,475$ ). According to the condition suggested by Baron and Kenny (1986), since the path from independent variable (reward/performance appraisal) to dependent variable (firm performance) through the mediator variable (innovation/new business venturing) is not significant, therefore, there is a full mediation effect. So, **H<sub>2g</sub>** is supported in the model.

**H<sub>2h</sub>:** Self-renewal mediates the effects of reward/performance appraisal on firm performance.

According to the condition suggested by Baron and Kenny (1986), independent variables must have an association with mediator variables, also there must be a relation between the independent and dependent variables. If the relation between reward/performance appraisal and firm performance with the mediation effect of self-renewal is

insignificant, there must be a full mediation. It can be seen that the path from reward/performance appraisal to firm performance is statistically significant without the mediation effect ( $\beta=0,248$ ;  $p=0,009$ ).

In addition to that, with the mediation effect, the significance level was decreased, and the effect became insignificant. ( $\beta=0,022$ ;  $p=0,801$ ). Because of that according to Baron and Kenny (1986), Self-renewal fully mediates the effects of reward/performance appraisal on firm performance. So, **H<sub>2h</sub>** is supported in the model.

**H<sub>2j</sub>**: Innovation/new business venturing mediates the effects of Employer's employment commitment on firm performance

The direction from employer's employment commitment to firm performance has a significant value with 0,009 ( $\beta=-0,347$ ) and between employer's employment commitment and firm performance with the mediation effect of the innovation/new business venturing has also a significant relation ( $\beta=0,317$ ). According to the condition suggested by Baron and Kenny (1986), if the independent variable has an association with the dependent variable and the relation continues with the effect of mediation, there must be a partially mediated effect.

In addition to that the relationship degree between independent and dependent variables must decrease with the mediator effect. The results show that there is a significant role of innovation/new business venturing in mediating the relationship between employer's employment commitment and firm performance. The mediation effect is partially. As a result, **H<sub>2j</sub>** is supported.

**H<sub>2k</sub>**: Self-renewal mediates the effects of Employer's employment commitment on firm performance

Finally, since both links from employer's employment commitment to firm performance ( $\beta=0,022$ ) and employer's employment commitment to firm performance with the self-renewal mediator ( $\beta=-0,008$ ) are not significant, there is no mediator effect on this path.

All these results conclude that self-renewal is not a significant mediator in the relationship between employer's employment commitment and firm performance. As a result, **H<sub>2k</sub>** was not supported.

**Table 3.16 :** Indirect/direct effects with the innovation/new business venturing mediator.

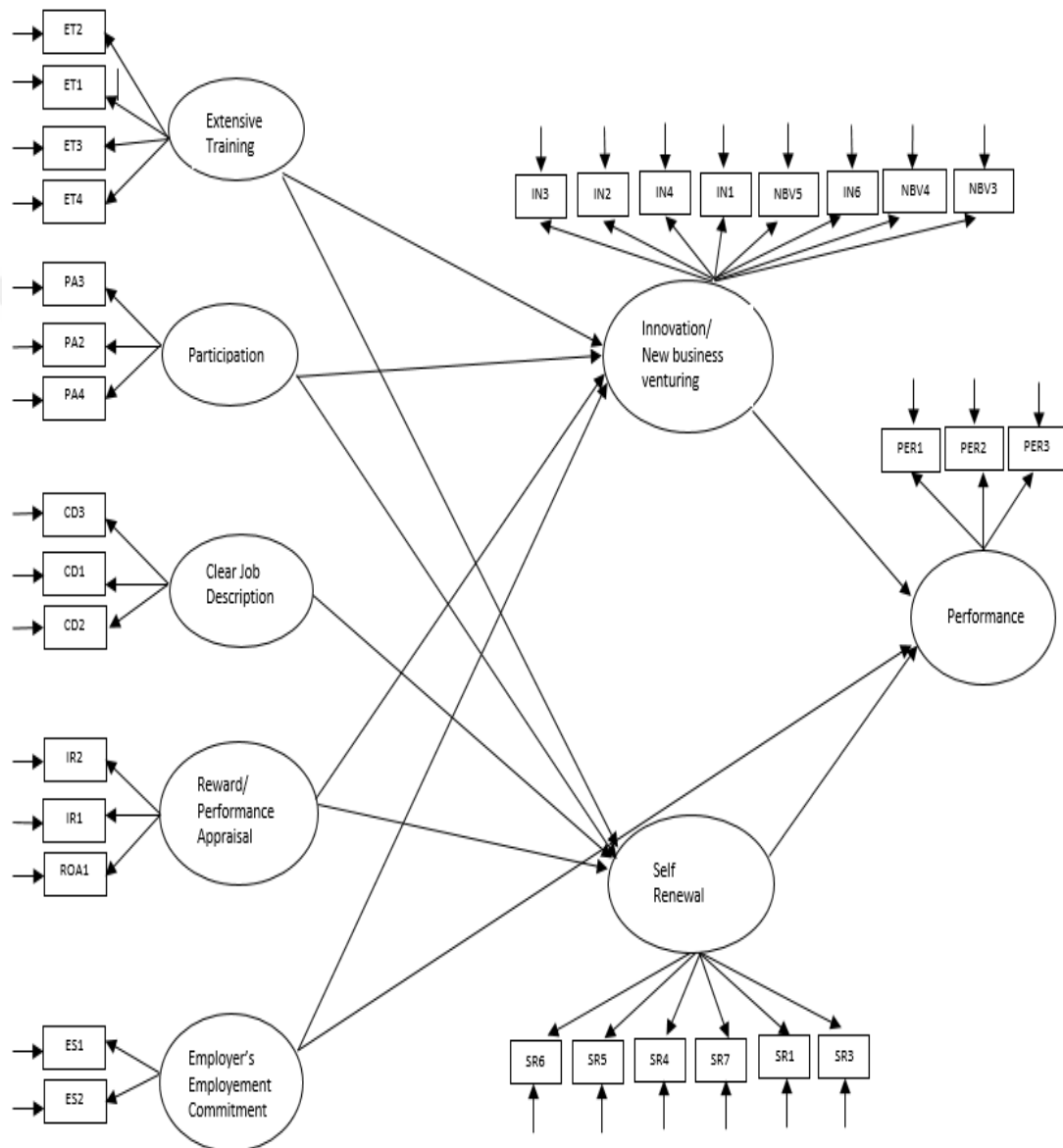
Independent Variable	Innovation/New business venturing		Performance		Mediation Effect
	Direct Effect	Indirect Effect	Direct Effect	Indirect Effect	
Extensive Training	0,439	0,000	0,000	0,072	YES
Participation	0,248	0,000	0,000	0,131	YES
Clear Job Description	0,009	0,000	0,000	0,002	NO
Reward/Performance Appraisal	0,248	0,000	0,000	0,043	YES
Employer's employment commitment	-0,170	0,000	0,000	-0,030	YES

**Table 3.17 :** Indirect/direct effects with the self-renewal mediator.

Independent Variable	Self-Renewal		Performance		Mediation Effects
	Direct Effect	Indirect Effect	Direct Effect	Indirect Effect	
Extensive Training	0,627	0,000	0,000	0,277	YES
Participation	0,115	0,000	0,000	0,040	YES
Clear Job Description	0,203	0,000	0,000	0,076	YES
Reward/Performance Appraisal	0,163	0,000	0,000	0,059	YES
Employer's employment commitment	- 0,022	0,000	0,000	- 0,008	NO

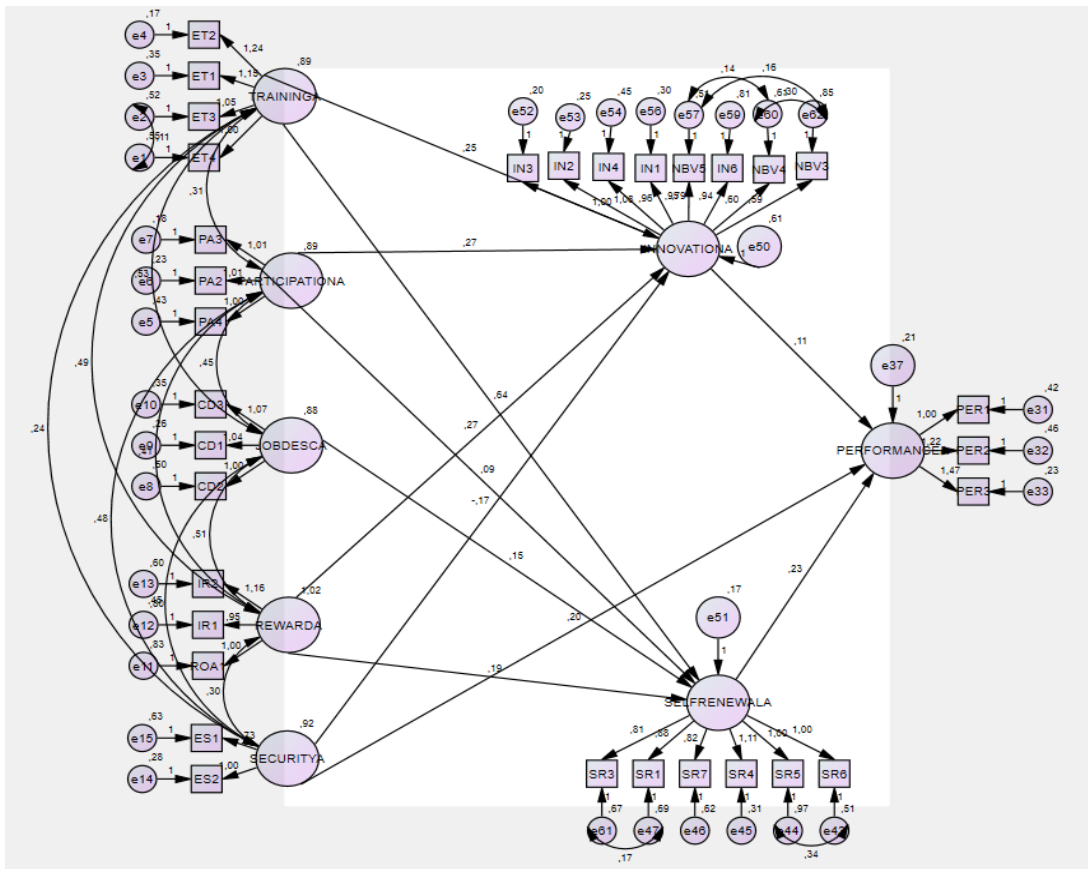
### 3.3.4 Final structural model

After the hypotheses testing and removing the insignificant paths that have no meaningful interpretation for parameter estimates, the revised model was developed. As a result, the modified proposed model shown as figure 3.4



**Figure 3.4 :** Final model.

After the modification done, the path estimations and error values changed, as predicted. The final modified model presented in the figure 3.5



**Figure 3.5 :** Amos output of the final model.

Finally, squared multiple correlations were analyzed to determine the ratio of variance explained by the exogenous variables in the theoretical model. The five remaining factor of HPHRM explained 81% variance of self-renewal and 33% variance of the innovation/new business venturing. The revised model explains 42% of the total variance of the firm performance. The overall fit values of the revised model shown in Table 3.18.

**Table 3.18 :** The model fit values of final model.

Model	Goodness-of-Fit Results					
	$\chi^2$	$\chi^2/df$	P	CFI	TFI	RMSEA
Structural Model	817,014	1,869	0,00	0,916	0,904	0,067

### 3.4 Moderated Mediation Analysis

Moderation analysis is used quite frequently in structural equation modeling practices. Mediation analysis explains the relation between independent and dependent variables through the mediator. But the moderation analysis examines the effect of direction and strength of the relation between independent and dependent variables (Baron & Kenny, 1986). A moderator effect can cause three different outcomes. First, a moderation effect increases the relationship between dependent and independent variables. Secondly, it leads to a reduction of effect between dependent and independent variables. Lastly, a moderator and independent variables affect the dependent variable in the opposite direction. In this study, we examine the moderator effect of organizational culture. Nevertheless, the main effect that we try to identify is the mediation effect of corporate entrepreneurship. Therefore, in this study we use the moderation effect of organizational culture to test the significance of the mediated paths. The following hypothesis was created to test the moderation effect.

H<sub>3a</sub>: Clan moderation effect on the relation between HPHRM and firm performance through mediation of CE

H<sub>3b</sub>: Adhocracy moderation effect on the relation between HPHRM and firm performance through mediation of CE

H<sub>3c</sub>: Market moderation effect on the relation between HPHRM and firm performance through mediation of CE

H<sub>3d</sub>: Hierarchy moderation effect on the relation between HPHRM and firm performance through mediation of CE

In this study, we examined the effects of culture on the proposed model. There were four main culture types but because of the low data size of the clan culture and adhocracy culture, we examined the moderation effects of hierarchy and market culture. As a result, hypothesis H<sub>3a</sub> and hypothesis H<sub>3b</sub> were rejected. The sample size of market culture is 96 out of 199 and hierarchy has 59-sample size.

Through the proposed structural modeling the moderation effect of organizational culture in the relationship path between exogenous and endogenous constructs was examined. The model path and estimations shown in table 3.19 and figure 3.6 for market culture.

When we look at the mediator variables, the result shows that both of them still effects the firm performance. The mediation effect of self renewal only significant at the significance level 0,1. The relation between self-renewal and job description became insignificant. In addition to that the effect of employer’s employment commitment to firm performance through the innovation/new business venturing became insignificant. However, the mediation effect of self-renewal, the highest effect to firma performance came from the extensive training. In addition to that, the effect between reward/performance appraisal and firm performance increased if there is an innovation/new business venturing mediator used.

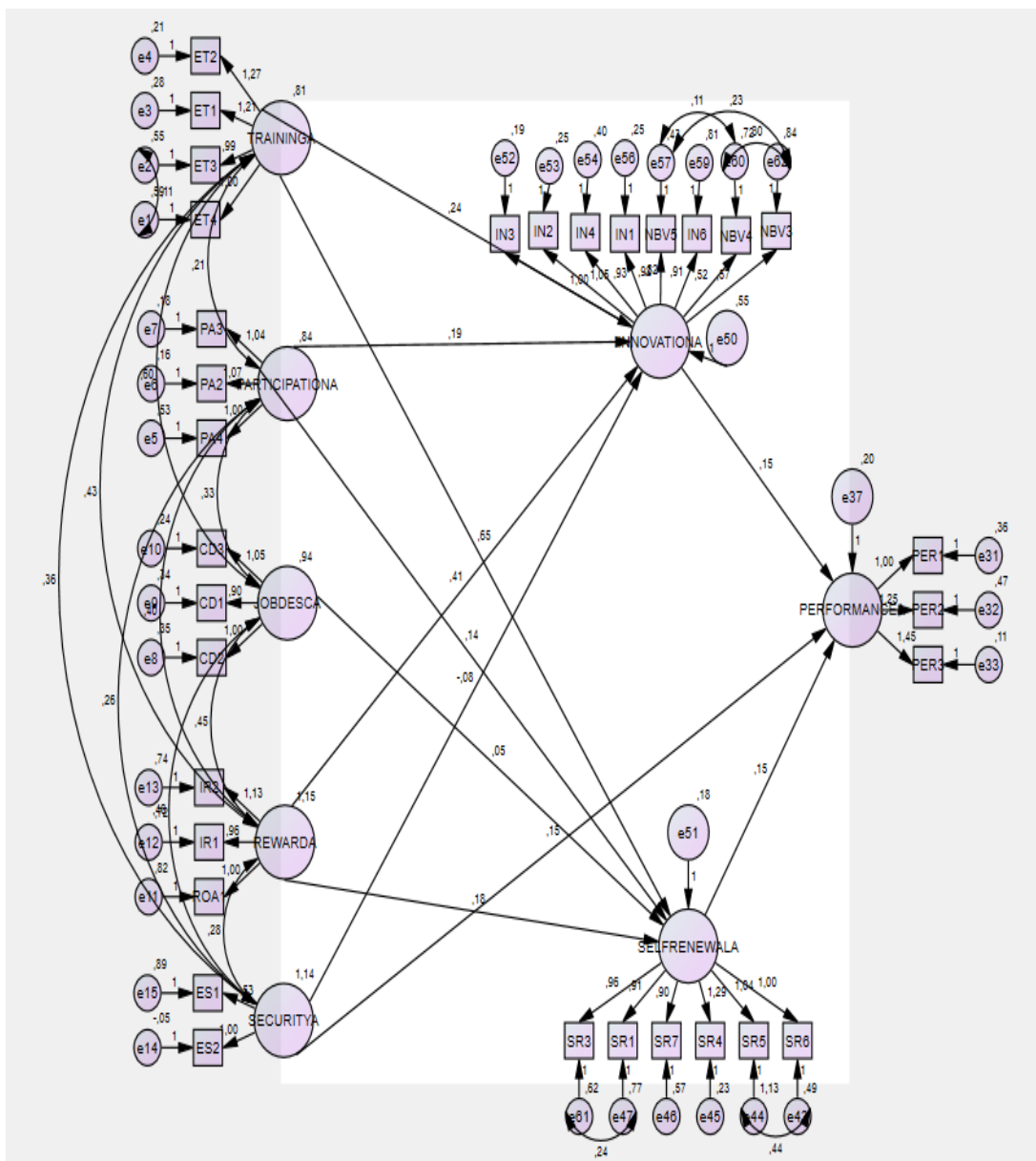


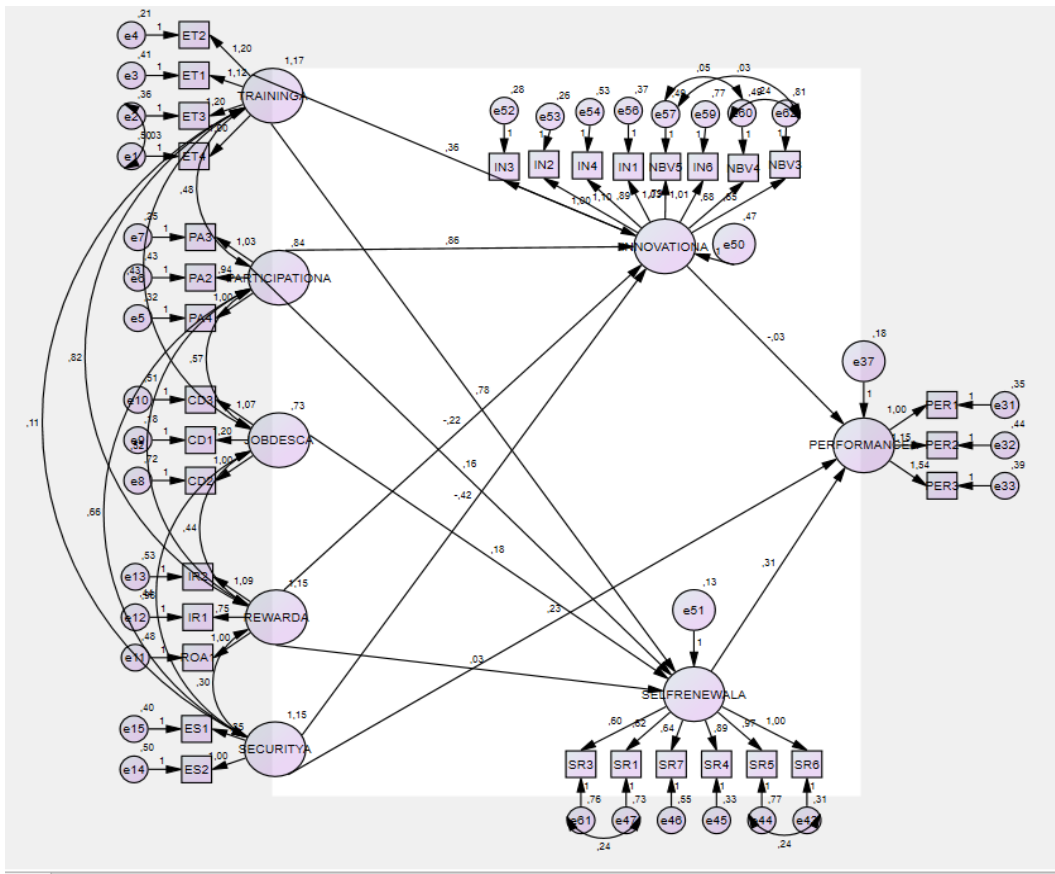
Figure 3.6 : Moderation effect of market culture.

**Table 3.19 :** Estimation and significance level for market culture.

	<b>Estimate</b>	<b>S.E.</b>	<b>C.R.</b>	<b>P</b>
INNOVATIONA <-- TRAINING	0,221	0,118	2,031	0,042
SELFRENEWALA <-- TRAINING	0,658	0,124	5,171	***
INNOVATIONA <-- PARTICIPATION	0,177	0,109	1,727	0,084
SELFRENEWALA <-- JOBDESC	0,053	0,095	0,511	0,609
SELFRENEWALA <-- REWARD	0,222	0,074	2,472	0,013
INNOVATIONA <-- REWARD	0,453	0,113	3,636	***
INNOVATIONA <-- SECURITY	-0,090	0,088	0,936	0,348
SELFRENEWALA <-- PARTICIPATION	0,145	0,074	1,875	0,060
PERFORMANCEA <-- INNOVATION	0,263	0,066	2,258	0,023
PERFORMANCEA <-- SELFRENEWAL	0,237	0,082	1,821	0,068

Table 3.20 and figure 3.7 present the outputs for hierarchy group the model executed with using AMOS.

The outputs of hierarchy culture was slightly different from market culture. In the hierarchy culture the mediation, effect of innovation/new businnes venturing disapered. In addition to that, the relation between reward/performance appraisal and firm performance became insignificant. The only independent variable that effect to firm performance was extensive training factor. In addition to that, there is a direct effect of employer's employment commitment to the firm performance.



**Figure 3.7 :** Moderation effect of hierarchy culture.

**Table 3.20 :** Estimation and significance level for hierarchy culture.

		Estimate	S.E.	C.R.	P
INNOVATIONA	<- TRAINING	0,384	0,182	1,967	0,049
SELFRENEWAL	<- TRAINING	0,769	0,132	5,871	0,000
INNOVATIONA	<- PARTICIPATION	0,781	0,271	3,166	0,001
SELFRENEWAL	<- JOBDESC	0,138	0,150	1,184	0,236
SELFRENEWAL	<- REWARD	0,025	0,119	0,221	0,824
INNOVATION	<- REWARD	-0,238	0,182	-1,227	0,219
INNOVATION	<- SECURITY	-0,448	0,200	-2,103	0,035
SELFRENEWAL	<- PARTICIPATION	0,136	0,144	1,132	0,257
PERFORMANCE	<- INNOVATION	-0,048	0,090	-0,331	0,743
PERFORMANCE	<- SELFRENEWAL	0,546	0,096	3,186	0,001
PERFORMANCE	<- SECURITY	0,397	0,082	2,770	0,005

Table 3.21 shows the z score estimation for market and hierarchy with the z-score. The z-score test conducted to find the significance of impact. Z-score test appear to be equivalent of chi- square difference test (Byrne,2010). While z-score values are calculated, critical ratio differences was use. The z-score limit value was defined as 1,96 which indicates that if the value above the limit value or under the negative limit level, there is a significant impact between different cultures.The result shows that culture has negatively moderates effect of Reward/performance appraisal on innovation/new business venturing. In addition to that the cultures moderates the effect between participation and innovation/new business venturing. No other paths have a significant impact on the moderator effect of culture. As a result we can accept the H<sub>3c</sub> and H<sub>3d</sub> .

**Table 3.21 : Z-score values for the moderator effects of market and hierarchy culture.**

	Market		Hierarchy		Z score
	Estimate	P	Estimate	P	
INNOVATIO <- TRAINING	0,221	0,042	0,385	0,049	0,54
SELFRENEW <- TRAINING	0,658	***	0,769	***	0,73
INNOVATIO <- PARTICIPATIO	0,177	0,084	0,781	0,002	2,29
SELFRENEW <- JOBDESC	0,053	0,609	0,138	0,236	0,72
SELFRENEW <- REWARD	0,222	0,013	0,026	0,825	-1,11
INNOVATIO <- REWARD	0,453	***	-0,239	0,219	-2,96
INNOVATIO <- SECURITY	-0,090	0,349	-0,448	0,035	-1,54
SELFRENEW <- PARTICIPATIO	0,145	0,061	0,137	0,257	0,144
PERFORMA <- INNOVATIONA	0,263	0,024	-0,049	0,740	-1,60
PERFORMA <- SELFRENEWL	0,238	0,069	0,546	0,001	1,25
PERFORMA <- SECURITY	0,294	0,033	0,398	0,005	0,69

### 3.5 Summary of Results

To sum up, fifteen hypotheses has tested in the research. Six of them rejected and the remaining nine hypothesis supported. The following table shows the fina results of the hypothesis. The model supported the only direct relation mentioned in the Hypothesis H1e. The other direct effects between HPHRM and firm performance were not support in the study. Innovation/ new business venturing mediates the effects of HPHRM and firm performance except clear job description. Self-renewal mediates the effects of HPHRM and firm performance except employer’s employment commitment.

**Table 3.22 :** Hypothesis and results.

<b>Hypothesis</b>	<b>Support</b>
H <sub>1a</sub> : There is a significant effect of extensive training on firm performance.	NO
H <sub>1b</sub> : There is a significant effect of clear job description on firm performance.	NO
H <sub>1c</sub> : There is a significant effect of participation on firm performance.	NO
H <sub>1d</sub> : There is a significant effect of reward/performance on firm performance.	NO
H <sub>1e</sub> : There is a significant effect of employer’s employee commitment on firm performance.	YES
H <sub>2a</sub> : Innovation/New business venturing mediates the effects of extensive training on firm performance	YES
H <sub>2b</sub> : Self renewal mediates the effects of extensive training on firm performance	YES

**Table 3.22 (continued) : Hypothesis and results.**

<b>Hypothesis</b>	<b>Support</b>
H <sub>2c</sub> : Innovation/New business venturing mediates the effects of participation on firm performance	YES
H <sub>2d</sub> : Self renewal venturing mediates the effects of participation on firm performance	YES
H <sub>2e</sub> : Innovation/New business venturing mediates the effects of clear job description on firm performance	NO
H <sub>2f</sub> : Self renewal mediates the effects of clear job description on firm performance.	YES
H <sub>2g</sub> : Innovation/New business venturing mediates the effects of reward/performance appraisal on firm performance	YES
H <sub>2h</sub> : Self renewal mediates the effects of reward/performance appraisal on firm performance	YES
H <sub>2j</sub> : Innovation/New business venturing mediates the effects of Employer's employment commitment on firm performance	YES
H <sub>2k</sub> : Self renewal mediates the effects of Employer's employment commitment I on firm performance	NO
H <sub>3a</sub> : Clan moderation effect on the relation between HPHRM and firm performance though mediation of CE	NO
H <sub>3b</sub> : Adhocracy moderation effect on the relation between HPHRM and firm performance though mediation of CE	NO
H <sub>3c</sub> : Market moderation effect on the relation between HPHRM and firm performance though mediation of CE	YES
H <sub>3d</sub> : Hierarchy moderation effect on the relation between HPHRM and firm performance though mediation of CE	YES



#### **4. CONCLUSION AND RECOMMENDATIONS**

In this part of the thesis study, it is aim to discuss the findings and the research result presented in the previous section, and the research findings are presented and discussed in the order of application section. In this context, firstly, the relationship between high performance human resource management practices and firm performance discussed. Secondly, the mediation effect of corporate entrepreneurship between HPHRM and firm performance was discuss. At the last stage, proposals with the research results were make to managers who are responsible for human resources in the firm and to academicians who will work on this subject.

Global economy requires more entrepreneurial for businesses to deal with the ambiguity and the fast changing environment. For this purpose, corporate entrepreneurship activities became more important then ever. It has been research whether human resource practices are a factor in creating entrepreneurship for the company. In addition, this study, the impact of high performance human resource practices and corporate entrepreneurship on firm performance has been investigate. The intervariable effect of corporate entrepreneurship and the impact of high-performance human resource sub-dimensions on firm performance have been analyze. In this research, it has been adopt that the company's ability to develop and effectively use its own competence will affect the performance of the company.

Many researches have proven that high performance human resources applications provide competitive advantage. Human resource practices that support corporate entrepreneurship are so specific that competitors cannot imitate them. Companies that are aware of the ability to quickly acquire and assimilate new market and technological capabilities is a key to their competitiveness, are willing to invest in human resource practices that support corporate entrepreneurship.

Many researchers have revealed the positive impact of corporate entrepreneurship on company performance. However, with this study, human resources practices found that enable the company to discover and increase entrepreneurship and directly influence the company's performance. Our work generally offers two contributions.

First, we contribute to understanding the high performance human resources practices CE and the effects on company performance. However, we also show evidence that the practice of human resources are not mediating the relationship between CE and firm performance, they are actually pioneer of company entrepreneurship.

Data collected from company employees operating in Turkey shows online survey method. Adequate data collection for the study allows for the appropriate application of discovery-oriented statistical tests such as factor analysis, structural equation modelling in this study. Primarily, exploratory factor analysis applied for each variable using SPSS statistical program. Nevertheless, this means, the factors that define the variables provided. Subsequent confirmatory factor analysis verified the significance of factor distributions. The validity of the hypotheses investigated by carrying out path analysis with the structural equation model with using AMOS program.

#### **Mediator effect of corporate entrepreneurship between high performance human resources and firm performance**

A path analysis technique based on the Structural Equation Model used to investigate the probable intermediary effects of in-house entrepreneurship factors that might be involved in the relationship between high performance human resource practices and firm performance. The mediation effect analyzed according to the method of Baron and Kenny (1986). To measure the validity of the possible mediator effect, the presence of the indirect effect of the independent variable on the dependent variable at 90% confidence interval at 2000 sample levels investigated using the Bootstrap method (Preacher and Hayes, 2008).

As a result of the analyzes, there are positive but not strong relations between human resource applications and firm performance, but this relationship, which is not very strong in our research, becomes stronger with the influence of corporate entrepreneurship factors. Hypotheses created by analyzing the sub-dimensions of each corporate entrepreneurship separately.

#### **Mediator effect of innovation/new business venturing between high performance human resource practice and firm performance: extensive training**

The effect of extensive training that is a sub dimation of high performance human resource practice to firm performance through innovation and new business venturing investigated. It seen that this hypothesis is supported in the analysis results. In addition

to that, the effect between extensive training and performance significant only if the innovation and new business venturing factor mediates them. Increasing competition with globalization trends and the complexity in customer trends are pushing firms to innovate in products, services and operations. It supports analysis results in previous studies. Researches emphasized that acceptance change, risk taking tendency and desire to take responsibility and change the attitude of team work are the programs aimed at changing attitudes toward innovation (Kanter, 1983) External training can benefit the organization because when the an employee gets more information and enhance more ability in the current jobs, it makes themm more innovative and productive. If the worker's job capability enhance, it allows new ideas to develop more easily. Because the expert on the job can finds the missing and wrong processes easier. In addition to that, training is also a good way to teach how to apply new ideas or to fund resources for entrepreneurial projects.

### **Participation**

The effect of participation that is a sub dimation of high performance human resource practice to firm performance through innovation and new business venturing examined. It seen that this hypothesis is supported in the analysis results. In addition to that, there is no direct effect between partipation and firm performance. Participation only have an influence upon firm performance though the innovation and new business venturing. Acoording to Wright et al. (2005) participation described as brainstorming activity groups, problem solving or system developer teams. Participation gives responsibilities to employees by improving employee skills and increasing employee motivation. In addition, the commitment and sense of responsibility for work are the results of partipation. According to another theory, learning employees 'interest through participation shows that they are more responsible for employees' productivity. The persons who have a participate opportunity is satisfied and encouraged because they think their concerns and opinions about the company are worthy of attention. As a result, they can express new ideas about firm's product or services without worrying.

### **Clear job description**

The effect of clear job description to firm performance through innovation and new business venturing examined. It seen that this hypothesis is not supported in the

analysis results. There is no direct or indirect effect between clear job description and firm performance with the mediation effect of innovation and new business venturing.

### **Reward/ performance appraisal**

The effect of reward and performance appraisal that is a sub dimension of high performance human resource practice to firm performance through innovation and new business venturing examined. It seen that this hypothesis is supported in the analysis results. In addition to that, the effect between reward/performance appraisal and performance significant only if the innovation and new business venturing factor mediates them.

Salary satisfaction of employees directly related to motivation. (Applebaum & Mackenzie, 1996) The reward improve the employee's motivation and productivity in the workplace. Because of that employee's who gets reward, adopt the interests and goals of the company as a result of that employee strives to improve company performance. (Combs et al., 2006). Potential satisfaction from the desired incentive compensation causes an employee to make extra effort to achieve the objective results desired by the company. Rewarding employees for their good performance increases motivation and aligns their interests with those of the company.

### **Employer's employment commitment**

The effect of employer's employment commitment that is a sub dimension of high performance human resource practice to firm performance through innovation and new business venturing examined. It seen that this hypothesis is supported in the analysis results. There is a direct relation between employer's employment commitment and firm performance. Therefore, the relation employer's employment commitment and firm performance though the mediation effect of innovation and new business venturing was partial. Many of the literature on employment safety as a high-performance application suggests that researchers consider it a supportive or curative practice. However, some literature suggests that employment security seen as an investment on employees (Sun et al., 2007). If there is some commitment, between employee and employer, employees may be bound to their employers and may try to stay at the firm to maintain security sentiments and this situation maximize their profitability (Bretherton, 1985; Nielson, 2007). In this way, employment security can ensure an environment in which an employee can execute their jobs properly without worrying

about potential unemployment (Combs et al., 2006). In addition, work safety employees will also devote their sense of commitment to the organization. In light of this information, employees make extra effort while performing their jobs. Because of that the firm performance directly effect positively.

### **Mediator effect of self renewal between high performance human resources and firm performance: extensive training**

The effect of extensive training that is a sub dimation of high performance human resource practice to firm performance through self-renewal examined. It seen that this hypothesis is supported in the analysis results. In addition to that, the effect between extensive training and performance significant only if the self-renewal factor mediates them. The self-renewal dimation refers the system- wide changes inside the organiztaion. Establishment of procedures to examine innovation ideas was a critical point for self-renewal operations. Transformation in the organization through the renovation of key ideas have an influence to firm performance. It is crucial for companies to adapt to the changing environment with rapidly changing technological developments. It is possible to follow the technological developments with the training. For this reason, corporate missions need to recruite into changing circumstances. Following up-to-date developments and detailed information about the subject formed through training.

### **Participation**

The effect of participation that is a sub dimation of high performance human resource practice to firm performance through self-renewal examined. It seen that this hypothesis is supported in the analysis results. In addition to that, there is no direct effect between partipation and firm performance. Participation only have an influence upon firm performance though the self-renewal. Participation to business decisions can help employees feel the feeling of ownership and inclusion in the results of decisions. As a result, employees feels responsible for their job and actions in the working place. This confort on the job makes employee more entpreneur for experimental projects.

### **Clear job description**

The effect of clear job description that is a sub dimation of high performance human resource practice to firm performance through self-renewal examined. It seen that this

hypothesis is supported in the analysis results. In addition to that, there is no direct effect between participation and firm performance. Clear job description only have an influence upon firm performance through the self-renewal. Job description defined as an explicit proposal of all the tasks that an employee must do in the workplace. The ambiguity of the roles and responsibilities of employees makes them feel unsatisfied and inefficient. Research confirms that role conflict and ambiguity cause dissatisfaction and tension in the workplace and reducing of employee commitment. (Schaubroeck et al., 1989). Role uncertainty can also cause to feel like they cannot perform well in their work. In the insecure environment, employees cannot contribute to company development. On contrary, if a person have clear job description do not feel stressed and insecure in the workplace. That situation can cause the innovative and open the change environment.

### **Reward/ performance appraisal**

The effect of reward and performance appraisal that is a sub dimension of high performance human resource practice to firm performance through self-renewal examined. It seen that this hypothesis is supported in the analysis results. In addition to that, the effect between reward/performance appraisal and performance significant only if the self-renewal factor mediates them. As the theory of expectancy, increased employee motivation causes rising of productivity and innovation to meet the expectation of the employer and ultimately receive the desired reward. The productivity and innovation inside the organization can cause system wide changes in the company. People make extra effort in their job to get much more reward. So this situation causes to birth of new projects in the company.

### **Employer's employment commitment**

The effect of employer's employment commitment to firm performance through self-renewal examined. It seen that this hypothesis is not supported in the analysis results. There is no direct or indirect effect between employer's employment commitment and firm performance with the mediation effect of self-renewal

### **Mediator effect of self-renewal between high performance human resources and firm performance: moderation of organizational culture**

Moderation effect of organization culture examined in the relationship path between HPHRP and firm performance through the mediation effect of corporate

entrepreneurship. Four different organization culture measured in the study. The sample data divided into these four-organization culture groups. The number of data was too small to carry out an analysis for clan and adhocracy culture. Because of that the parth analysis and z score tests has been conducted in market and hierarchy culture.

### **Market**

The path analysis shows that employer's employment commitment factor of HPHRP has no significant relation with the firm performance, which mediated by innovation and new business venturing in the market culture. In addition to that, the relation between clear job description and firm performance though the mediation effect of self-renewal was also not significant in the market culture. The results show that with the mediaton effect of of innovation and new business venturing, reward/performance appraisal, participation and training has a significant relation between firm performances. In addition to that, with the mediaton effect of self-renewal, reward/performance appraisal, participation and training has a significant relation between firm performances. The highest relation effect was between extensive training and self-renewal. Also the relation between reward/performance appraisal and firm performance though innovation/new busines venturing was also high in the Amos output. Finally, the result show that training, reward/performance appraisal and security are good predictors of firm performance though mediation effect of firm performance.

When we look at the significant path differences across market and hierarchy culture, only participation and reward/performance appraisal has evidence to support the moderating effect of cultur on the relationship between firm performance though mediaton effect of innovation and new business venturing.

### **Hierarchy**

The path analysis shows that reward and performance appraisal factor of HPHRP has no significant relation with the firm performance which is mediated by innovation/new business venturing and self-renewal in the hierarchy culture. In addition to that, the relation between clear job description and firm performance though the mediation effect of self-renewal was also not significant in the hierarchy culture. In addition, participation has no significant relation with innovation/new business venturing. Furthermore, the relation between innovation/new business venturing and firm

performance has become insignificant. Because of that, there has a only one mediation factor that mediates between human resource manegemen and firm performance. It is also clear that innovation/new business venturing became a mediator between HPHRP and self-renewal factor.

When we look at the significant path differences across market and hierarchy culture, only participation and reward/performance appraisal has evidence to support the moderating effect of cultur on the relationship between firm performance though mediaton effect of innovation and new business venturing. Consequently, in the culture of hierarchy, innovation and new business venturing effect has become insignificant. There were similar results found when the literature is examined. (Mintzberg, 1983; Öğüt et al. 2003) .Moreover, when we look at the cultural characteristics of the Turkish society, the conclusions about the culture of hierarchy are very important. Based on the finding that organizational culture is an element affecting innovation, it is necessary for enterprises to form organizational culture for entrepreneurial, creative, harmonious, giving importance to flexibility, hierarchy, regulatory and organizational culture structures (hierarchical culture). Academic institutions that train managers or employees, and institutions that provide educational services to companies should create training programs that emphasize these features in the trainings they give. In addition to that in hierarchy culture reward and performance appraisal became a insignificant factor to enhance firm performance on contrary of market culture. Considering the normative and stable structure of hierarchy culture, fixed working system and exceptense of competitive environment among the employees explains the result accurately. On the contrary, the effect of reward and performance appriasal is growing even more because of the dynamic and competitive structure of market culture. It is becoming more difficult for people to participate without worrying because of win policies of market culture. In addition, since participation is not a motivating factor, it is seen that participation is not one of the important factors that affecting company performance. On the contrary, order and formal rules are very important in hierarchical culture. For this reason, encouraging participation and feeling that their thoughts are valued are the factors that enhance motivation in the organization.

Global economy requires more entrepreneurial for businesses to deal with the ambiguity and the fast changing environment. For this purpose, corporate

entrepreneurship activities became more important than ever. It has researched whether human resource practices are a factor in creating entrepreneurship for the company. In this study, firstly, the relationship between high performance human resource management practices and firm performance discussed. The mediating effect of corporate entrepreneurship and the impact of high-performance human resource sub-dimensions on firm performance have analyzed. Secondly, the mediation effect of corporate entrepreneurship between HPHRM and firm performance discussed. One of the most important results of the research is that innovation/new business venturing mediates the effect of extensive training, reward/performance appraisal and employer's employment commitment on firm performance. The other striking result is that self-renewal mediates the effect of extensive training, clear job description and reward/performance appraisal on firm performance. In addition to that, the direct relation between employer's employment commitment and firm performance revealed in the study. So H1 (High-performance human resource practices is related to firm performance) and H2 (Corporate entrepreneurship mediates the effects of high-performance human resource practices on firm performance) is fully supported. Our work generally offers two contributions. First, we contribute to understanding the high performance human resources practices CE and the effects on company performance. However, we also show evidence that the practice of human resources are not mediating the relationship between CE and firm performance, they are actually pioneer of company entrepreneurship

However, the hypotheses have tested with firms from only one country, Turkey. Future research should focus on extending the research in different national cultures and across different types of organizations. In addition, the results of studies on larger samples may contribute to the enrichment of the literature. In addition, moderating variables could be insert into the model to investigate whether the supported hypotheses depend on different moderation effects.



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## APPENDICES

### APPENDIX A: Survey

#### Değerli Katılımcı,

Bu anket, İstanbul Teknik Üniversitesi Endüstri Mühendisliği Bölümü akademik personeli ve öğrencileri tarafından yürütülen bir araştırma projesinin önemli bir parçasıdır.

Çalışmanın ana amacı, "Kurumsal girişimcilik uygulamalarına imkan veren kurum-içi girişimcilik yaklaşımlarının şirketlerin performanslarına etkisini araştırmak, ve bu etkileşim üzerinde yüksek performanslı insan kaynakları uygulamalarının rollerini değerlendirmektir."

Bu çalışmada toplanan tüm anketler ve elde edilecek veriler **sadece akademik amaçlı kullanılacaktır**. Ankete katılan şirket ve kişilerin bilgileri (anonim bilgiler olarak ele alınıp) **kesinlikle gizli tutulacaktır**. Çalışma kapsamında Türkiye genelinde toplanan tüm anketler bütünsel olarak değerlendirilerek genel bulgu ve sonuçlar elde edilecektir.

Cevaplamak üzere olduğunuz mevcut anket toplam 6 ana bölümden oluşmaktadır. Her bir bölümün başında o kısma ait soruları hangi kapsamda değerlendirmenizin istendiği belirtilmektedir. Çalışmanın bütünlüğü açısından tüm sorulara eksiksiz cevap vermeniz çok büyük önem taşımaktadır.

Araştırmaya gösterdiğiniz ilgi, yardım ve ayırdığınız zamandan dolayı çok teşekkür ederiz.

Tuğçe HANCI DÖNMEZ

**Başla** 00:00:00

a. Şirketimizde işe alınacak personelin uzmanlık ve becerisine göre personel seçimi yapılmaktadır \*

1	2	3	4	5
Kesinlikle Katılmıyorum		Kararsızım		Kesinlikle Katılıyorum

Figure A.1 : Survey questions.

- b. Şirketimizde personel seçimi adayın gelecek potansiyeline göre yapılmaktadır.\*

1	2	3	4	5
Kesinlikle Katılmıyorum		Kararsızım		Kesinlikle Katılıyorum

- c. İşe personel alımında prosedürlere azami özen gösterilir.\*

1	2	3	4	5
Kesinlikle Katılmıyorum		Kararsızım		Kesinlikle Katılıyorum

- d. Yeni işe alınacak personeli seçimi sırasında kapsamlı işe alım standartları uygulanır.\*

1	2	3	4	5
Kesinlikle Katılmıyorum		Kararsızım		Kesinlikle Katılıyorum

- e. Şirketimizde, çalışanların genel becerilerini arttırabilmelerini sağlayan kapsamlı eğitim programları uygulanır.\*

1	2	3	4	5
Kesinlikle Katılmıyorum		Kararsızım		Kesinlikle Katılıyorum

- g. İşe alınan personele işletmede işini yapabilmesi için gereken bilgileri içeren kurumsal eğitim programları uygulanır.\*

1	2	3	4	5
Kesinlikle Katılmıyorum		Kararsızım		Kesinlikle Katılıyorum

- t. Şirketimizde, eğitim süreci sistemli ve düzenli bir şekilde planlanır.\*

1	2	3	4	5
Kesinlikle Katılmıyorum		Kararsızım		Kesinlikle Katılıyorum

- h. Şirketimizde, çalışanların terfi etme imkanlarını arttırmak amacıyla kurumsal eğitim programları uygulanır.\*

1	2	3	4	5
Kesinlikle Katılmıyorum		Kararsızım		Kesinlikle Katılıyorum

Figure A.1 (continued) : Survey questions.

i. Çalışanların bu şirkette net kariyer yolları vardır.\*

1	2	3	4	5
Kesinlikle Katılmıyorum		Kararsızım		Kesinlikle Katılıyorum

j. Boş bir kadro için eleman ihtiyacı olduğunda öncelik şirketin içinden doldurulmasıdır.\*

1	2	3	4	5
Kesinlikle Katılmıyorum		Kararsızım		Kesinlikle Katılıyorum

k. Çalışanların bu şirketteki kariyer hedefleri bağlı oldukları ilk seviye yöneticileri tarafından bilinir.\*

1	2	3	4	5
Kesinlikle Katılmıyorum		Kararsızım		Kesinlikle Katılıyorum

l. Şirket personelinin mevcut işlerinde istedikleri kadar çalışmaya devam etmeleri mümkündür.\*

1	2	3	4	5
Kesinlikle Katılmıyorum		Kararsızım		Kesinlikle Katılıyorum

m. Bu şirkette çalışanlara iş güvencesi neredeyse tamamen verilir.\*

1	2	3	4	5
Kesinlikle Katılmıyorum		Kararsızım		Kesinlikle Katılıyorum

n. Şirketimizde pozisyonlara ait görevler ve sorumluluklar açık ve nettir.\*

1	2	3	4	5
Kesinlikle Katılmıyorum		Kararsızım		Kesinlikle Katılıyorum

n. Şirketimizde pozisyonlara ait görevler ve sorumluluklar açık ve nettir.\*

1	2	3	4	5
Kesinlikle Katılmıyorum		Kararsızım		Kesinlikle Katılıyorum

o. Şirketimizde işlere ait güncel iş tanımları bulunmaktadır.\*

1	2	3	4	5
Kesinlikle Katılmıyorum		Kararsızım		Kesinlikle Katılıyorum

Figure A.1 (continued) : Survey questions.

- p. Bir pozisyonun iş tanımı, çalışanlar tarafından yerine getirilen tüm görevleri doğru bir şekilde tanımlar.\*

1	2	3	4	5
Kesinlikle katılmıyorum		Kararsızım		Kesinlikle katılıyorum

- q. Şirketimizde her çalışanın performans hedefi bulunmaktadır.\*

1	2	3	4	5
Kesinlikle katılmıyorum		Kararsızım		Kesinlikle katılıyorum

- r. Performans değerlendirmeleri objektif ve ölçülebilir sonuçlara dayanmaktadır.\*

1	2	3	4	5
Kesinlikle katılmıyorum		Kararsızım		Kesinlikle katılıyorum

- s. Çalışan değerlendirmeleri yapılırken uzun vadeli ve grup bazlı başarı göz önünde bulundurulur.\*

1	2	3	4	5
Kesinlikle katılmıyorum		Kararsızım		Kesinlikle katılıyorum

- t. Bireysel primler, örgütün kârlılığına bağlı olarak ödenir.\*

1	2	3	4	5
Kesinlikle katılmıyorum		Kararsızım		Kesinlikle katılıyorum

- u. Şirketimizde bireysel veya takım performansına dayalı prim ödemesi bulunmaktadır.\*

1	2	3	4	5
Kesinlikle katılmıyorum		Kararsızım		Kesinlikle katılıyorum

- v. Çalışanlara şirketin hisseleri teşvik ödemesi olarak verilmektedir.\*

1	2	3	4	5
Kesinlikle katılmıyorum		Kararsızım		Kesinlikle katılıyorum

Figure A.1 (continued) : Survey questions.

w. Şirketimizde, çalışanların karar alma süreçlerine katılmaları yöneticileri tarafından desteklenir.\*

1	2	3	4	5
Kesinlikle katılmıyorum		Kararsızım		Kesinlikle katılıyorum

x. Çalışanların işlerini yaparken karar almasına izin verilir.\*

1	2	3	4	5
Kesinlikle katılmıyorum		Kararsızım		Kesinlikle katılıyorum

y. Çalışanlara işlerin yapılışı ile ilgili öneriler geliştirmesine fırsat sağlanır.\*

1	2	3	4	5
Kesinlikle katılmıyorum		Kararsızım		Kesinlikle katılıyorum

z. Bu şirkette yöneticiler çalışanları ile açık iletişim kurarlar.\*

1	2	3	4	5
Kesinlikle katılmıyorum		Kararsızım		Kesinlikle katılıyorum

3 → Bölüm 2

Lütfen şirketinizdeki girişimciliğe ve yeni uygulamalara imkan vere yaklaşım ve uygulamalar ile ilgili olarak aşağıda yer alan söylemler şirketinizin içerisinde bulunduğu sektörün dinamiklerini de göz önüne alarak ne derecede katıldığınızı 1 ile 5 arası puan vererek cevaplayınız.



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a. Şirketimizde reklam ve pazarlama aracılığıyla var olan ürünler için yeni talepler yaratılır\*

1	2	3	4	5
Çok önemiz		Kararsızım		Çok önemli

Figure A.1 (continued) : Survey questions.

b. Faaliyet gösterdiğimiz sektörde iş kolları sürekli olarak genişletilir.\*

1	2	3	4	5
Çok önemsiz		Kararsızım		Çok önemli

d. Şirketimiz var olan ürünlerimiz için yeni işletme fırsatları arar.\*

1	2	3	4	5
Çok önemsiz		Kararsızım		Çok önemli

e. Şirketimiz, yeni ürünler ile yeni pazarlara girer.\*

1	2	3	4	5
Çok önemsiz		Kararsızım		Çok önemli

f. Şirketimiz, yeni ürün/hizmetleri geliştirmeye büyük önem vermektedir.\*

1	2	3	4	5
Çok önemsiz		Kararsızım		Çok önemli

h. Şirketimiz, yeni ürün/hizmet geliştirme çabalarına yatırım yapmıştır.\*

1	2	3	4	5
Çok önemsiz		Kararsızım		Çok önemli

l. Şirketimiz, mevcut pazarlarda satışa sunmak üzere radikal anlamda yeni ürün/hizmetler yaratmıştır.\*

1	2	3	4	5
Çok önemsiz		Kararsızım		Çok önemli

j. Şirketimiz, yeni pazarlarda satışa sunmak üzere radikal anlamda yeni ürün/hizmetler yaratmıştır.\*

1	2	3	4	5
Çok önemsiz		Kararsızım		Çok önemli

Figure A.1 (continued) : Survey questions.

- k. Araştırma geliştirme (ARGE) faaliyetlerine sektördeki diğer şirketlerin çok üstünde yatırım yapmıştır.\*

1	2	3	4	5
Çok Önemli		Kararsızım		Çok Önemli

- l. Ürün odaklı araştırma geliştirme (ARGE) faaliyetlerine sektördeki diğer şirketlerin çok üstünde önem vermiştir.\*

1	2	3	4	5
Çok Önemli		Kararsızım		Çok Önemli

- m. Yeni ve özgün süreçler geliştirmekten ziyade diğer şirketlerin geliştirmiş bulunduğu üretim/hizmet süreç teknolojilerini takip etmiş ve uyarlamıştır.\*

1	2	3	4	5
Çok Önemli		Kararsızım		Çok Önemli

- m. Yeni ve özgün süreçler geliştirmekten ziyade diğer şirketlerin geliştirmiş bulunduğu üretim/hizmet süreç teknolojilerini takip etmiş ve uyarlamıştır.\*

1	2	3	4	5
Çok Önemli		Kararsızım		Çok Önemli

- n. Şirketimiz, yeni teknoloji geliştirme konusuna oldukça önem verir.\*

1	2	3	4	5
Çok Önemli		Kararsızım		Çok Önemli

- o. Şirketimiz misyonunu sürekli gözden geçirir.\*

1	2	3	4	5
Çok Önemli		Kararsızım		Çok Önemli

- q. Şirketimiz faaliyet gösterilen ve rekabet edilen iş kollarını zaman zaman yeniden tanımlamaktadır.\*

1	2	3	4	5
Çok Önemli		Kararsızım		Çok Önemli

Figure A.1 (continued) : Survey questions.

- c. Yenilikçiliği teşvik etmek amacıyla, organizasyon yapısında önemli değişikliklere gider.\*

1	2	3	4	5
Çok Önemli		Kararsız		Çok Önemli

- s. Şirketimiz çalışanların yaratıcılıklarını geliştirebilmek için sürekli eğitir.\*

1	2	3	4	5
Çok Önemli		Kararsız		Çok Önemli

- t. Şirketimizde yeni fikir ve proje geliştirenler için bir ödüllendirme sistemi mevcuttur.\*

1	2	3	4	5
Çok Önemli		Kararsız		Çok Önemli

- u. Yaratıcılık ve yenilikçiliği tetiklemek amacıyla yenilikçi insan kaynakları programları ve politikalar uygulanır.\*

1	2	3	4	5
Çok Önemli		Kararsız		Çok Önemli

- v. Şirketimizde fikir ve projelerimizi geliştirebilmemiz için iş yükümüz azaltılır.\*

1	2	3	4	5
Çok Önemli		Kararsız		Çok Önemli

- w. Çok nadir olarak, yeni ürün/hizmetlerin, teknolojik ve idari/teknik yeniliklerin pazara sunulmasında öncü şirket rolünü üstlenir.\*

1	2	3	4	5
Çok Önemli		Kararsız		Çok Önemli

- w. Çok nadir olarak, yeni ürün/hizmetlerin, teknolojik ve idari/teknik yeniliklerin pazara sunulmasında öncü şirket rolünü üstlenir.\*

1	2	3	4	5
Çok Önemli		Kararsız		Çok Önemli

Figure A.1 (continued) : Survey questions.



c. Şirketimizin son 3 yıldaki pazar payı artışı\*

- 1- Yetersiz
- 2-Ortalamanın altı
- 3-Ortalama
- 4-Ortalamanın Üstü
- 5-Yüksek

1	2	3	4	5
Yetersiz		Ortalama		Yüksek

4-+ **ŞİRKETİNİZ İLE İLGİLİ AŞAĞIDAKİ 4 İFADEYİ 1'DEN 4'E SIRALAYINIZ**

a. Şirketimiz, geniş bir aile gibidir. İnsanlar kendileriyle ilgili birçok şeyi diğerleriyle paylaşırlar.\*

- (1) Şirket ortamını hiç yaratmıyor
- (2) Şirket ortamını biraz yaratıyor
- (3) Şirket ortamını yaratıyor
- (4) Şirket ortamını tam olarak yaratıyor

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	2	3	4

b. Şirketimiz, dinamik ve girişimcidir. İnsanlar risk almaya çok isteklidir.\*

- (1) Şirket ortamını hiç yaratmıyor
- (2) Şirket ortamını biraz yaratıyor
- (3) Şirket ortamını yaratıyor
- (4) Şirket ortamını tam olarak yaratıyor

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	2	3	4

c. Şirketimiz, sonuç odaklıdır, işlerin tamamlanması esastır. İnsanlar çok rekabetçi ve başarı odaklıdır.\*

- (1) Şirket ortamını hiç yaratmıyor
- (2) Şirket ortamını biraz yaratıyor
- (3) Şirket ortamını yaratıyor
- (4) Şirket ortamını tam olarak yaratıyor

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	2	3	4

d. Şirketimiz, kontrol bazlı olarak oldukça çok yapılandırılmıştır. İşlerin nasıl yapılacağı resmi prosedürler tarafından belirlenir.\*

- (1) Şirket ortamını hiç yaratmıyor
- (2) Şirket ortamını biraz yaratıyor
- (3) Şirket ortamını yaratıyor
- (4) Şirket ortamını tam olarak yaratıyor

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	2	3	4

Figure A.1 (continued) : Survey questions.

1+ **ŞİRKETİNİZ İLE İLGİLİ AŞAĞIDAKİ 4 İFADEYİ 1'DEN 4'E SİRALAYINIZ**

a. **Şirketimizi birarada tutan şey, sadakat ve karşılıklı güvendir. Şirkete olan bağlılık yüksektir.\***

- (1) Şirket ortamını hiç yanatmıyor
- (2) Şirket ortamını biraz yanatıyor
- (3) Şirket ortamını yanatıyor
- (4) Şirket ortamını tam olarak yanatıyor

1 2 3 4

b. **Şirketimizi birarada tutan şey, yeniliğe ve gelişime bağlılıktır. En ileri noktada olmaya önem verilir.\***

- (1) Şirket ortamını hiç yanatmıyor
- (2) Şirket ortamını biraz yanatıyor
- (3) Şirket ortamını yanatıyor
- (4) Şirket ortamını tam olarak yanatıyor

1 2 3 4

c. **Şirketimizi birarada tutan şey, başarı ve hedeflere ulaşılmasıdır.\***

- (1) Şirket ortamını hiç yanatmıyor
- (2) Şirket ortamını biraz yanatıyor
- (3) Şirket ortamını yanatıyor
- (4) Şirket ortamını tam olarak yanatıyor

1 2 3 4

d. **Şirketimizi birarada tutan şey, resmi kural ve politikalarıdır. Kurumun düzgün çalışması önemlidir.\***

- (1) Şirket ortamını hiç yanatmıyor
- (2) Şirket ortamını biraz yanatıyor
- (3) Şirket ortamını yanatıyor
- (4) Şirket ortamını tam olarak yanatıyor

1 2 3 4

**Figure A.1 (continued) : Survey questions.**

→ **ŞİRKETİNİZ İLE İLGİLİ AŞAĞIDAKİ 4 İFADEYİ 1'DEN 4'E SIRALAYINIZ**

a. **Şirketimiz insan gelişimini vurgular. Güven, açıklık ve katılım konuları üzerinde durulur.\***

- (1) Şirket ortamını hiç yaratmıyor
- (2) Şirket ortamını biraz yaratıyor
- (3) Şirket ortamını yaratıyor
- (4) Şirket ortamını tam olarak yaratıyor

1 2 3 4

b. **Şirketimiz yeni kaynaklar ve yeni fırsatlar yaratılmasını vurgular. Yeni şeyler denenmesine ve fırsatların kullanılmasına değer verilir.\***

- (1) Şirket ortamını hiç yaratmıyor
- (2) Şirket ortamını biraz yaratıyor
- (3) Şirket ortamını yaratıyor
- (4) Şirket ortamını tam olarak yaratıyor

1 2 3 4

c. **Şirketimiz rekabetçi hareketleri ve kazanmayı vurgular. Yüksek hedeflere ulaşmak ve pazarda kazanmak önemlidir.\***

- (1) Şirket ortamını hiç yaratmıyor
- (2) Şirket ortamını biraz yaratıyor
- (3) Şirket ortamını yaratıyor
- (4) Şirket ortamını tam olarak yaratıyor

1 2 3 4

d. **Şirketimiz devamlılığı ve istikrarı vurgular. Verimlilik, kontrol ve işlerin düzgün yürütülmesi önemlidir.\***

- (1) Şirket ortamını hiç yaratmıyor
- (2) Şirket ortamını biraz yaratıyor
- (3) Şirket ortamını yaratıyor
- (4) Şirket ortamını tam olarak yaratıyor

1 2 3 4

**Figure A.1 (continued) : Survey questions.**

→ **ŞİRKETİNİZ İLE İLGİLİ AŞAĞIDAKİ 4 İFADEYİ 1'DEN 4'E SIRALAYINIZ**

a. **Şirketimiz başarıyı, çalışanların, takım çalışmasının ve çalışan bağlılığının geliştirilmesi ile tanımlar.\***

- (1) Şirket ortamını hiç yansıtmıyor
- (2) Şirket ortamını biraz yansıtmıyor
- (3) Şirket ortamını yansıtmıyor
- (4) Şirket ortamını tam olarak yansıtmıyor

1 2 3 4

b. **Şirketimiz başarıyı, yeni ürün ve hizmetlerin geliştirilmesi, ürün liderliği ve yenilikçilik ile tanımlar.\***

- (1) Şirket ortamını hiç yansıtmıyor
- (2) Şirket ortamını biraz yansıtmıyor
- (3) Şirket ortamını yansıtmıyor
- (4) Şirket ortamını tam olarak yansıtmıyor

1 2 3 4

c. **Şirketimiz başarıyı, pazarda rakipleri yenmek ve rekabete dayalı pazar liderliği ile tanımlar.\***

- (1) Şirket ortamını hiç yansıtmıyor
- (2) Şirket ortamını biraz yansıtmıyor
- (3) Şirket ortamını yansıtmıyor
- (4) Şirket ortamını tam olarak yansıtmıyor

1 2 3 4

d. **Şirketimiz başarıyı, verimlilik bazında tanımlar, ve güvenilir dağıtım, düzgün planlama, düşük maliyetli üretimi başan kriteri olarak alır.\***

- (1) Şirket ortamını hiç yansıtmıyor
- (2) Şirket ortamını biraz yansıtmıyor
- (3) Şirket ortamını yansıtmıyor
- (4) Şirket ortamını tam olarak yansıtmıyor

1 2 3 4

**Figure A.1 (continued) : Survey questions.**



## **CURRICULUM VITAE**

**PHOTO**

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### **EDUCATION** :

- **B.Sc.** : 2012, Istanbul Kultur University, Engineering Faculty, Industrial Engineering.
- **B.Sc.** : 2013, Istanbul Kultur University, Engineering Faculty, Computer Engineering

