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ISSN 2148-6689

PressAcademia
www.pressacademia.org/journals/rjbm
RJBM
ISSN 2148-6689
Research Journal of Business and Management YEAR 2020 VOLUME 7 ISSUE 2

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Research Journal of Business and Management (RJBM) is a scientific, academic, peer-reviewed, quarterly and open-access online journal. The journal publishes four issues a year. The issuing months are March, June, September and December. The publication languages of the Journal are English and Turkish. RJBM aims to provide a research source for all practitioners, policy makers, professionals and researchers working in all related areas of business, management and organizations. The editor in chief of RJBM invites all manuscripts that cover theoretical and/or applied researches on topics related to the interest areas of the Journal.

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ISSN 2148-6689
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ISSN 2148-6689
Research Journal of Business and Management YEAR 2020 VOLUME 7 ISSUE 2

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RJBM
ISSN 2148-6689

Research Journal of Business and Management YEAR 2020 VOLUME 7 ISSUE 2

THE EFFECT OF SUPPLY CHAIN MANAGEMENT ON BUSINESS PERFORMANCE: AN APPLICATION IN FOOD SECTOR

DOI: 10.17261/Pressacademia.2020.1199
RJBM- V.7-ISS.2-2020(1)-p.56-66

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Date Received: April 4, 2020 **Date Accepted:** June 8, 2020

To cite this document To cite this document
Ozturk, D., Tekin, M. (2020). The effect of supply chain management on business performance: an application in food sector. Research Journal of Business and Management (RJBM), V.7(2), p.56-66.,
Permanent link to this document: http://doi.org/10.17261/Pressacademia.2020.1199

ABSTRACT
Purpose - The aim of this study is to demonstrate the effects of supply chain management applied in the food sector on business performance.
Methodology – In the study, a face-to-face survey was conducted with 90 business owners or managers selected by easy sampling method from among the businesses operating in the food sector in Ankara**.** Explanatory factor analysis was used to determine the structure validity of the scales used in the research. Correlation analysis was performed to test the direction and severity of the relationships between variables; regression analysis was performed to test the causality relationships between variables.
Findings- According to the correlation analysis, there is a positive relationship between supply chain management and business performance (r=0.84; p<.01). Furthermore, as a result of the regression analysis, 71% of the change in business performance can be explained by the changes in supply chain management.
Conclusion- According to these results, it can be said that the businesses operating in the food sector adopt and implement supply chain management will reflect positively on business performance.

Keywords: Supply chain, supply chain management, business performance, regression analysis, food sector
JEL Codes: M11, M10, M31

TEDARİK ZİNCİRİ YÖNETİMİNİN İŞLETME PERFORMANSI ÜZERİNDEKİ ETKİSİ: GIDA SEKTÖRÜNDE BİR UYGULAMA

ÖZET
Amaç - Bu çalışmanın amacı, gıda sektöründe uygulanan tedarik zinciri yönetiminin işletme performansı üzerindeki etkilerini ortaya koymaktır.
Metodoloji- Çalışmada, Ankara'da gıda sektöründe faaliyet gösteren işletmeler arasından kolayda örnekleme metodu ile seçilmiş 90 işletme sahibi veya yöneticileri ile yüz yüze anket çalışması gerçekleştirilmiştir. Araştırmada kullanılan ölçeklerin yapı geçerliliğinin belirlenmesinde açıklayıcı faktör analizi kullanılmıştır. Değişkenler arasındaki ilişkilerin yönünü ve şiddetini test etmek amacıyla korelasyon analizi; değişkenler arasındaki nedensellik ilişkilerini test etmek amacıyla ise regresyon analizleri yapılmıştır.
Bulgular- Korelasyon analizi sonucuna göre, tedarik zinciri yönetimi ile işletme performansı (r=0.84; p<.01) arasında pozitif yönde anlamlı bir ilişki olduğu tespit edilmiştir. Ayrıca, yapılan regresyon analizi sonucunda ise işletme performansındaki değişimin %71'i tedarik zinciri yönetimindeki değişmelerle açıklanabilmektedir.
Sonuç- Bu sonuçlara göre, gıda sektöründe faaliyet gösteren işletmelerin tedarik zinciri yönetimini benimseyip uygulamalarının işletme performansına olumlu şekilde yansıyacağı söylenebilir.

Anahtar Kelimeler: Tedarik zinciri, tedarik zinciri yönetimi, işletme performansı, regresyon analizi, gıda sektörü.
JEL Kodları: M11, M10, M31

1. GİRİŞ

Küreselleşme süreciyle birlikte yaşanan rekabet koşullarında tedarik zinciri yönetimi (TZY), işletmelerin başarısını artıran önemli süreçlerden biri olarak karşımıza çıkmaktadır. Artık işletmeler, bir yandan rekabetçi konumlarını devam ettirebilmek diğer yandan da dünyanın değişik yerlerindeki müşterilerinin isteklerini karşılayabilmek için TZY'ni uygulamaktadır (Öztürk, 2016). Tedarik zinciri, malzemelerin temini ile başlayıp bu malzemelerin son ürüne dönüştürülmesi ve bu son ürünün de müşterilere dağıtımını sağlayan bir ağ olarak tanımlanabilir (Ganeshan ve Harrinson, 1995). Tedarik zinciri, iş süreçleri açısından malzeme temini, stok yönetimi, tedarik, satış süreci, müşteri hizmetleri, üretim, satış tahmini ve dağıtım gibi pek çok alanı kapsamaktadır (Şen, 2006). İşletmeler müşterilerini tatmin etmek için yer aldıkları değer zinciri içerisindeki bütün üyelerle işbirliğini güçlendirmeye ve geliştirmeye çalışmaktadır. TZY, müşterilerin ihtiyaçlarını karşılamak üzere her türlü ürün, hizmet ve bilgi akışının ham maddesinin başlangıç noktasından ürünün tüketildiği son noktaya kadar olan tedarik zinciri içindeki üretimin ve hareketinin etkili bir biçimde planlanması uygulanması, taşınması, depolanması ve kontrol altında tutulması hizmetidir (Lojistik terimleri, 2019). Başarılı bir TZY; işletmelerde ürün kalitesinin artırılması, satın alma maliyetlerinin düşürülmesi, ürün ve dağıtım esnekliğinin geliştirilmesini hedefleyen zincir üyeleri arasındaki etkili bir bütünleşme ile gerçekleştirilebilir.

Gıda sektörü, insan hayatının en temel ihtiyaçlarından biri olan besin maddeleri üretmesi nedeniyle, imalat sanayi içerisinde çok önemli bir yere sahiptir. Gıda sektörünün nüfus artışına paralel olarak bu stratejik önemini koruması, yeterli ve sağlıklı gıda arzını devam ettirmesine bağlıdır. Gıda işletmeleri, insan sağlığı ve performansı üzerinde doğrudan etkili olan ürünleri üretirken, müşteri istek ve beklentilerinin zaman içerisinde değişebileceğini de göz önünde tutmak zorundadır. Çünkü; gıda işletmelerinde ürün yaşam eğrisi kısa olan ürünlere yapılan yatırımlar ürünün satılamadığı her gün stoklama maliyetinin yanında ürünün bozulma riskini de beraberinde getirmektedir. Gıda sektöründe faaliyet gösteren işletmelerin iç ve dış pazarlarda rekabet yapabilmeleri ve kârını maksimize edebilmeleri için TZY uygulamalarına ağırlık vermeleri gerekmektedir. Birçok firma sipariş aldıktan, malın dağıtımına kadar olan dönemde ciddi bir baskı altındadır. Üretici ve onun tedarikçisi, satıcı ve müşterilerinin yer aldığı geniş bir yelpazenin tüm kanalları, müşterinin satın almak istediği ortak bir mal, hizmet ya da bilgiyi sağlamak için çalışırlar (Demir ve Gümüşoğlu, 2009). İşletmeler müşterilerini tatmin etmek için yer aldıkları değer zinciri içerisindeki bütün üyelerle (tedarikçi, üretici, perakendeci vb.) işbirliğini güçlendirmeye ve geliştirmeye çalışmaktadır. Aksi takdirde tedarik zincirinde meydana gelen aksaklıkların işletmelere bedelinin ağır olması da kaçınılmaz gözükmektedir. Örneğin, ABD gıda sektöründe yapılan bir araştırmaya göre, tedarik zinciri üyeleri arasında istenilen ölçüde işbirliğinin olmaması nedeniyle yılda 30 milyar dolar kaybedildiği belirlenmiştir (Demirtaş, 2008). Günümüzde rekabet üstünlüğü sağlamak isteyen işletmelerin temel hedefi, daha kaliteli ürünü daha düşük maliyetle temin etmek, pazardaki hızlı değişimleri yakından takip etmek ve üstün bir müşteri değeri yaratarak işletme performansını artırmaktır. Bu çalışmanın amacı, gıda sektöründe uygulanan TZY'nin işletme performansı üzerindeki etkilerini ortaya koymaktır. Araştırmada TZY ve işletme performansı arasındaki ilişki, TZY değişkeninin alt boyutları ile birlikte incelenmiştir. Bunun nedeni; işletme performansında ortaya çıkan etkilerin, TZY'nin hangi alt boyutlarında ne düzeyde gerçekleştiğinin belirlenmesinin daha sağlıklı sonuçlar ortaya koyacağının düşünülmesidir.

Çalışmada giriş bölümünün ardından konuyla ilgili temel kavramlara ve araştırma konusuyla ilgili önceden yapılmış literatür özetlerine yer verilmiştir. Üçüncü bölümde ise araştırmanın metodolojisi başlığı altında örneklem, veri toplama yöntemi, kapsam, kısıtlar ve araştırmanın kavramsal modeli oluşturulmuştur. Dördüncü bölümde araştırmanın bulgularının verilmesinin ardından son bölümde ise sonuç ve öneriler paylaşılmıştır.

2. LİTERATÜR TARAMASI

2.1. Tedarik Zinciri Yönetimi

TZY, hammadde temininden üretime ve dağıtımla son müşteriye kadar bir malın ulaşabilmesi için bir değer zincirinde yer alan tedarikçi, üretici, dağıtıcı, perakendeci ve müşteriler arasında malzeme/ürün, para ve bilginin yönetimidir (Özdemir, 2004). TZY'nin en önemli özelliği, zincir içinde faaliyet gösteren işletmelerin tüm faaliyetlerini kapsayacak şekilde planlama yapılmasına ve bu şekilde bütün işletmelerin ortak bir paydada buluşmasına olanak sağlamasıdır. Böylelikle işletmeler arasındaki işbirliği sağlanarak kalite, hız, maliyet ve güvenilirlik gibi konularda avantaj elde edilebilecektir (Güleş vd., 2009). TZY; işletme maliyetlerinin düşürülmesi, yüksek kaliteli ürünlerin üretilmesi, müşteri ihtiyaçlarına en kısa sürede cevap verilmesi, işletmeler arası işbirliğinin artırılması, alıcı-tedarikçi ilişkilerinin düzenlenmesi, çevrim süresi ve mamul stoklarının düşürülmesi, uzmanlaşmanın sağlanması gibi birçok alanda yararlar sağlamaktadır (Öztürk, 2016).

Amerika Birleşik Devletleri'ndeki 80 işletme üzerinde gerçekleştirilen bir araştırma sonuçlarına göre; işletmelerin TZY sayesinde tedarik zinciri maliyetlerini %25'ten %50'ye, siparişi yerine getirme süresini %30'dan %50'ye, stok düzeylerini de %25'ten %60'a kadar indirdiği, buna karşılık teslim performansını %16'dan %28'e, işletme kapasitesini %10'dan %20'ye ve işletmenin genel verimliliğini de %10'dan %16'ya kadar çıkarttığı tespit edilmiştir (Gegez vd., 2003). Bir başka araştırma sonuçlarına göre, bu sistem sayesinde işletmenin maliyetlerinde %32'den fazla, stok listelerinde ise %95'ten fazla azalma sağlandığı, dağıtım performansında %50'nin üstünde, stok dönüş hızında %100'ün üstünde ve müşteri memnuniyetinde ise %5'in üzerinde artış sağlandığı tespit edilmiştir (Nesi Inch.,1999). Brezilya'da yapılan diğer bir araştırmada ise TZY'nin; fiyat, esneklik, kalite ve teslim performanslarını pozitif yönde etkilediği sonucuna varılmıştır (De Souza Miguel ve Brito, 2011). Demirdöğen ve Küçük'ün yaptığı (2007) araştırma sonuçlarına göre ise, TZY'nin, stokları %25-60 oranında azalttığı, teslim performansını %15-28 oranında arttırdığı ve sipariş karşılama oranlarını ise %20-30 oranında iyileştirdiği ortaya konulmuştur.

TZY uygulamaları konusunda yapılan literatür çalışmaları sonucunda; işletme ile tedarikçileri arasında gerçekleştirilen bilgi paylaşımı (Li ve Lin, 2006; Toptancı, 2013), tedarikçilerle geliştirilen stratejik ortaklık (Ungan, 2011; Toptancı, 2013), müşteri ilişkileri, erteleme (Yön, 2007; Toptancı, 2013), depolama (Ünüvar, 2007; Toptancı, 2013; Demirdöğen ve Korucuk, 2017), satın alma (Kazançoğlu, 2008; Toptancı, 2013; Demirdöğen ve Korucuk, 2017) faaliyetlerinin TZY uygulamaları arasında yer aldığı belirlenmiştir. Bu çalışmada da TZY uygulamaları yukarıda verilen değişkenler dahilinde ölçülmüştür.

2.2. İşletme Performansı

Küresel rekabet ortamında bir işletmenin ayakta kalabilmesi ve başarılı olabilmesi, yüksek performans düzeyinde çalışabilmesine ve performanslarını etkin bir şekilde yönetebilmesine bağlıdır. Performans, çalışanların bireysel hedefleri ile örgütsel hedeflerinin uyumlu hale getirilerek bireyin yarattığı katma değerin ortak amaç ve hedefler doğrultusunda yönlendirilmesini sağlayan birey-örgüt bütünleşmesini ifade etmektedir (Öztürk, 2019). İşletmeler için performans değerlendirme, önceden saptanmış performans kriter ya da standartlara ne ölçüde yaklaşıldığını göstermesi açısından önemlidir. İşletmelerde performans ölçütleri, işletmelerin benimsedikleri örgüt stratejileri ile yakından ilişkili olması ve işletmelerin de çoğunlukla birbirinden farklı stratejilere sahip olması nedeniyle farklılıklar gösterebilmektedir. Genel olarak literatür incelendiğinde; kârlılık, verimlilik, etkinlik, pazar payı, büyüme, satışların artışı, yatırımın geri dönüş oranı, müşteri memnuniyeti, çalışanların memnuniyeti, çalışma hayatının kalitesi, kalite ve yenilik örgütsel performans boyutlarında en yaygın kullanılan kriterlerdir. Bu çalışmada, işletme performansı değişkeninin ölçümünde; ürün ve hizmet kalitesi, müşteri memnuniyeti, verimlilik, satış artışları, teslimat süresi ve maliyet gibi kriterler kullanılmıştır.

2.3. Tedarik Zinciri Yönetimi ve İşletme Performansı İlişkisi

Literatürde TZY'nin alt boyutları ile işletme performansı arasında yapılan çalışmaların özeti sunulmuştur. Darroch (2005), çeşitli sektörler üzerinde yaptığı araştırmada örgütlerde bilginin yayılması ile işletme performansı arasında pozitif yönlü bir ilişki olduğunu ortaya koymuştur. Çağlar (2014), lojistik işletmelerinde bilişim teknolojileri kullanımıyla işletme performansı arasındaki ilişkiyi incelediği araştırmada, bilgi paylaşımı ile işletme performansı arasında pozitif yönlü anlamlı bir ilişki olduğunu tespit etmiştir. Özarallı (2006) yaptığı araştırmada, farklı sektörlerdeki işletmelerde bilgi paylaşımı ile işletme performansı arasında orta düzeyde pozitif bir ilişki olduğunu belirlemiştir. Demirel (2008) yaptığı araştırmada, bankacılık sektöründe bilgi paylaşımının işletme performansı üzerindeki etkisini incelemiş ve pozitif yönde bir ilişki olduğunu tespit etmiştir.

Chen vd., (2004) tarafından yapılan araştırmada, stratejik satın alma ile işletme performansı arasındaki anlamlı pozitif bir ilişkinin olduğu saptanmıştır. Carr ve Pearson (2002) tarafından yapılan araştırmada, stratejik satın alma faktörünün hem küçük hem de büyük işletmelerde işletmenin finansal performansı üzerinde bir etkiye sahip olduğu bulunmuştur. Carr ve Smeltzer (1999) tarafından yapılan araştırmada ise stratejik satın almanın, işletmenin genel performansının artmasına katkı sağladığı tespit edilmiştir. Kafkaslı Cicos (2018), İstanbul Sanayi Odası (ISO) tarafından yayımlanan 2016 yılındaki Türkiye'nin en büyük 1000 sanayi işletmesi arasından 102 işletme ile yaptığı çalışmada, stratejik satın alma ile işletme performansı arasında pozitif yönlü ve güçlü bir ilişki olduğunu tespit etmiştir.

Güleş vd., (2005) konaklama sektöründe faaliyet gösteren işletmelerde müşteri ilişkileri yönetimi uygulama düzeyinin işletme performansı üzerinde olumlu etkisinin olduğunu tespit etmişlerdir. Chang vd. (2010), yapmış oldukları çalışmalarında müşteri ilişkileri yönetiminin işletme performansı üzerinde pozitif yönlü bir etkisi olduğu sonucuna varmışlardır. Wang ve Feng (2012) ise yaptıkları çalışmalarında, müşteri ilişkileri yönetiminin işletme performansına pozitif katkı sağladığını tespit etmişlerdir. Civelek (2016) yaptığı araştırmada, konaklama işletmelerinde müşteri ilişkileri yönetimini uygulayan işletmelerin, müşteri ilişkileri yönetimini uygulamayan işletmelere oranla işletme performans kriterlerinin oldukça yüksek olduğu saptamıştır. Wu ve Chen

(2012) yaptıkları araştırmada, Tayvan'daki otel ve motel işletmelerinde müşteri ilişkileri yönetiminin işletme performansı üzerindeki etkisini incelemişlerdir. Araştırma bulgularına göre müşteri ilişkileri yönetiminin işletme performansı üzerinde pozitif etkisinin olduğunu saptanmıştır. Yıldız (2010), tarafından yapılan araştırmada otomotiv işletmesinde müşteri ilişkileri yönetiminin işletmenin performansına (pazarlama, üretim ve finansal işlevlerine) olumlu yönde etki ettiği tespit edilmiştir.

Yayla ve Ungan (2019) çalışmalarında, Doğu Marmara bölgesinde faaliyet gösteren 102 üretim firmasında TZY uygulamaları ile işletme performansı arasındaki ilişkiyi araştırmışlardır. Analiz sonucunda; işletme performansı ile bilgi paylaşımı (r: 0,273), müşteri ilişkileri (r: 0,470) ve stratejik tedarikçi ortaklığı (r: 0,369) değişkenleri arasında anlamlı ve pozitif bir ilişkiler elde etmişlerdir. Erdem (2013), Türkiye'nin en büyük 500 firması arasında yer alan gıda işletmeleri içerisinden 78 işletme ile yaptığı araştırmada TZY uygulamalarının işletme performansına pozitif yönde etkisinin olduğunu tespit etmiştir. Ayrıca çalışmada, TZY uygulamaları benimsenme derecesinin alt boyutlarının (teknoloji kullanımı, envanter, iç ilişkiler, ürün geliştirme, dış ilişkiler ve nakliye) işletme performansına (öz varlıklara geri dönüş, müşteri elde tutma, müşteri tavsiyeleri, pazar payı kazanımı ve rekabetçi pozisyon) pozitif yönde etkisi olduğu bulunmuştur.

3. METODOLOJİ

3.1. Örneklem Süreci ve Veri Toplama Yöntemi

Araştırmanın evrenini, Ankara ili Organize Sanayi Bölgelerinde (OSB) faaliyet gösteren gıda işletmeleri oluşturmaktadır. Ankara Ticaret Odasından elde edilen verilere göre; Ankara ilinde 7 OSB'de gıda sektöründe (et ve et ürünleri, süt ve süt ürünleri, şeker ve şekerli mamuller, un ve unlu mamuller, bitkisel yağ, meyve-sebze işleme vb.) faaliyet gösteren 115 üretim işletmesi bulunmaktadır. Araştırmanın evrenini temsil eden 115 işletme içerisinden kolayda örnekleme metodu ile seçilmiş 90 işletme çalışmanın örneklemini oluşturmaktadır (Bu sayı evrenin %78.26'sını oluşturmaktadır). Araştırmanın verileri 2019 yılı haziran ayında anket yöntemi ile toplanmıştır. Anket formu üç kısımdan oluşmaktadır. Birinci kısımda, işletme yöneticilerinin demografik bilgilerini kapsayan sorular yer almaktadır. İkinci kısımda TZY ve son kısımda ise işletme performansı değişkenlerine ait 5'li likert tipi ölçekler kullanılmıştır (1- Kesinlikle katılmıyorum……...5-Kesinlikle katılıyorum). Araştırmada kullanılan ölçeklerden ilki olan TZY ölçeği, Toptancı (2013) tarafından geliştirilmiş olup; stratejik tedarikçi ortaklığı, bilgi paylaşımı, müşteri ilişkileri yönetimi, satın alma, depolama ve erteleme faaliyetlerinden oluşan 14 önerme içermektedir. Araştırmada kullanılan ikinci ölçek ise; Shadi Dizaji (2017) ve Gelmez (2017) tarafından geliştirilen ürün ve hizmet kalitesi, maliyet, verimlilik, satış artışları, teslimat süresi ve müşteri memnuniyeti seviyesinin ölçümü gibi performans ölçümlerine yönelik 6 önermeden oluşan işletme performansı ölçeğidir.

3.2. Kapsam ve Kısıtlar

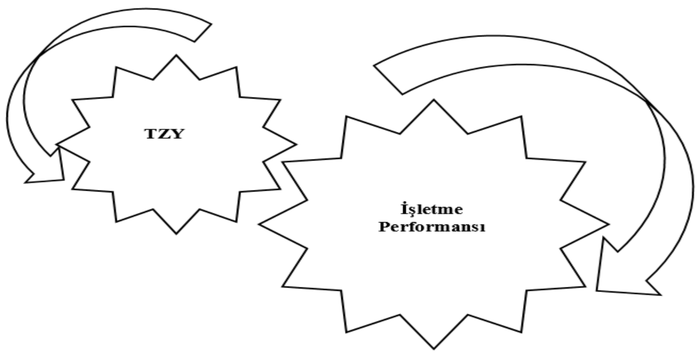
Araştırmanın kapsamını, gıda işletmelerinde uygulanan TZY'nin işletme performansı üzerindeki etkisinin incelenmesi oluşturmaktadır. Birçok bilimsel çalışmada olduğu gibi, bu çalışmada da bir takım kısıtlar mevcuttur. Öncelikle bu araştırma Ankara ili OSB'de faaliyet gösteren gıda işletmelerinde gerçekleştirildiği için sonuçlar daha çok bu ilde yer alan işletmeler için genelleştirilebilir. Dolayısıyla gelecekte araştırma konusuyla ilgili çalışmaların başka illerde de tekrarlanması karşılaştırmaların yapılabilmesi ve genelleştirilebilme açısından önemlidir. Çalışmanın bir diğer kısıtı ise, araştırma kapsamında yer alan ilde gerçekleştirilen analizlerin örneklem çerçevesi ile sınırlı olmasıdır. Bu nedenle benzer araştırmaların farklı örneklemler üzerinde yapılması faydalı olacaktır.

3.3. Araştırmanın Yöntemi

Bu araştırmanın ana materyalini, Ankara ilinde faaliyet gösteren 90 gıda işletmesinden anket yöntemi elde edilen birincil nitelikteki veriler oluşturmaktadır. Çalışmada zaman, maliyet ve ulaşma güçlükleri nedeniyle kolayda örneklem metodu tercih edilmiştir. Kolayda örnekleme yönteminde veriler, ana kütleden en kolay, hızlı ve ekonomik şekilde toplabilmektedir (Aaker vd., 2007; Onurlubaş ve Altunışık, 2019). Araştırmada kullanılan ölçeklerin yapı geçerliliğinin belirlenmesinde açıklayıcı faktör analizi kullanılmıştır. Faktör analizinden önce, örnek alınan kütlenin yeterliliğini ve verilerin uygunluğunu test etmek için Kaiser- Meyer-Olkin (KMO) ve Bartlett's küresellik testi yapılmıştır. Açıklayıcı faktör analizi ile oluşturulan faktörlerde, rotasyon yöntemi olarak Varimax Yöntemi tercih edilmiştir. Değişkenler arasındaki ilişkilerin yönünü ve şiddetini test etmek amacıyla korelasyon analizi; değişkenler arasındaki nedensellik ilişkilerini test etmek amacıyla ise regresyon analizleri uygulanmıştır. TZY'nin işletme performansı üzerindeki etkisini tespit etmek için basit regresyon analizi, TZY'nin alt boyutlarının işletme performansı üzerindeki etkisini tespit etmek için ise çoklu regresyon analizi yapılmıştır. Elde edilen veriler SPSS 21.0 istatistiksel paket programı yardımıyla analiz edilmiştir.

Araştırmanın kavramsal modeli Şekil 1'de gösterilmiştir. Modelin bağımsız değişkeni gıda işletmelerinde uygulanan TZY'dir. Bağımlı değişken ise işletme performansıdır.

Şekil 1: Araştırmanın Kavramsal Modeli



Yukarıdaki şekle göre, TZY'nin meydana getiren unsurlar işletme performansını etkilemektedir. Çalışmanın amacı da; gıda işletmelerinde uygulanan TZY'nin bu işletmelerin işletme performansına etkilerini ölçmektir.

Araştırmanın hipotezleri şu şekilde belirlenmiştir:

H_1: TZY ile işletme performansı arasında anlamlı bir ilişki vardır.

H_2: TZY'nin alt boyutları ile işletme performansı arasında anlamlı bir ilişki vardır.

H_3: TZY'nin işletme performansı üzerinde pozitif yönde etkisi vardır.

H_4: TZY'nin alt boyutlarının işletme performansı üzerinde pozitif yönde etkisi vardır.

4. ARAŞTIRMANIN BULGULARI

4.1. Betimleyici İstatistik Analiz Sonuçları

Araştırmaya katılanların %80'ini erkek, %20'ini ise kadın katılımcılar oluşturmaktadır. Katılımcıların %10'unun 20 yaş ve altı, %29.2'sinin 21-30, %35.8'inin 31-40, %25'inin ise 41-50 yaşları arasında oldukları tespit edilmiştir. Katılımcıların %52.9'u üniversite mezunu, %40.6'sı ortaöğretim mezunu ve %6.5'i ise ilköğretim mezunudur. Departmanları ise, %8'i lojistik, %12.3'ü Ar-Ge, %17.5'i satın alma, %14.8'i satış/pazarlama, %19.3'ü tedarik zinciri, %25.6'sı üretim ve %2.5'i ise yönetim departmanlarında görev yapmaktadır. İşletmedeki pozisyonlarına bakıldığında %20.6'sının işletme sahibi, %10'u genel müdür, %16.1'i genel müdür yardımcısı, %32.8'i departman müdürü ve %20.5'i departman müdür yardımcılarından oluşmaktadır. Çalışma süreleri değerlendirildiğinde ise, %6.4'ünün 1-3 yıl arası, %12.9'unun 4-7 yıl arası, %48.6'sının 8-12 yıl arası ve %32.1'inin ise 12-20 yıl arası meslek deneyimine olduğu görülmektedir. Anket yapılan işletmelerin %20'si 1990 yılı ve öncesinde, %25.2'si 1991-2000 yılları arasında ve %54.8'i 2001 yılı ve sonrasında kurulmuştur. Bu işletmelerin %57.6'sı 1-249 ve %42.4'ü ise 250 ve üstü personel çalıştırmaktadır. İşletmelerin %60'ı bölgesel, %40'ı ise uluslararası pazarlarda faaliyet göstermektedir.

4.2. Faktör ve Güvenilirlik Analizleri

Tablo 1'de görüldüğü gibi, araştırma kapsamında katılımcılara yöneltilen TZY uygulamalarını ölçmeye yönelik ifadelere faktör analizi uygulanmıştır. Analiz neticesinde, KMO örneklem yeterlilik katsayısı 0.879 olarak bulunmuştur. Kaiser (1974), KMO testi ile ilgili olarak 0.50'den düşük değerlerin kabul edilemeyeceğini, 0.50-0.60 arasındaki değerlerin kötü, 0.60-0.70 arasındaki değerlerin zayıf, 0.70-0.80 arasındaki değerlerin iyi, 0.90'dan büyük değerlerin ise mükemmel olduğunu ifade etmiştir. Bu çalışmada KMO değerinin (0.879) kabul edilebilir aralıkta olması, örneklemin faktör analizi için yeterli olduğunu göstermektedir. Bartlett'in küresellik testinde ise anlamlılığın $p<0.000$ olması, değişkenler arasında anlamlı düzeyde yüksek ilişki bulunduğunu ve verilerin faktör analizi için uygunluğunu teyit etmektedir. Analiz neticesinde TZY uygulamalarını belirlemeye yönelik 14 ifadenin de faktör yüklerinin, 0.50'nin üzerinde olduğu görülmüştür. TZY ölçeğine uygulanan faktör analizi sonucunda toplam varyansın %42.66'sını açıklayan altı boyutlu (bilgi paylaşımı, satın alma, erteleme, müşteri ilişkileri yönetimi, depolama ve stratejik tedarikçi ortaklığı) bir yapı elde edilmiştir. Bu yapılara ilişkin maddelerin faktör yüklerinin birinci faktörde 0.856 ile 0.858, ikinci faktörde 0.856 ile 0.857, üçüncü faktörde 0.843 ile 0.845, dördüncü faktörde 0.813 ile 0.814, beşinci faktörde 0.715 ile 0.813 ve altıncı faktörde ise 0.750 ile 0.800 arasında değiştiği görülmektedir. Araştırmada kullanılan tüm ölçeklerin güvenilirlikleri bir ölçeğin içerdiği maddelerin birbiriyle ne ölçüde tutarlı olduğunu gösteren Cronbach's alpha testi ile sorgulanmıştır (Kline, 2005). Cronbach's alpha değerleri ise şu şekildedir; birinci faktör için 0.641; ikinci faktör için 0.633; üçüncü faktör için 0.512, dördüncü faktör için 0.610, beşinci faktör için 0.739 ve altıncı faktör için ise 0.614'dür. Ölçeğin toplam Cronbach's alpha güvenilirlik katsayısı ise 0.895 olarak hesaplanmıştır.

Tablo 1: Tedarik Zinciri Yönetimi Faktör Analizi

Faktör ve İfadeler	Faktör yükü	Cronbach's alfa
Faktör 1: Bilgi Paylaşımı		
Tedarikçilerle çeşitli düzeylerde bilgi iletişimi kurulmaktadır.	0.858	0.641
Tedarikçilerle aramızdaki bilgi alışverişi tamdır ve güvenilirdir.	0.856	
Faktör 2: Satın Alma		
Tedarikçiler firma ile ilgili maliyet azaltma programlarına dahil olmaktadırlar.	0.857	0.633
Tedarik edilen ürünün toplam teslimat maliyetini azaltmak için uygulanan maliyet indirme programlarına taşıyıcılarda dâhil edilir.	0.856	
Faktör 3: Erteleme		
Siparişlerde erteleme gerçekleşmemesi için gerekli planlamaları yaparız.	0.845	0.512
Siparişlere anında cevap vermek için çaba gösteririz.	0.843	
Faktör 4: Müşteri İlişkileri Yönetimi		
Ürün ve müşteri hizmetleri hakkında geri bildirim sağlanır.	0.814	0.610
Müşteri memnuniyetini sıklıkla ölçer ve değerlendiririz.	0.813	
Faktör 5: Depolama		
Depolama faaliyetlerini planlı bir şekilde yürütmekteyiz.	0.813	0.739
Ürünlerimiz uygun depolama koşullarında muhafaza edilmektedir.	0.724	
Depolama faaliyetlerinde ekonomikliği göz önünde bulundururuz.	0.715	
Faktör 6: Stratejik Tedarikçi Ortaklığı		
Tedarikçilerle ilişkilerimiz uzun vadelidir, aramızda daimi bir ilişki vardır.	0.800	0.614
Planlama ve hedef belirleme faaliyetlerimize önemli tedarikçilerimizi katılımını sağlarız.	0.750	
Tedarikçilerle ortak hedef ve stratejiler belirlenmektedir.	0.788	
Açıklanan Toplam Varyans (%)	42.657	
Toplam Cronbach's Alpha Güvenirlik Katsayısı	0.895	
Kaiser-Meyer-Olkin (KMO)	0.879	
Bartlett' Test of Sphericity	X^2= 460.962 (p<0.000)	

Tablo 2'de, işletme performansını ölçmeye yönelik ifadelere faktör analizi uygulanmıştır. Analiz neticesinde, KMO örneklem yeterlilik katsayısı 0.892 olarak bulunmuştur. Bu değer örneklemin faktör analizi için yeterli olduğunu göstermektedir. İşletme performansı ölçeğindeki 6 ifade tek boyut altında toplanmış ve toplam varyansı açıklama oranı ise %69.16'dır. Ölçeğin Cronbach's Alpha güvenilirlik katsayısı ise 0.910 olarak hesaplanmıştır.

Tablo 2: İşletme Performansı Faktör Analizi

Faktör ve İfadeler	Faktör yükleri
İşletme Performansı	
Ürün ve hizmet kalitesi yükselmektedir.	.888
Müşteri memnuniyeti seviyesi yükselmektedir.	.852
İşletmenin pazar payı artış göstermektedir.	.847
İşletmenin satılan mallarının teslimat süresi kısalmaktadır.	.807
İşletmenin satışları artış göstermektedir.	.801
İşletmenin maliyetleri düşmektedir.	.791
Varyansın açıklanma oranı (%)	69.162
Cronbach's Alpha katsayısı	0.910
Kaiser-Meyer-Olkin (KMO)	0.892
Bartlett' Test of Sphericity	X^2= 329.024 (p<0.000)

4.3. Korelasyon Analizi Sonuçları

Regresyon analizlerinden önce korelasyon analizleri yapılarak, değişkenler arasındaki ilişkilerin yönü ve şiddeti belirlenmek istenilmiştir. Araştırma modelinde yer alan değişkenlere ait ortalamalar ve korelasyon sonuçları Tablo 3'de verilmiştir.

Tablo 3: Ortalamalar ve Değişkenler Arası Korelâsyon Değerleri

	BP	SA	ER	MİY	D	STO	TZY	İŞPER
BP	1							
SA	.529**	1						
ER	.566**	.479**	1					
MİY	.621**	.529**	.433**	1				
D	.542**	.601**	.576**	.552**	1			
STO	.683**	.464**	.608**	.649**	.516**	1		
TZY	.822**	.750**	.750**	.792**	.815**	.829**	1	
İŞPER	.545**	.799**	.618**	.599**	.872**	.549**	.843**	1
Ort.	4.27	4.25	4.31	4.32	4.21	4.33	4.28	4.06
St. Sapma	0.85	0.82	0.68	0.82	0.76	0.69	0.61	0.98

**. Correlation is significant at the 0.01 level (2-tailed).

Bilgi Paylaşımı (BP); Satın Alma (SA); Erteleme (ER); Müşteri İlişkileri Yönetimi (MİY); Depolama (D); Stratejik Tedarikçi Ortaklığı (STO); Tedarik Zinciri Yönetimi (TZY); İşletme Performansı (İŞPER).

Araştırmaya dahil edilen değişkenlerin ortalamaları ve korelasyon analizi sonuçları Tablo 3'de gösterilmektedir. Korelasyon değerleri için, 0.00-0.25 ise çok zayıf, 0.26-0.49 ise zayıf, 0.50-0.69 ise orta, 0.70-0.89 ise yüksek, 0.90-1.00 ise çok yüksek düzeyde ilişkinin olduğu kabul edilir (Kalaycı, 2014: 99-125). Bu değer aralıklarına göre, TZY (tüm alt boyutlar dahil edildiğinde) ile işletme performansı arasındaki ilişkinin yüksek düzeyde ve pozitif yönlü bir ilişki olduğu görülmektedir (r= 0.843; p< 0.01). Dolayısıyla H_1 hipotezi kabul edilmiştir. TZY'nin BP (r= 0.545; p< 0.01), ER (r= 0.618; p< 0.01), MİY (r= 0.599; p< 0.01) ve STO (r= 0.549; p< 0.01) alt boyutları ile işletme performansı arasındaki ilişkilerin pozitif yönde ve orta düzeyde bir ilişki olduğu saptanmıştır. TZY'nin SA (r= 0.799; p< 0.01) ve D (r= 0.872; p< 0.01) alt boyutları ile işletme performansı arasında ise pozitif yönde ve yüksek düzeyde bir ilişki tespit edilmiştir. Elde edilen bu sonuçlar ışığında "TZY'nin alt boyutları ile işletme performansı arasında anlamlı bir ilişki vardır." ifadesinin yer aldığı H_2 hipotezi kabul edilmektedir.

4.4. Regresyon Analizi Sonuçları

Araştırmada değişkenler arasındaki ilişki korelasyon analiziyle ölçüldükten sonra ilişkilerin nedenselliğini incelemek amacıyla basit ve çoklu regresyon analizleri yapılmıştır.

Tablo 4: Tedarik Zinciri Yönetiminin İşletme Performansı Üzerindeki Etkisi

Model	İşletme Performansı						
	B	Β	R^2	Düzeltilmiş R^2	F	t	p
(Constant)	0.320					1.155	0.251
TZY	0.914	0.843	0.710	0.707	203.594	14.269	0.000

Bağımlı Değişken: İşletme Performansı

Tablo 4'de TZY'nin işletme performansı üzerindeki etkisini araştırmak üzere yapılan basit regresyon analizi sonuçları istatistiksel olarak anlamlı bulunmuştur (F=203.594; p<0.001). TZY işletme performansı düzeyinin %71'ini açıklamaktadır. Beta katsayısına baktığımızda ise; işletme performansı düzeyini açıklamada TZY'nin (β= 0.843; p<0.001) anlamlı katkısının olduğu gözlenmektedir. H_3 hipotezi kabul edilmiştir.

T**ablo 5: Tedarik Zinciri Yönetiminin Alt Boyutlarının İşletme Performansı Üzerindeki Etkisi**

Model	İşletme Performansı					
	B	β	t	p	Collinearity (Eşdoğrusallık)	
					Tolerans	**VIF**
(Constant)	0.295		1.590	.116		
Bilgi Paylaşımı	-.077	-.099	-1.715	.090	.430	2.326
Satın Alma	.333	**.413**	8.126	**.000**	.554	1.806
Erteleme	.104	**.107**	2.012	**.048**	.509	1.966
Müşteri İlişkileri Yönetimi	.056	.069	1.243	.218	.461	2.169
Depolama	.490	**.566**	10.447	**.000**	.486	2.057
Stratejik Tedarikçi Ortaklığı	.022	.023	.378	.707	.396	2.528
R^2	0.889					
Düzeltilmiş R^2	**0.880**					
Durbin-Watson	2.181					
F	103.834					

Bağımlı Değişken: İşletme Performansı

Tablo 5'te TZY'nin alt boyutlarının (bilgi paylaşımı, satın alma, erteleme, müşteri ilişkileri yönetimi, depolama ve stratejik tedarikçi ortaklığı) işletme performansı üzerindeki etkisini araştırmak üzere yapılan çoklu regresyon analizi sonuçları istatistiksel olarak anlamlı bulunmuştur (F=103.834; p<0.001). Araştırma modelindeki değişkenler arasında çoklu doğrusal bağlantı sorunu olup olmadığını saptamak amacıyla doğrudaşlığa - eşdoğrusallık (collinearity) da bakılmıştır. Elde edilen VIF değerinin 10'un altında, tolerans değerinin de 0.2'nin üstünde olması çoklu bağlantı probleminin olmadığını göstermektedir (Field, 2009). TZY'nin alt boyutları işletme performansının %88'ini açıklamaktadır. Beta katsayılarına bakıldığında ise; tüm bağımsız değişkenler regresyon modeline dahil edildiğinde işletme performansı üzerinde satın almanın (β= 0.413; p< 0.05), ertelemenin (β= 0.107; p< 0.05) ve depolamanın (β= 0.566; p< 0.05) anlamlı bir etkisinin olduğu anlaşılmaktadır. En yüksek Beta değerine sahip olan değişken, göreli olarak en önemli değişkendir (Kalaycı, 2009). Bu bağlamda depolama değişkeninin işletme performansı üzerinde en yüksek etkiye sahip değişken olduğu gözlemlenmektedir. Elde edilen bu sonuçlar ışığında H_4 hipotezinin kısmen kabul edildiği söylenebilir.

5. SONUÇ VE ÖNERİLER

Bu araştırmada gıda sektöründe uygulanan TZY'nin işletme performansına etkileri incelenmiştir. Elde edilen veriler üzerinden öncelikle betimsel analizler ve sonrasında ise araştırmanın konusunu oluşturan değişkenler arasındaki ilişkiyi belirlemek için regresyon analizleri kullanılmıştır. Regresyon analizleri yapılmadan önce değişkenler arasındaki ilişkilerin yönünü ve büyüklüğünü test etmek için Pearson Korelasyon analizi yapılmıştır. Korelasyon analizi sonucuna göre; TZY'nin bilgi paylaşımı, erteleme, müşteri ilişkileri yönetimi ve stratejik tedarikçi ortaklığı alt boyutları ile işletme performansı arasında pozitif yönde ve orta düzeyde; TZY'nin satın alma ve depolama alt boyutları ile işletme performansı arasında ise pozitif yönde ve yüksek düzeyde anlamlı bir ilişki olduğu görülmüştür. Bir sonraki aşamada regresyon analizleri ile TZY'nin işletme performansı üzerindeki etkileri araştırılmıştır. Basit doğrusal regresyon analizi sonucuna göre, TZY'nin işletme performansı üzerinde pozitif bir etkisinin olduğu saptanmıştır. TZY'nin alt boyutları ile işletme performansı arasındaki nedensellik ilişkisinin incelenmesi için çoklu regresyon analizi gerçekleştirilmiştir.

İşletme performansı üzerinde en yüksek etkiye sahip olan değişkenin depolama olduğu tespit edilmiştir. Gıda zincirinin önemli basamaklarından biri olan depolama, nihai ürününün kalitesinin korunmasında ve sağlıklı bir şekilde tüketiciye ulaştırılmasında son derece önemlidir. Depolama faaliyetlerinin etkin bir şekilde yürütülmesi müşteri memnuniyeti seviyesinin yükselmesine ve dolayısıyla işletmenin pazar payının artmasına olumlu bir etki yaratacaktır. Araştırmadan ortaya çıkan sonuçlardan biri de satın alma ve erteleme faaliyetlerinin gıda sektöründe işletme performansı üzerinde önemli bir etkisinin olduğu tespit edilmiştir. Satın alma yönetimi, işletmelere maliyet avantajı sağladığı için TZY'nin önemli bir parçası konumundadır. Etkin bir satın almanın gerçekleştirilebilmesi için, doğru tedarikçilerle çalışılmasının yanında tedarikçi performanslarının da uygun kriterlere göre değerlendirilmesi gerekmektedir. Ancak bu sayede satın alma fonksiyonu maliyetlerde önemli düşüşler sağlayarak işletmenin satış marjını artırabilecektir. Erteleme stratejisi, ürün çeşitliliğinin yüksek ve ürün yaşam eğrisinin kısa olduğu gıda sektöründeki firmalar için ayrı bir önem taşımaktadır. Dolayısıyla, gıda işletmelerinin araştırmadan ortaya çıkan sonuçları bu anlamda değerlendirmeleri ve etkili stratejiler geliştirmeleri performanslarını arttırmalarında önemli katkılar sağlayacaktır.

Bu çalışmanın Ankara ilinde faaliyet gösteren 7 OSB'de gıda sektöründeki; et ve et ürünleri, süt ve süt ürünleri, şeker ve şekerli mamuller, un ve unlu mamuller, bitkisel yağ, meyve-sebze işleme sektöründeki 115 işletme içerisinden kolayda örnekleme metodu ile seçilmiş 90 işletmeden oluşması önemli bir kısıttır. Bu araştırmanın ileride yapılacak çalışmalar için bir yol gösterici nitelik taşıdığına inanılmaktadır. Gelecekte yapılacak çalışmalarda farklı illerde daha geniş örneklem grupları kullanılarak sonuçların karşılaştırılması yoluyla yöneticilere destek sağlanabilir.

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PressAcademia
www.pressacademia.org/journals/rjbm
RJBM
ISSN 2148-6689
Research Journal of Business and Management YEAR 2020 VOLUME 7 ISSUE 2

A NEW APPROACH THAT PROPOSES TRIZ AS A CREATIVE PROBLEM SOLVING TECHNIQUE IN HEALTH SERVICES

DOI: 10.17261/Pressacademia.2020.1200
RJBM-V.7-ISS.2-2020(2)-p.67-79

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Date Received: March 3, 2020 **Date Accepted:** June 2, 2020

To cite this document
Guner,S., Kose, I., (2020). A new approach that proposes TRIZ as a creative problem solving technique in health services. Research Journal of Business and Management (RJBM), V.7(2), p.67-79.
Permanent link to this document: http://doi.org/10.17261/Pressacademia.2020.1200

ABSTRACT
Purpose- The aim of this study is to produce a new solution matrix to develop innovative solutions for the problems encountered during the delivery of health services and to present a methodology on how to use TRIZ in health services.
Methodology- In this study, contradiction matrix, 40 principles and IFR-idealism philosophy, which are among the basic TRIZ paradigms, were used in the process of presenting innovative solutions. One of the Pairwise Comparison methods AHP (Analytical hierarchy process) was used when parameter matching.
Findings- As a result of the study, a new matrix and methodology has been developed.
Conclusion- Although TRIZ is a very famous problem-solving method, there are only a few studies that use TRIZ to improve service quality in healthcare. This study proposes a new framework for TRIZ's use in healthcare and will serve as a guide for researchers working in this field. Healthcare providers will be able to develop innovative solutions to the problems they encounter by using the 16X16 solution matrix developed as a result of this study and following the methodology proposed as a result of this study.

Keywords: TRIZ, contradiction matrix, innovation management, quality in health services
JEL Codes: I19, L21, M10

1. INTRODUCTION

Companies are trying to produce new ideas and develop creative solutions to their problems by using various methods. While other creative thinking techniques, such as brainstorming, lateral thinking and SCAMMER technique are planned to solve the intellectual inertia, the TRIZ offers solutions based on contradictions to the problems. Although it has high acceptance in the technical domain, TRIZ is not so prevalent in the service domain. This study proposes a novel solution matrix (one of the TRIZ methods) by matching the contradiction matrix with the quality parameters of the service sector (here, the healthcare sector) and presents a methodology on how to use TRIZ in the service domain. In this study, firstly, we matched the health service quality criteria and the parameters (which are the columns and lines of the TRIZ's contradiction matrix) by using binary comparison method and the 16x16 matrix was obtained. Then, we applied the brainstorming method to gather the problems and selected the technical ones. During the solution of these problems, their improving and deteriorating features were found so that we determined their appropriate cell in the 16x16 matrix. The methods that solve our problem have been determined by taking into consideration the TRIZ solution principles that correspond to these cells and are located in the cells of the original 39x39 contradiction matrix of TRIZ. By showing that the problems in our problem pool can be solved, we suggested that the proposed 16x16 matrix can be used in the service sector in general and the health service sector in particular. This study is one of the few studies in the literature using TRIZ in the service sector. By following the proposed methodology, the health service providers will be able to gather and eliminate the problems, and then generate innovative solutions for the technical ones. The contradiction matrix that is proposed in this study will be a good starting point for researchers to obtain a better solution for the service sector with further studies.

Our article consists of four parts; In order to emphasize the importance and benefits of the TRIZ method, which is the subject of our study in the literature review section, previous studies are included and comparisons of the methods commonly used in quality improvement in the service sector are presented. In the following, the data collection and matrix development stages of our study are given in detail and the methods applied are explained; In the last section, the results are discussed and inferences are made and ideas are presented about the future studies.

2. LITERATURE REVIEW

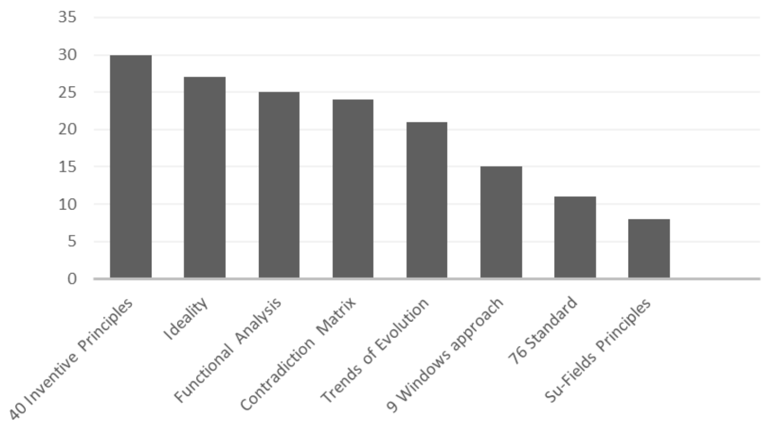
2.1. TRIZ

The abbreviation TRIZ consists of the initials of the words "Teoriya Resheniya Izobreatatelskikh Zadatch" (Creative Problem Solving Theory), which is referred to as "теория решения изобретательских задач" in Russian. It is creative problem-solving techniques that were developed by Genrich Saulovich Altshuller, who was an engineer and worked as a patent officer in the Soviet Union in 1946 (Genrikh Saulovich Altshuller, 1984). Altshuller, who is known as the father of TRIZ methods, realized that in the patent applications he studied while working as a patent specialist, the idea put forward as a new invention, was formed as a result of repeating basically similar main themes with different names in different fields and started to investigate patents (Salamatov, 1999). In his study on more than 200.000 patent applications, he proved that there are 1500 technical contradictions that can be solved by applying basic principles (Pala and Srikant, 2005). He observed that only 40,000 of the patents he examined had creative solutions, while the rest appeared as a result of repeating previously existing ideas or inventions in different fields of application. As a result of the 2.5 million patents it has examined, it has been shown that a problem encountered in one sector and a lot of time and money spent on its solution is basically similar to the problems encountered in another sector. Generalizing the principles on which the inventions are based, we have made 39 parameters by generalizing them for the use of each sector and created a problem solving matrix from these parameters. Another point that attracted the attention of Altshuller as a result of the studies he examined; The proposed methods for the solution of the problems are a new problem and this situation contains contradictions. In short, each idea presented as a new solution has another problem. each solution creates its problem. The important thing is to be able to predict the results of the reaction that may occur against the action effect and to prepare solution measures accordingly. This is one of the most important features of TRIZ that distinguishes it from other creative problem solving techniques. TRIZ detects contradictory situations in problems and offers solutions to these problems through contradictory. For example; We want the table we produce to be strong, but the materials we use to ensure this stability cause the table we produce to be heavy and it is undesirable to have the table heavy. As another example; We want to reduce their workloads to increase personnel efficiency, and if we consider recruiting new personnel to provide this situation as a solution, this causes an unwanted situation such as cost. As can be seen from the examples that can be increased further, it is very difficult to produce an absolute beneficial solution method, each solution proposal reveals its contradictory situations. TRIZ, on the other hand, offers systematic solution suggestions over contradictory situations. TRIZ does not decide instead of decision maker, it guides the decision maker. Although these methods are mostly used for solving problems in technical fields, TRIZ parameters and principles are used in social and commercial fields such as non-technical policy, politics, marketing, and business management in recent years (Altuntaş Serkan and Yener, 2012). Thanks to the systematic solution offer offered by TRIZ, anyone who receives this training can produce effective innovative solutions in their field.

2.1.1 Basic TRIZ Tools and Methods

TRIZ is not a single method, it is a collection of methods that contains many methods and to generate systematic ideas (Chechurin and Borgianni, 2016)). While some of the TRIZ methods are aimed at solving existing problems, some of them are about the future. Although there are many books and articles about TRIZ today, there is no publication where all TRIZ methods are collected and included. Although Altshuller, the creator and developer of TRIZ, presented TRIZ methods in his publication "About A Technology of Creativity" published with Shapiro, all methods are not included because of today's TRIZ methods are not included in that source (G.S. Altshuller and Shapiro, 1956). According to Valeri, it is very difficult to collect all the methods of modern TRIZ in a single book. Ilevbare et al. (Ilevbare, Probert and Phaal, 2013) He sent a survey to 40 TRIZ experts around the world to measure the use of TRIZ in practice. According to the survey results; the most common TRIZ method is "40 Inventive Principles". The frequency of use of TRIZ tools is given below (Figure 1).

Figure 1: Frequency of Use of Agricultural Tools According to the Survey Results (Ilevbare et al., 2013)



If we examine the data in Figure 1 as a percentage (%), we reach the results in Table 1. According to these rates, more than 70% of TRIZ users use the principles of the invention and ideal, while 50-69% use the function analysis and contradiction matrix in creative problem solving.

Table 1: Percentage of Use of TRIZ Methods

TRIZ Users%	TRIZ Tools
>%70	40 Principle of Invention Principle of Ideality
%50- %69	Function Analysis 39X39 Conflict Matrix
<%50	9 Window Approach 76 Standard Su-Field Analysis ARIZ

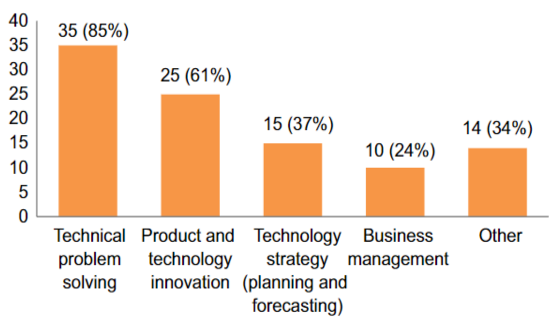
In the later stages of our study, "40 Inventive Principles", "39X39 Contradiction Matrix" and "Ideality" methods were used.

2.2. Sectors Benefiting from TRIZ

In an ever-evolving and changing global world, businesses aim to continue their existence and gain superiority in competition. In order to achieve these goals, they have to meet customer expectations and even provide products or services that exceed expectations. In order to meet the expectations of customers who expect low cost and high quality of the products or services they receive, businesses are required to design their business processes close to perfection, to follow innovations, and to provide high quality products and services by quickly finding solutions to their problems. Considering these objectives of companies, TRIZ feature, which emphasizes creativity and innovation, is thought to be a necessary method for companies to produce high quality and low cost ideal products or services (Şener, 2006).

Nowadays, many big companies that are aware of the advantages of TRIZ in practice now give TRIZ training to their employees in recruitment and wait for their implementation in business processes (Kaya, 2017). The effectiveness and benefits of TRIZ method in practice have been demonstrated by many studies (Altuntaş Serkan and Yener, 2012; Chechurin, 2016; Durgun and Doruk, 2015; Fiorineschi, Frillici, and Rotini, 2018; LariSemnani, Mohebbi Far, Shalipoor and Mohseni, 2015; Li, Atherton and Harrison, 2014; Mishra, 2013). Although TRIZ methodology has been applied with different plugins in different sectors, its use in the service sector is not common compared to other sectors (Ilevbare et al., 2013). In 2013, they asked 40 TRIZ professionals around the world in which areas they benefited from TRIZ to measure the use of TRIZ. While 85% of TRIZ professionals stated that they implemented TRIZ in technology, only 24% stated that they used TRIZ in areas requiring management and strategy (Figure 2).

Figure 2: The areas where TRIZ is used most frequently (Ilevbare et al., 2013)



2.3. Quality in Health Services Sector

The concept of quality comes from the Latin word "quality" which is translated as "how it was formed". As it is understood from this meaning, quality is used to determine how and how a product or service occurs. Quality is a dynamic process. In other words, a product or service called quality today may be considered poor quality in the future. In this respect, quality can also be defined as suitability in time (Duran, 2011). Quality, which is open to continuous improvement, includes the goal of exceeding these expectations beyond meeting customer needs and expectations (Çelik, 2018). The concept of quality; "It is used to express the difference, suitability and usability of the product or service that changes and develops over time (Gürbüz, 2014). The main goal of the enterprises is to meet the expectations of the service they provide to the customer and even exceed this expectation.

The most important feature of the healthcare sector that distinguishes it from other service sectors is that a possible mistake can cause an inability to work, to spend the remaining life of the patient in poor quality and even to the loss of human life. Working with 'zero error', which is one of the basic principles of the concept of quality, is much more important in the health sector. For all these reasons, the concept of quality service becomes more and more specialized in the healthcare sector. Problem solving and innovation management methods play an important role in improving the quality of health. For this reason, almost every method developed in business science has been applied in health institutions that offer a very complex and information-intensive service in a short time, and sometimes these methods have been adapted to the special needs of health institutions.

2.3.1. Problem Solving Methods Used in Quality Studies in Health

2.3.1.1. Lean Hospital and Healthcare Quality

Lean management model "How do we realize the cheapest and error-free production with the least resources, in the shortest time possible, with the least amount of waste and the most flexible use of all production factors, to respond to customer demand? " It is a process improvement model that emerged as a result of the answer to the question (Aytaç, 2009). The lean management approach includes labor, equipment, time, etc. it adopts to avoid waste of any kind by including waste of resources, to eliminate works without added value or to minimize the resources spent for these jobs and to design a new process in which resources are directed to jobs that will create more value (Shannon et al., 2006). The first use of the lean management model in health services dates back to the 2000s. For the first time in American health care system in England and applied lean hospital model was introduced in Turkey in recent years. In addition to its new use in the health system of our country, it is becoming more and more widespread (İlkim and Derin, 2016). The digitalization of the health system in various fields such as requesting tests online, switching to an electronic system in prescriptions, electronic appointment system can be seen as the macro-sized applications of lean management in the health system. Simple and macro-level lean practices are used in various subjects such as preventing the increasing costs in health, ensuring patient and personnel satisfaction, preventing waste, and increasing the quality of service provision (Güleryüz, 2012). The activities that do not add value to the treatment process of the patient are determined and the resources spent on these activities are transferred to other activities that are expected to provide added value.

2.3.1.2. 6 Sigma and Quality in Health

The 6 Sigma approach is a strategic quality improvement method designed by a US company that wants to gain an advantage in competition against Japanese products in 1985 (Bircan and Köse, 2012). This method first emerged as tools and techniques designed to detect and eliminate errors encountered in production processes and work with high efficiency. After its effectiveness was noticed and developed, it became a method used in non-production processes by using it in various fields such as business, bank and insurance (Şener, 2006). The basis of this approach is to ensure customer satisfaction by increasing quality. In statistics, sigma represents distance from the mean (standard deviation), while 6 Sigma represents below average deviation (Şener, 2006). Aiming for perfection, this method allows only 3.4 errors per million.

3.4 million per million error, which is the statistical equivalent of the 6 Sigma approach, means that the company that adopts this approach works close to zero error. The information that a business is operating with a 1% error may be perceived as a low rate in the first place, but the low or high number of errors varies according to the field of the business. For example, in a health institution where 400 operations are performed per day, the knowledge that it works with a 1% error rate means that 4 patients die every day. Health institutions should work with "zero error". That the quality of processes in health institutions is at 6 Sigma level means that the error rate is close to zero. Although the practices of this approach in the health sector are later than other sectors, in recent years, many institutions have been using the 6 Sigma method to improve the quality of health services. 6 Sigma application in health sector; It is used in many areas such as reducing the length of hospital stay of patients, detecting and correcting errors during invoicing, errors in drug use, correction in payment periods, improving quality, ensuring personnel efficiency, organizing patients. It is aimed to reduce the error rates and increase the quality in this way (Bircan and Köse, 2012; Coskun, Unsal, Serteser and Inal, 2010; Deniz, Staub and Çimen, 2016; Kuşçu et al., 2018; Özveri and Çakır, 2012; Yıldız, 2018).

2.3.1.3. Use of TRIZ in Health Care Services

Methods such as six sigma, lean hospital are used more frequently in quality improvement studies in health services. When the literature is analyzed, only 3 publications using TRIZ were found in quality improvement studies in health services (Altuntaş Serkan & Yener, 2012; LariSemnani et al., 2015; Lin, Chen, & Chen, 2012). In these studies, they took a result-oriented approach instead of a method proposal and did not offer a fully functional matrix proposal. Few studies have focused on improving TRIZ healthcare quality. These studies are given below.

In the study of Shu-Ping et al. In 2012 (Lin et al., 2012), TRIZ parameters using the model proposed by Parasuraman (Parasuraman, Zeithaml, & Berry, 1985) and their friends to determine the themes to be improved in the service industry. They aimed to develop a new matrix by matching with. It is not mentioned in detail in the study what this matching is made or how it is tested. While doing this matching, they could not offer a complete matrix suggestion because they match some parameters with 1 and 2 with TRIZ parameters. In addition, they tried to develop a solution proposal by interpreting the 40 principles directed by their matching, not problem specific but in general. The basic usage principle of TRIZ is to place each problem into parameters by placing it in the TRIZ matrix and trying to improve it by examining the solution suggestions offered by the matrix in the intersection cell.

In another study conducted in 2015 (LariSemnani et al., 2015), they tried to use the TRIZ model to develop the necessary strategies to improve the quality of the services provided to patients. In fact, this study shows what is the priority in the quality aspect of care provided to patients. For this purpose, they used a survey method to collect information and applied surveys to 96 people in total. Service quality; they addressed in 5 dimensions: empathy, assurance, reliability, responsiveness and physical assets. A 31 x 31 matrix known as WIN-WIN was used to solve management problems with TRIZ. He measured the perceived and expected service quality for all 5 dimensions and reached the conclusion that the most deficit was seen in the "empathy" dimension. Later, they expressed each of these dimensions as a problem and placed them in the matrix and tried to provide general suggestions. But these solution suggestions do not improve once the problem is identified, but After determining the size, it is presented as general solution suggestions. They aimed to identify the 40 most repeated principles from the proposals of the TRIZ matrix. As a result of this study, it is not aimed to present a matrix or methodology proposal.

Also in another study conducted by Altuntaş and Yener (Altuntaş Serkan & Yener, 2012) in 2012; 10 service quality dimensions proposed by Parasuraman were discussed. These 10 service quality were matched with TRIZ parameters and 10 experts were asked whether they participated in this matching. Since 2 matches were not approved by half of the experts, they were discarded and a new matrix was introduced with the remaining 8 matches. However, in this study, it was not based on an explanation of what they did in the first match, and the experts were asked only their opinions against "1" matching. In this study, if more than 1 parameter was presented to the experts for each match, it is thought that a TRIZ parameter could be found for 2 dimensions excluded, thus the matrix could be more extensive.

3. DATA AND METHODOLOGY

This study was designed based on the question of how TRIZ method, which is frequently used in other sectors and has very beneficial results, can be used in health services. The final result we want to achieve is to propose a unique methodology and to develop a matrix suitable for use in the service industry. While doing this, efforts have been made to catch the method that TRIZ followed in the beginning. Our limit condition here is that we do not have too many problems. In this process, group decision-making methods and creative thinking techniques were used in appropriate places within our framework. The methodology that has emerged and suggested accordingly is given in Figure-3 below. Our work, which tries to identify the problems experienced in health services and to offer creative solutions to the detected problems, consists of 11 steps. While determining these steps, the methods in a case study conducted in 2008 to improve the quality of the e-commerce company were reviewed for improvement (Su, Lin and Chiang, 2008).

Figure 3: Implementation Steps of the Study

The objectives of the research are:

- To develop TRIZ matrix specific to the service sector,
- To develop a problem-solving methodology to identify problems and guide them through the TRIZ method,
- To test the methodology and functionality of the matrix with the studies to be carried out in a health institution.

- To provide solutions to these problems detected in the health institution together with the field experts with the activities to be carried out with TRIZ.

3.1. Selection of the Sector in Which the Study is Made and Determination of Areas and Dimensions in the Selected Sector

As the first step in this study; The sector to be included in the study is determined as "Health Services Sector". Afterwards, it is aimed to identify the areas that are planned to be improved in health services. Since improvement is planned in the field of "Quality in Health Services", a comprehensive literature study has been carried out to determine the quality dimensions in the service sector. When we examine the studies in the literature; it has been observed that different methods such as SERVQUAL and SERPERF, Gaps model, data attenuation analysis, critical event method and service barometer are used as the quality measurement model in the service sector (Tanrıyar, 2017). As a result of the researches, since the quality of service is considered in the model proposed by Parasuraman and his friends, the 10 parameters proposed by Parasuraman and his colleagues are planned to be handled in this study to make the study more comprehensive (Parasuraman et al., 1985). SERVQUAL scale is a widely accepted service quality measurement model developed in 1985 by Parasuraman et al. 10 quality parameters recommended by Parasuraman and friends; reliability, responsiveness, competence-competence, access, respect-courtesy, communication, credibility, security, empathy and physical assets.

3.2. Matrix Development

Although the parameters of TRIZ's 39x39 Conflict matrix are wide-ranging and suitable for use in all disciplines, the field they initially associate with is technical issues. A few of these parameters (For example, the use of composite materials) are quite difficult to encounter in the healthcare industry, which is the subject of our study. It is aimed to develop a new “TRIZ Quality Matrix in Service Sectors” to provide ease of use and guide people who will perform quality improvement work in the service sector. The purpose of developing the matrix; The determination of TRIZ parameters corresponding to 10 quality parameters (Parasuraman et al., 1985) recommended in the literature and accepted in the literature. In this way, a new matrix special to the service sector will be presented. During this determination, it is expected from the participating experts to determine which TRIZ parameter covers and meets the relevant quality parameter more. The scope of the parameters is well understood in accordance with the problem literature examples examined during the comprehensive literature review and TRIZ trainings. Thanks to this information history, screening was made considering which of the 39 parameters presented by the conflict matrix could correspond to the quality parameters. As a result of this elimination, minimum 3 and maximum 11 TRIZ parameters, which are considered to correspond to each quality parameter, were determined. While determining the participants to be included in the matrix development studies; The criteria of being a university graduate at least undergraduate level and having at least 5 years of work experience in the sector or having graduated from relevant management departments at the graduate level are taken into consideration. Comparisons to a total of 9 experts who met these criteria were presented with descriptions of each parameter. The participants were asked to score the table sent to them according to the multi-criteria decision making method. Multi-criteria decision making methods allow decision makers to evaluate the data more analytically and evaluate alternative options by taking many criteria into account (Kocakaya, 2009).

1.The pairwise comparison-AHP (Analytical Hierarchy Process) [Pairwise Comparison (Saaty, 2000)] matrix was prepared and the participants were expected to compare the parameters by sharing with the participants as an excel file (a total of 90 tables were formed as the comparisons of the 9 experts were evaluated for 10 parameters).

The steps after this stage were applied separately for each “quality parameter” through the evaluated comparison tables from the participants.

2.Geometric averages were calculated for binary comparison matrices of matrix filled by each specialist and then power weights were calculated for each comparison. It is normalized by dividing the values in each cell in the matrix by the column total.

3.The arithmetic mean of each line in the normalized matrix is calculated by weight. The results obtained here show the importance of weights for each criterion.

The consistency of the comparison between the criteria shows the accuracy of the result. For this reason, a consistency analysis was performed to determine whether the results of the comparisons were collected analytically consistently. The consistency rate (CR) is calculated by a formula developed by Saaty (Özkan, Kocaoğlu and Özkan, 2018; Saaty, 2000).

These calculations were made on all decision matrix responses (90 tables) from 9 experts for each quality parameter with a total number of 10. Replies from each expert, rather than performing the same operations for each table separately; It has been calculated and placed in the Excel spreadsheet whose formulas have already been entered. After determining that the results of our decision matrices are consistent, the "weights" of the matches in each matrix (each matrix represents 1 quality parameter) was examined. The parameters to be included in the new matrix to be developed were determined according to the "parameter weights" resulting from the analysis of the decision matrices. The parameter with the highest weight was added to the table by matching. In evaluation matrices, there are TRIZ parameters whose weight is the same as the quality parameter. In this case, both parameters that have the same weight without being selected among the parameters are included in the matrix. As a result of these processes, “TRIZ Quality Matrix in Service Sectors” has been developed (Table 2).

Table 2: TRIZ Quality Matrix in Service Sectors (Guner, 2019)

	2	9	14	15	19	24	25	28	29	30	31	33	36	37	38	39
2	+	-	28,2,10,27	-	-	10,15,35	10,20,35,26	18,26,28	10,1,35,17	2,19,22,37	35,22,1,39	6,13,1,32	1,10,26,39	25,28,17,15	2,26,35	1,28,15,35
9	-	+	8,3,26,14	3,19,35,5	8,15,35,38	13,26	-	28,32,1,24	10,28,32,25	1,28,35,23	2,24,35,21	32,28,13,12	10,28,4,34	3,34,27,16	10,18	-
14	40,26,27,1	8,13,26,14	+	27,3,26	19,35,10	-	29,3,28,10	3,27,16	3,27	18,35,37,1	15,35,22,2	32,40,25,2	2,13,25,28	27,3,15,40	15	29,35,10,14
15	-	3,35,5	27,3,10	+	28,6,35,18	10	20,10,28,18	3	3,27,16,40	22,15,33,28	21,39,16,22	12,27	10,4,29,15	19,29,39,35	6,1	35,17,14,19
19	-	8,15,35,	5,19,9,35	28,35,6,18	+	-	35,38,19,18	3,1,32	-	1,35,6,27	2,35,6	19,35	2,29,27,28	35,38	32,2	12,28,35
24	10,35,5	26,32	-	10	-	+	24,26,28,32	-	-	22,10,1	10,21,22	27,22	-	35,33	35	13,23,15
25	10,20,26,5	-	29,3,28,18	20,10,28,18	35,38,19,18	24,26,28,32	+	24,34,28,32	24,26,28,18	35,18,34	35,22,18,39	4,28,10,34	6,29	18,28,32,10	24,28,35,30	-
28	28,35,25,26	28,13,32,24	28,6,32	28,6,32	3,6,32	-	24,34,28,32	+	-	28,24,22,26	3,33,39,10	1,13,17,34	27,35,10,34	26,24,32,28	28,2,10,34	10,34,28,32
29	28,35,27,9	10,28,32	3,27	3,27,40	32,2	-	32,26,28,18	-	+	26,28,10,36	4,17,34,26	1,32,35,23	26,2,18	-	26,28,18,23	10,18,32,39
30	2,22,13,24	21,22,35,28	18,35,37,1	22,15,33,28	1,24,6,27	22,10,2	35,18,34	28,33,23,26	26,28,10,18	+	-	2,25,28,39	22,19,29,40	22,19,29,40	33,3,34	22,35,13,24
31	35,22,1,39	35,28,3,23	15,35,22,2	15,22,33,31	2,35,6	10,21,29	1,22	3,33,26	4,17,34,26	-	+	-	19,1,31	2,21,27,1	2	22,35,18,39
33	6,13,1,25	18,13,34	32,40,3,28	29,3,8,25	1,13,24	4,10,27,22	4,28,10,34	25,13,2,34	1,32,35,23	2,25,28,39	-	+	32,26,12,17	-	1,34,12,3	15,1,28
36	2,26,35,39	34,10,28	2,13,28	10,4,28,15	27,2,29,28	-	6,29	2,26,10,34	26,24,32	22,19,29,40	19,1	27,9,26,24	+	15,10,37,28	15,1,24	12,17,28
37	6,13,28,1	3,4,16,35	27,3,15,28	19,29,39,25	35,38	35,33,27,22	18,28,32,9	26,24,32,28	-	22,19,29,28	2,21	2,5	15,10,37,28	+	34,21	35,18
38	28,26,35,10	28,1	25,13	6,9	2,32,13	35,33	24,28,35,30	28,26,10,34	28,26,18,23	2,33	2	1,12,34,3	15,24,10	34,27,25	+	5,12,35,26
39	28,27,15,3	-	29,28,10,18	35,10,2,18	35,10,38,19	13,15,23	-	1,10,34,28	18,10,32,1	22,35,13,24	35,22,18,39	1,28,7,10	12,17,28,24	35,18,27,2	5,12,35,26	+

Table 3: Descriptions of the Parameters in the Row and Column of the Matrix

2- The weight of a stationary object	**29-** Sensitivity of Production
9- Speed	**30-** Harmful factors affecting an object from outside
14- Robustness	**31-** Harmful elements created by the object
15- Action time-action time of a moving object	**33-** Ease of Use
19- Energy consumed by a moving object	**36-** Complexity of the System
24- Loss of Information	**37-** Control complexity
25- Loss of Time	**38-** Automation Level
28- Measurement Accuracy	**39-**Capacity / Productivity

Table 4: Provisions of TRIZ 40 Principles in Matrix Cells

1 Segmentation	**21** Skipping
2 Taking Out/Separation	**22** ‘Blessing in Disguise’
3 Local Quality	**23** Feedback
4 Asymmetry	**24** Intermediary
5 Merging	**25** Self-Service
6 Universality	**26** Copying

7 ‘Nested Doll’	**27** Cheap Short-Living Objects
8 Anti-Weight	**28** Mechanics Substitution
9 Preliminary Anti-Action	**29** Pneumatics and Hydraulics
10 Preliminary Action	**30** Flexible Shells and Thin Films
11 Beforehand Cushioning	**31** Porous Materials
12 Equipotentiality	**32** Colour Changes
13 ‘The Other Way Around’	**33** Homogeneity
14 Curvature	**34** Discarding And Recovering
15 Dynamization	**35** Parameter Changes
16 Partial or Excessive Actions	**36** Phase Transitions
17 Another Dimension	**37** Thermal Expansion
18 Mechanical Vibration	**38** Strong Oxidants
19 Periodic Action	**39** Inert Atmosphere
20 Continuity of Useful Action	**40** Composite Materials

3.3. Identifying Problems in Areas to Improve

After determining the relevant sector and the parameters in this field, problems in the sector were identified with the brainstorming method, which is accepted as the best known method to generate ideas (Isaksen and Gaulin, 2005; Jordan, 2010; Rawlinson, 2017).Before the brainstorming sessions, the participants were identified and some training was given to them after the scope, quality and objectives of the study were explained. They were asked to identify the problems they faced under the 10 recommended quality parameter heading.

3.3.1. Identifying Participants

In order to determine the health professionals to participate in the brainstorming study, information was obtained about the managers who can be included in the study by applying to the chief physician of a private health institution serving in Istanbul and the quality management unit. In the selection of the participants; The criteria of being a university graduate at least undergraduate level and having worked in the sector for at least 5 years are determined. Then, the scope of the study was explained by contacting the managers directed by the quality manager of the institution, and they were asked whether they could participate in this study voluntarily and 17 of the 32 managers interviewed were included in the study. Participants in the study consist of managers working in 13 different administrative units of the hospital. The average working time of the participants in the health sector is 17.3 years.

3.3.2. Increasing the Knowledge Levels of Participants

The managers within the scope of the study were given information about the quality parameters they have already applied (Table 5).

Table 5: Quality Parameters

• Reliability	• Contact
• Responsiveness	• Credibility
• Competence	• Security
• Access	• Empathy
• Respect-Courtesy	• Physical Assets

A presentation was made about the reminder. In this presentation, examples about the scope of each parameter are presented. Then, to inform the participants about TRIZ, which we will use as a creative problem solving method, the training titled "Process Innovation in Healthcare Services with the Creative Problem Solving Technique TRIZ" was given.

These training were organized in two sessions in a meeting where all participants came together. Training resources were shared with the participants via e-mail and until the next meeting, they were asked to evaluate the problems they experienced in their business processes by considering the quality parameters and the TRIZ methodology.

3.3.3. Gathering and Consolidating Ideas through Brainstorming Sessions

In the idea collection phase of this study, the brainstorming method known as the most effective group idea generation method was applied to the participant group by adding different plugins (Bertoncelli, Mayer and Lynass, 2016; Isaksen and Gaulin, 2005; Sapuan, 2017). Advantage of brainstorming method in groups; during the brainstorming sessions of the individual, it is the opportunity for another friend in his group to read the idea that he has revealed and to create a new idea on it or to develop his existing idea.

The sessions were held with the participants divided into 2 groups accompanied by 2 moderators. While creating the groups, it was paid attention to the participants working in the same management unit to be in different groups. The event was held in a medium-sized meeting room to enable participants to create ideas in a comfortable environment, and a warm atmosphere was created and served to the participants.

As a result of the brainstorming session; A total of 616 problems were identified. After these ideas were read by the moderators and brought together online and similar ones were combined, 149 discrete problems were identified.

3.4. Placing the detected problems in the newly developed matrix and developing innovative solutions

The contradictory situations of the problems detected in the brainstorming sessions were determined. After the conflicting situations of the problems were determined, they were matched with the general TRIZ parameters and placed on the "TRIZ Quality Matrix in Service Sectors" which was newly developed in this study. In the brainstorming sessions, the contradictory situations in the 10 problems we selected among the answers to the questions posed to the participants were identified and placed in the "TRIZ quality matrix in service sectors" that we developed and innovative solutions have been developed.

3.5. Scoring and Evaluation of the Solution Offers Offered

Managers were asked to rate the solution suggestions developed for the problems in terms of 7 criteria. In determining this criterion, it was developed based on 5 criteria used in the interactive innovation model proposal study presented to an internationally serving company (Kose, Guner, Isguzerer and Sisli, 2018).

These criteria are;

1. Additional Income Generating or Expense Reduction Potential
2. Indirect Benefits such as Marketing, Social Benefit, Awareness
3. Estimated time to be applied
4. Estimated project budget
5. It is innovation.

The criteria added apart from these criteria are;

6. Applicability
7. The project is the probability of encountering internal or external resistance.

After evaluating the solution suggestions within ourselves, the ratings of the solution suggestions were shared with the managers and their suggestions were included in the final evaluation stage. In the evaluation in the second stage, the IFR-Ideality ratios of the solution proposals were calculated. Thus, the solution suggestions were reevaluated and the most suitable solution methods were tried to be developed.

Each criterion was evaluated as follows (high, medium, low, etc.). Since six criteria in total and 1 criterion in the denominator are included, the criteria results are scored as follows (3,2,1,6,12,18). While calculating ideality, in some cases, time can be considered as a cost and included in the denominator. However, in our samples, it was not seen as a loss since it did not cause any loss cost.

Table 6: Evaluation Criteria

Criteria 1	• Much (3)	• Medium (2)	• Less (1)
Criteria 2	• Much (3)	• Medium (2)	• Less (1)
Criteria 3	•Long: 18+ Months (1)	• Medium: 6-18 Months (2)	• Short: 1-6 Months (3)
Criteria 4	• Many:> 500.000 TL (18)	• Medium: 500,000-100,000 TL (12)	Less: <100.000 TL (6)
Criteria 5	• Much (3)	• Medium (2)	• Less (1)
Criteria 6	• High (3)	• Medium (2)	• Low (1)
Criteria 7	• High (3)	• Medium (2)	• Low (1)

Table 7: Calculation of the Ideal Rates of Solution Proposals

Solution no.	Criteria 1	Criteria 2	Criteria 3	Criteria 4	Criteria 5	Criteria 6	Criteria 7	IFR Rate
1	3	3	2	3	3	2	12	1,33333
2	3	3	3	2	3	1	6	2,5
3	1	1	3	2	3	3	6	2,16667
4	3	3	2	2	2	1	12	1,08333
5	3	2	2	2	3	3	12	1,25
6	2	3	2	2	3	3	6	2,5
7	2	2	2	1	2	2	12	0,91667
8	1	3	2	2	2	2	6	2
9	1	3	2	2	2	1	12	0,91667
10	1	2	3	1	3	3	6	2,16667

According to the results obtained after evaluations by managers, the idealities of the solution suggestions were calculated. The Idea Account score table is given below (Table 7). According to IFR calculations, the most ideal solution suggestions are solution no. 2 and 6. These suggestions are followed by suggestions 3, 10 and 8. The managers of the relevant institution should consider these rates when deciding to implement their solutions.

The Idealness (IFR) calculation formula is as follows;

$Ideal$ity= ΣBenefits / (ΣCost+ ΣLoss)

3.6. Sharing Results with Field Experts

The result of the study and the proposed solution suggestions were reported to the senior managers of the relevant institution. In this report, besides the solution suggestions, the calculated IFR rates are also included. The creative solutions obtained as a result of the study were shared with the field experts at organized meetings.

4. CONCLUSION

Healthcare industry; It is a special case as it may cause loss of human life due to various reasons such as lack of health substitution, delay or not being able to receive the service. Health service providers have to continue to serve the problems they face by taking quick action. The fact that the person receiving service in health institutions working as a health business is individuals who doubt the health of their relatives or their relatives causes these people to be more nervous and to see the mistakes that may occur are unacceptable. Working with 'zero error', which is one of the basic principles of the concept of quality, is much more important in the health sector. For all these reasons, the concept of quality service becomes more and more specialized in the healthcare sector. Many methods such as lean hospital, Six Sigma are used to improve the quality during service delivery. This study is designed to evaluate and guide how TRIZ can be used for quality improvement in health care. And finally; proposes a new method to offer fast and innovative solutions to problems encountered during service delivery.

In order to test the functionality of the solution matrix and methodology we presented as a result of our study, we developed innovative solutions for the problems identified in the brainstorming session we did in the university hospital using this matrix and methodology. According to the results of the evaluation, it seems that we have obtained results that may correspond in practice. According to all these results, it has been seen that TRIZ methods and methodologies can also be used as a creative problem solving technique in health. It is recommended that health service providers include TRIZ methods in their quality improvement studies.

The functionality of the matrix and methodology developed as a result of the study was tested only on a limited number of problems obtained from a single health institution. Our limit condition here is that we have a small number of problem pools and we provide this problem pool with data in a single institution. Future studies can take into account the matrix we have developed through larger problem pools and the data of more organizations. In addition, the participation of industry experts in the problem solving phase can contribute to the creativity level of the solution proposals to be developed.

Financial project support was received from Medipol University Scientific Research Projects Commission. Ethics committee numbered 43037191-604.01.01-E.57707 was obtained from the Medipol University Ethics Committee Commission for the study.

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PressAcademia
www.pressacademia.org/journals/rjbm
RJBM
ISSN 2148-6689
Research Journal of Business and Management YEAR 2020 VOLUME 7 ISSUE 2

RELATIONSHIP BETWEEN THE CUSTOMER EXPECTATIONS FROM WEBSITES' PERFORMANCE AND E-WOM: A STUDY ON SPORT SHOES BRANDS

DOI: 10.17261/Pressacademia.2020.1201
RJBM- V.7-ISS.2-2020(3)-p.80-94

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Date Received: November 4, 2019 **Date Accepted:** May 30, 2020

To cite this document
Uzunkaya, T., (2020). Relationship between the customer expectations from websites' performance and e-wom: a study on sport shoes brands. Research Journal of Business and Management (RJBM), V.7(2), p.80-94.
Permanent link to this document: http://doi.org/10.17261/Pressacademia.2020.1201

ABSTRACT
Purpose- Investigating the relationships among perceived website quality, sources of credibility, experience, social impact, and recommendation affect performance expectations, customer satisfaction, trust and WOM.
Methodology- The data were gathered by personal interview and Structural Equation Modeling was used to test the relationships.
Findings- The quality of the website content and the technological quality of the website have a positive impact on performance expectancy, while the website information quality has a negative impact on performance expectancy. The impact of adopting social impact and recommendations, the internet and past experience, sources of credibility on performance expectations were found insignificant. The impact of performance expectations on customer satisfaction and trust was found significant. The impact of performance expectancy on WOM was found insignificant. The direct impact of customer satisfaction on WOM was found significant.
Conclusion- Technology or technological innovations that benefit customers or help their goals affect customer performance expectations. In the market conditions where the competition is rapidly increasing, it is an important element in terms of competition that the brands increase the performance expectations of consumers by attaching importance to the content quality and technical quality of the website. Increased performance expectation positively affects increased customer satisfaction and confidence in the website. In addition, customer satisfaction has a positive impact on word-of-mouth communication by enabling customers to have positive feelings and thoughts about the brand.

Keywords: Performance expectation, word of mouth, online shopping, customer satisfaction, trust.
JEL Codes: M30, M31, M39

1. INTRODUCTION

Developments in information technologies have accelerated the internet's involvement in all areas of consumers' lives. The changing area of use of the internet in course of time has provided the brands with the advantage of offering a platform via which they can access their target audience. It offered consumers the opportunity to compare products or services by shopping online.

Developments have changed the shopping behaviors of consumers and enabled them to prefer online platforms. Technologies or technological innovations that benefit customers or help their goals affect consumers' performance expectations. Thanks to online shopping, consumers can shop without time lime by taking advantage of the various discounts and campaigns offered by the brands. Consumers, also, have the opportunity to compare the different options offered by different brands for the same products. This makes the competition more difficult for brands and increases consumer expectations. Many features such as the updateness, usefulness, and presentation way of the information of the website, easiness of navigation on the website, speed of the page loading, and easiness of access to the website created for the brand affect the performance expectations of the consumers. Therefore, the brands need to pay attention to technique, content, and quality of information when creating their websites. In particular, providing accurate information that affects consumers' shopping on the website, in other words, sources of credibility is another important factor that affects the consumer's performance expectation.

Consumers consider online consumer recommendations to reduce their risk while shopping online. They can be influenced by the views of a consumer who has previously experienced a product that they are considering to buy. Individuals may also be affected by valuations of other individuals with similar attitudes and ideas. In addition, the fact that the previous experiences of the consumer are negative may also cause the consumer to act uneasy about online shopping. Consumers' satisfaction with their experiences on a website can positively shape their attitude, perception and behavior towards the website. Therefore, social impact and recommendations, experience are another important element that may direct the consumers' performance expectation.

Increasing in the level of satisfaction of consumers as a result of comparing the expectations of consumers with the performance they achieved affects their confidence in the brand and their word-of-mouth communication. A sense of trust created for the brand leads consumers to think positively about the brand, directing the word-of-mouth communication in favor of the brand.

In this respect, one of the objectives of the study is to determine whether the perceived website quality, reliability sources, experience, social impact, and recommendation affect performance expectations positively. Another objective is to determine whether performance expectation positively affects customer satisfaction, trust, word-of-mouth communication behaviors, and whether the online trust has a mediating role between satisfaction and word-of-mouth communication behavior. To determine whether customer satisfaction affects website trust and word-of-mouth communication behaviors positively and whether website trust affects word-of-mouth communication behaviors positively are among the other objectives of the study.

The article consists of 5 chapters. The second chapter contains a literature review regarding the concepts in the article. The third chapter consists of the purpose, conceptual model, sample selection, hypotheses, and data collection method of the study. There is a number of analysis conducted with the Structural Equality model and findings in the fourth chapter. In the fifth chapter, there is the conclusion section.

2. LITERATURE REVIEW

2.1. Performance Expectation

Advances in internet technologies and related applications enabled consumers to interact with firms in new ways. More and more organizations are investing in customer-oriented online resource technologies to increase their share in the online market (Al-Qeisi et al., 2014: 2282).

Performance expectation is the comprehension of the advantages of technological innovation by people with the output they obtained. By enabling individuals to use innovation, a technology that fulfills the goals they want will be perceived by individuals as having better performance outputs. Performance expectations require that individuals are explained how these innovations can benefit them. The degree at which a consumer believes that technological innovation helps his/her goals is a part of expectations related to performance (Ratten, 2015: 86-87).

Performance expectations as a concept in which using a technology will benefit the consumer and lead to performance gains. It was found that performance expectancy is the strongest determinant for behavioral intention to use mobile applications with the previous studies. Therefore, if consumers find innovations and values from social networking applications, they would be more willing to continue the use and purchase of social networking. Before using the applications, consumers will evaluate the performance expectations of social networking applications based on information exchange and communication messages. Consumers perceive the benefit differently in respect to different social networking applications. For example, social networking applications should be able to provide a useful function to users in terms of sharing information, joining in a special interest group, and making connection (Chua et al., 2018: 121).

2.2. Perceived Quality

Website content quality refers to the perceived validity level, currency, and value of information available on a community website (Mpinganjira, 2016: 5). The website quality is whether the features of a website meet the needs of users and reflect the overall excellence of the website. To implement a successful e-strategy and retain and attract customers, companies should understand the perceptions of customers about the most important website features (Ali, 2016: 215). The content of the website is the information, feature or service offered on the website and designed it as a way of presenting this information to users (Flaviàn et al., 2009: 1107).

Content quality is the features of the information displayed on the website such as usefulness, integrity, accuracy, and currency of the information. It addresses specific details about specific content, products/services, member support, privacy policies, and other important information displayed on the website (Janvrin et al., 2009: 380).

Babic-Hodovic et al. (2017: 117) stated that technical quality reflects the service action, service output or the result the customers received after service encounter. Using web technologies, an organization can always reach its potential customers and provide them with not only general information about its products or services but also interactive business transactions. In such an environment, the technical features of the web site (security, easy navigation, search facilities, site usability, valid links, customization, page loading speed, interaction and easy access to the site) are becoming important features of website quality (Aladwani, 2006: 181).

Studies revealed that creating a web site with the content under the standards (content usability, integrity (completeness), clarity, currency, conciseness and accuracy) is the waste of resources. The studies also stated that the website has no chance to attract consumers. One of the main stages of the purchase process followed by most consumers is the process by which a consumer searches for and collects the facts actively from the website. If the website does not meet the consumer expectations regarding their information needs, this incompatibility may cause negative reactions from the visitors to the website. If the website provides the consumers with ambiguous, unusable or incorrect information, it is difficult to gain their trust (Aladwani, 2006: 182).

Quality of information means the "quality of the output of the information system, which can be in the form of reports or online screens”. Internal data quality, accessibility, context-dependent quality and currency summarize the features of effective information quality (Naicker and Jairam-Owthar, 2017: 2). The quality of information is a measure of the value that information provides to a user (Chua et al., 2012: 179).

Quality is "to meet customer expectations continuously" meaning that "the data, which does not help the business fulfill its mission, no matter how accurate it is, has no quality" (Gustavsson and Wänström, 2009: 326-327). The quality of information on a level to the extent the information is consistent in meeting the needs of everyone who needs it. Quality of information is a desirable feature for the output of information systems (Nirwanto and Andarwati, 2019: 61).

2.3. Social Impact and Recommendation

According to the study of social psychology, social impact is the change in behaviors, thoughts or emotions from an individual's point of view as well as arising from the interaction with another individual or a group. Another term for social impact is known as peer group pressure, which is the pressure on an individual to fit him/her into a separate group, resulting in a certain behavior (Eckhardt et al., 2009: 13).

Social impact is a form of harmony (similarity) in which the individual agrees with other members of a social group. The harmony can change people's behavior, attitudes, or beliefs because of social impact. For example, online social impact can help to build product attitude and affect purchase intention (Hsieh and Tseng, 2018: 165-166).

Depends on how social impact is powerful, a consumer will start adopting to new technology sooner. Stronger social impacts cause consumers to understand a technology more usefull (expectation of higher performance) that situation causes more powerful using intentions (Al-Qeisi et al., 2014: 2283).

The importance of consumer recommendations was strengthened in the internet age. The internet authorizes consumers and allows unprecedented networks with potential consumers. Consumers can easily submit their recommendations online for the potential of millions of people to read, on the one hand, an increasing number of potential consumers move online and access other consumers' ideas easily, on the other hand. For example, product reviews before deciding what to buy (Bechwati and Nasr, 2011: 56).

Consumer reviews are used frequently by consumers to make a decision about products before purchasing. The number of these assessments and the scope of their impacts have increased recently due to the fact that social media such as Facebook and Twitter became widespread. With the growth of the internet as both a means of distribution and communication, the sellers consider that displaying online consumer assessments is one of the most effective tools for turning product intentions into sales (Cervellon and Carey, 2014, 1375-1376). The studies on the impacts of online consumer assessments has confirmed the argument that online consumer assessments significantly affect perceived resource reliability and purchasing intents of other consumers (Lin and Xu, 2017: 363).

Today's information and communication technologies provide people with access to plenty of information almost anytime, anywhere. People are increasingly looking for information about online services and products; they make consumption decisions based on online recommendations (e.g., word of mouth communication). One of the most important factors driving consumers to look for online recommendations is to reduce the risk of consumption. People try to reduce uncertainty and risk by finding credible information that was useful for decision making. Credibility was an important index helping consumers to assess perceived risk reduction through online recommendations (Fan et al., 2018: 1509). Many studies showed that trust in general had a positive effect on purchasing behavior (e.g., repurchase, fullness of shopping cart). The studies revealed that the main reason for the positive effect of trust was due to its ability to reduce uncertainty (Kenning, 2008: 466).

2.4. Sources of Credibility

Information is communicated directly to the customers through the seller and, indirectly, through the media and other consumers. The studies manifested that the credibility is an important sign for sellers to help consumers in making decisions. This is because it encourages consumers to rely on and use the product information of the sellers leading them to make a purchase decision (Kumar and Polonsky, 2019: 25).

The credibility is the believability of the product position information in a brand depending on the willingness and ability of firms to deliver what they promise (Loureiro et al., 2018: 134). Credibility is among concerns about online consumer reviews; highly credible evaluations positively affect the adoption level of information by the users. Measuring the credibility of online assessments is different from measuring offline assessments. It is difficult to judge the credibility of online assessments with the abundance of online assessments offered worldwide by different community members (Cheung et al., 2012: 619).

“A credible source is a communication medium that is seen as providing correct information, relatively free of bias”. Source credibility is, therefore, linked to the credibility of the news provided. A piece of false news or text can affect online users' perception of the credibility of a web page (Visentin et al., 2019: 101).

2.5. Experience

Shopping experience using a variety of web-based decision support tools to search, compare and examine products and services has a positive impact on word of mouth, valuation of products, and perception on the web. When consumers need additional information for online shopping, they first consider their previous online shopping experience, which is a kind of internal information stored in their memory. This information includes product performance, payment method, delivery conditions, quality of service and the magnitude of the risk they assume and may affect purchase intentions in future online purchases (Tsao et al., 2016: 1992).

Positive customer experience provides firms with the opportunity for competitive advantage in the long run. Additionally, positive word of mouth communication results in improved performance for customer retention and customers who are satisfied and loyal with reduced complaints. Therefore, in the twenty-first century, the firms began to pay attention to the experience-based economy from the service-based economy (Garg et al., 2014: 87). Customer experience is generated not only by elements that the service provider can control (e.g., service interface, medium, diversity, price) but also by devices - such as smartphones that the customer chooses to use in various situations - and elements out of their controls - such as being affected by other customers (McColl- Kennedy et al., 2015: 431).

Internet experience is not the experience with a particular website, but the skill or ability of the consumers who use various value-added services offered on a wide range of different websites and visit various websites. Consumer experience with the internet is important in understanding the perceptions, attitudes, and behaviors of customers in online environments (Soto-Acosta et al., 2014: 546). Customers' previous internet experiences are an important determinant for their online shopping behavior. The studies conducted previously revealed that consumer satisfaction with previous online shopping has resulted in building trust in online sales firms; this affects future online transactions (Ranganathan and Jha, 2007: 54).

The studies revealed that the previous experience describes how the consumer shopped in the past; they also state that it is an important determinant of consumer behavior. Previous experience enhances one's access to information specific to shopping (Hsiao et al., 2012: 322). In addition to this, the studies conducted previously supports the idea that negative past experiences or past dissatisfaction affected the current decision-making process and that previous experiences constituted a prejudice. Customer behavior can change as they gain more experience and knowledge from past transactions. The more negative consumers perceive past transactions, the more hesitation possibility increases (Demirgüneş, 2018: 36).

2.6. Customer Satisfaction

Satisfaction is a function of expectations and perceived performance. If the performance of a product or service is lower than expected, the consumers will not be satisfied, but if the performance matches expectations, consumers will be satisfied. If performance exceeds expectations, the consumer will be very happy (Puspaningrum, 2018: 87-88). Customer satisfaction is a person's feelings of pleasure or frustration that arise from comparing the person's expectations and perceived performance (or result) of the product (Tiwari, 2012: 3).

Customer satisfaction is the after-sales evaluations reflecting positive/negative emotions, overlapping degree of what they took from a product and their expectations. More generally, customer satisfaction is the result of a proportional valuation between the expectations before purchase and the outcomes after the purchase (Cakici et al., 2019: 446). The customer satisfaction as the difference between the expectations of an individual regarding the product or service before consumption and the actual experience after the consumption. Therefore, the satisfaction as the evaluations of customers regarding how a product meet or exceed the expectations of customers that arise after the consumption of a product or service (Keisidou et al., 2013: 269).

Measuring customer satisfaction has several benefits for businesses; for example, improved communication, knowing the demand, a better understanding of problems, evaluation of progress, monitoring and reporting of successful results and changes. Monitoring, measuring and evaluating customer relations and satisfaction provide companies a strategic advantage over their competitors (Palm, 2016: 317). The studies revealed that satisfied customers tend to be loyal and to spread positive word of mouth. While the distrust causes to decrease loyalty and satisfaction, supportive customers' trust in service providers leads to more satisfaction and loyalty (Cheshin et al., 2018: 99).

While some studies evaluate trust as the precursor of satisfaction, some of them conceptualize trust as an output of satisfaction (Wang et al., 2015: 474). Some studies suggested that users believe that most of the information on the web is not credible. Lack of consumer confidence is a great obstacle to the adoption and growth of e-commerce. If consumers cannot find satisfactory signs of credibility, they leave the site and perform their operations elsewhere (Clewley et al., 2009: 806).

2.7. Trust

The existence of trust in the marketing literature has a significant impact on strengthening sustainable relationships with customers (Cyr et al., 2008, 777). Trust includes the credibility perceived by a consumer regarding the brand, product, or service of a seller. Trust in electronic commerce remains a critical issue for consumers because they will face the difficulty of purchasing a product or service that they cannot actually see or touch from an unfamiliar seller. The studies revealed that the trust plays a central role in helping consumers overcome their perceptions of risk and insecurity. Since the privacy and security concerns are important obstacles for the internet channel, customers will not trust their personal information, including credit card information, to sellers without trust (Hong and Cho, 2011: 470).

Trust in e-commerce includes the expectations regarding the trust-related features of the online seller and the beliefs of online consumers. High-level trust encourages consumer attitudes and behaviors more positively (Tran and Strutton, 2019: 2-3). The negative attitudes happen in buyers in case of fraudulent or negative buying experiences. In such a situation, buyers would no longer trust the seller and that they possibly turn to alternatives in order to fulfill their needs and wishes (Pappas, 2016: 94).

2.8. Word of Mouth Communication

Word of mouth communication is the face-to-face conversation between consumers about a product or service experience. This face-to-face conversation was usually private and was conducted between the two parties as the information source and receiver. The source and receiver were usually friends, relatives or acquaintances. The main feature of word of mouth communication is that its source is independent; there are no commercial interests in providing word of mouth communication, and therefore, this communication process is more reliable than the information generated by firms (López and Sicilia, 2014: 29).

Word of mouth communication, which was informal and assumed a higher form of efficiency of personal communication, has been existed since about the 1960s in the face of traditional types of advertising. Word of mouth communication stopped to express only a verbal message in the course of time covers, nowadays all forms of communication between customers. The internet revolution and faster progress of social media, gradually, allowed customers to search for product-related advice on the web (Kościółek, 2017: 60).

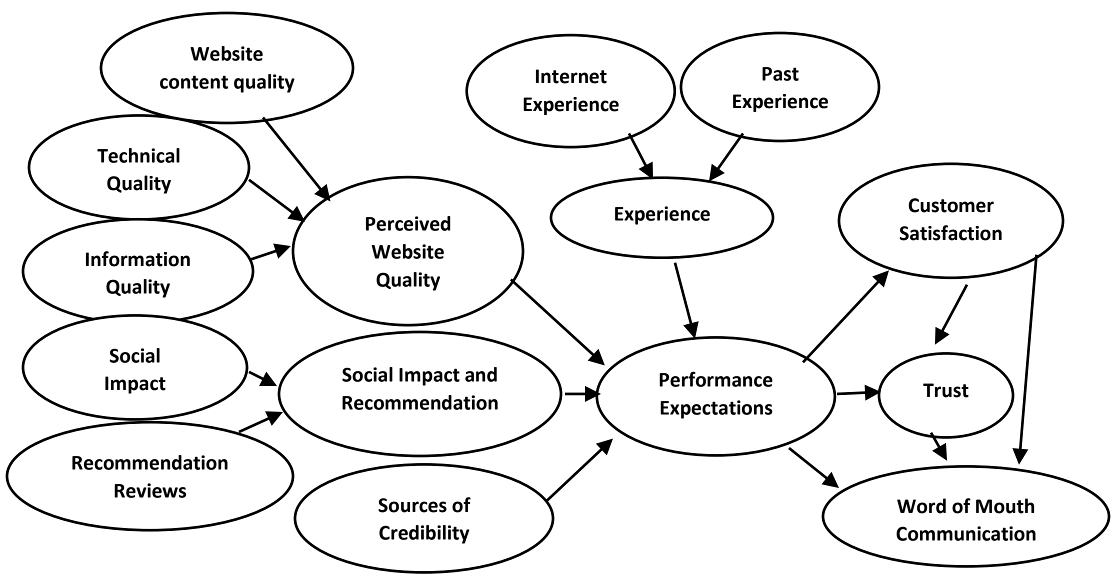
Word of mouth communication has been regarded for many years as a major influence on what people know, feel, and do. Word of mouth communication is an informal means of communication regarding the ownership, use, or features of a particular product or service or seller for other consumers. Electronic word of mouth communication refers to the reviews regarding a product or service provided by customers through networks. The studies conducted previously revealed that consumers had a direct effect on trust and buying behaviors (Yan et al., 2016: 63).

3. DATA AND METHODOLOGY

3.1. Purpose and Model of Research

One of the aims of the study, which covers the consumers who makes online shopping using the web sites of sport shoe brands, is to determine whether perceived website quality, sources of credibility, experience, social impact, and recommendation have a positive impact on performance expectations. Another objective is to determine whether performance expectation has a positive impact on customer satisfaction, trust, and word of mouth communication behaviors and whether the online trust has a mediating role between satisfaction and word of mouth communication behavior. Determining whether customer satisfaction has a positive impact on website trust and word of mouth communication behaviors and website trust has a positive impact on word of mouth communication behaviors are among the other objectives of the study. Model of the research was created on the basis of the study of Loureiro et al. (2018) conducted on fashion brand websites. Conceptual model of the research is shown in Figure 1.

Figure 1: Conceptual Model of Research



Note: Loureiro, S.M.C., Cavallero, L., Miranda, F.J. (2018). Fashion Brands on Retail Websites: Customer Performance Expectancy and E-Word of Mouth, Journal of Retailing and Consumer Services 41, p.133.

3.2. Population and Sample

The population of the research consists of consumers over the aged 18 and more living in Kocaeli making online sports shoe shopping through the website. The individuals were selected from the said population within the scope of the sample size calculated with the following formula by using the convenience sampling method that is among the non-random sampling methods.

$n = p * q * (Z/e)^2 = 0,5 * 0,5 * (1,96/0,05)^2 = 395$

The questionnaire was used as the data collection method and the questionnaire prepared for this purpose was filled in by the interviewers via the personal interviews.

3.3. Hypotheses

If the website does not meet the expectations of consumers regarding their information needs, this incompatibility may cause negative reactions from the visitors to the website. If the website provides the consumers with ambiguous, unusable or incorrect information, it is difficult to gain their trust (Aladwani, 2006: 182). The quality of information is a measure of the value that information provides to a user (Chua et al., 2012: 179). Studies revealed that by enabling individuals to use innovation, a technology that fulfills the goals they want will be perceived by individuals as having better performance outputs (Ratten, 2015: 86-87). In light of these studies, the test of the following hypotheses was targeted:

H1: Perceived website quality has a positive impact on performance expectations.

H1.1: Content quality has a positive impact on performance expectations.

H1.2: Technical quality has a positive impact on performance expectation.

H1.3: Information quality has a positive impact on performance expectations.

Stronger social impacts cause consumers to understand a technology more usefull (expectation of higher performance) that situation causes more powerful using intentions (Al-Qeisi et al., 2014: 2283). The internet authorizes consumers and allows unprecedented networks with potential consumers. The consumers can easily submit their suggestions online for the potential of millions of people to read, on the one hand, an increasing number of potential consumers move online and easily access other consumers' views, on the other hand. For example, product reviews before deciding what he/she will buy (Bechwati and Nasr, 2011: 56). The performance expectations of consumers will change based on the recommendations and comments they received from sports shoe websites. In this context, the following hypotheses were determined:

H2: Social impact and recommendation from other consumers have a positive impact on performance expectations.

H2.1: Social impact from other consumers have a positive impact on performance expectations.

H2.2: Comments and recommendations from other consumers have a positive impact on performance expectations.

When consumers need additional information for online shopping, they first consider their previous online shopping experience, which is a kind of internal information stored in the memory. This information includes product performance, payment method, delivery conditions, quality of service and the magnitude of the risk they assume and may affect purchase intentions in future online purchases (Tsao et al., 2016: 1992). The studies revealed that customer behavior can change as they gain more experience and knowledge from past transactions. The more negative consumers perceive past transactions, the more hesitation possibility increases (Demirgüneş, 2018: 36). Accordingly, the hypotheses were determined as follows:

H3: Online website experience has a positive impact on performance expectations.

H3.1: Online website internet experience has a positive impact on performance expectations.

H3.2: Online website past experience has a positive impact on performance expectations.

Studies proved that the credibility is an important sign for sellers to help consumers in making decisions. This is because it encourages consumers to trust and use the product information of the sellers leading them to make a purchase decision (Kumar and Polonsky, 2019: 25). Credibility is the believability of the product position information in a brand depending on the willingness and ability of firms to deliver what they promise (Loureiro et al., 2018: 134). The hypothesis on this subject is established as follows:

H4: Sources of credibility has a positive impact on performance expectations.

Satisfaction is a function of expectations and perceived performance. If the performance of a product or service is lower than expected, the consumers will not be satisfied, but if the performance matches expectations, consumers will be satisfied. If performance exceeds expectations, the consumer will be very happy (Puspaningrum, 2018: 87-88). Accordingly, the hypothesis is as follows:

H5: Performance expectation has a positive impact on customer satisfaction.

Trust in e-commerce includes the expectations regarding the trust-related features of the online seller and the beliefs of online consumers. The studies found that high-level trust encourages consumer attitudes and behaviors more positively (Tran and Strutton, 2019: 2-3). The following hypothesis regarding these variables is established:

H6: Performance expectation has a positive impact on trust.

Negative word of mouth communication involves product discredit, bad experiences, spreading rumors and personal complaints, while positive word of mouth communication involves associating good experiences, supporting the business, and making recommendations (Sweeney et al., 2014: 338). In terms of sports shoe brands and websites, consumers' comments on products or services were taken into consideration in our study.

H7: Performance expectation has a positive impact on word of mouth communication behavior.

Researches revealed in the studies conducted previously that satisfied customers tend to be loyal and to spread positive word of mouth. While distrust is causes to decrease loyalty and satisfaction, supportive customers' trust in service providers leads to more satisfaction and loyalty (Cheshin et al., 2018: 99). Some researchers conceptualize trust as an output of satisfaction (Wang et al., 2015: 474). The hypotheses regarding the said variables are determined as follows:

H8: Online trust has a mediating role between satisfaction and word of mouth communication behavior.

H8.1: Customer satisfaction has a positive impact on website trust.

H8.2: Website trust has a positive impact on word of mouth.

H8.3: Customer satisfaction has a positive impact on word of mouth.

3.4. Data Collection Method

The questionnaire was used as the data collection method. The questions in the questionnaire were created by using the scales used in the study of Loureiro et al. (2018: 136). The studies on performance expectancy were created by using the study conducted by Venkatesh et al. (2003); the questions regarding the website content quality from the questions used by Yang et al. (2005) in his study; information quality questions from the scale questions used by Loureiro et al. (2018); technical quality scale questions from the scale questions used by Aladwani (2006). The study of Senecal and Nantel (2004) was used in scale questions regarding the sources of credibility, the study of Lassar et al. (2005) was used in questions related to internet experience questions, and the study of Smith et al. (2005) was used in questions of past buyer experience. Social impact questions were created by using the study of Venkatesh et al. (2003); adoption of advice comments questions were created by using the study of Cheung et al. (2009); customer satisfaction questions were created by using the study of Pavlou (2003); trust questions were created by using the study of Jarvenpaa et al. (2000) and Kim et al. (2008); and word of mouth communication behavior scale questions were created by using the study of Brown et al. (2005) were created.

4. FINDINGS

Conceptual model shown in Figure 1 was tested with the structural equation modeling and the abbreviations of the variables used in the model are as follows: PERFEXP and Perfexp: Performance Expectation, WCQ and Wcq: Website Content Quality, WIQ and Wiq: Website Information Quality, WTQ and Wtq: Website Technical Quality, CS and Cs: Sources of Credibility, SI and Si: Social Impact, RR and Rr: Recommendation Reviews, WOM and Wom: Word of Mouth Communication Behaviors, SATISF and Satisf: Satisfaction, TRUST and Trust: Trust, IE and Ie: Internet Experience, PASTEXP and Pastexp: Past Experience.

395 questionnaires from the population were collected via personal interview technique and analyzed. Within the framework of the conceptual model of the study, firstly, Lisrel Structural Equation Modeling was used to test the measurement model and the structure consisted of implicit variables and observed variables were analyzed. The test results, goodness of fit values of which were established within acceptable limits, of the structural equation modeling of the conceptual model of which the confirmatory factor analysis results are indicated in Figure 2, were shown in Figure 3 as standard solution values and its goodness of fit values were found within acceptable limits.

According to the results of the analysis, while the content and technical quality of the website has a positive impact on performance expectation, the information quality of the website does not have a positive impact on the performance expectation. Therefore, H1.1 and H1.2 hypotheses were accepted, whereas, the H1.3 hypothesis was rejected. Perceived website quality is verified in terms of content and technological quality.

The impact of adopting social impact and recommended comments on performance expectancy was found insignificant. It was found that social impact and advice by other consumers had no positive impact on performance expectations and the hypotheses H2.1 and H2.2 were rejected.

Impact of internet experience and past experience on performance expectations was determined as insignificant. The hypothesis H3.1 and H3.2 were, therefore, rejected. It cannot be confirmed that online website experience has a positive impact on performance expectations. Impact of the sources of credibility on performance expectations was also found insignificant and hypothesis H.4 was rejected.

Impact of performance expectation on customer satisfaction was found significant and hypothesis H5 was accepted. Impact of performance expectation on trust was found positive and hypothesis H6 was accepted. The effect of performance expectancy on word of mouth communication behavior was found insignificant and hypothesis H7 was refused.

Impact of customer satisfaction on trust was found significant and hypothesis H8.1 was accepted. The effect of web site trust on word of mouth communication behavior was found insignificant and hypothesis H8.2 was refused. It was determined that customer satisfaction has a positive impact on word of mouth communication and hypothesis H8.3 was accepted.

Direct effect of customer satisfaction on word of mouth marketing communication was determined significant (Apd=0.84*Satisfaction, $R^2 = 0.54$). Effect of customer satisfaction was expected to decrease when confidence enters, whereas, it was determined that customer satisfaction increased and has no mediating effect. In other words, trust has no mediating role in the effect of customer satisfaction on word of mouth marketing communication. The hypothesis H8 was, therefore, rejected.

Figure 2: Test of Measurement Model Significance Results

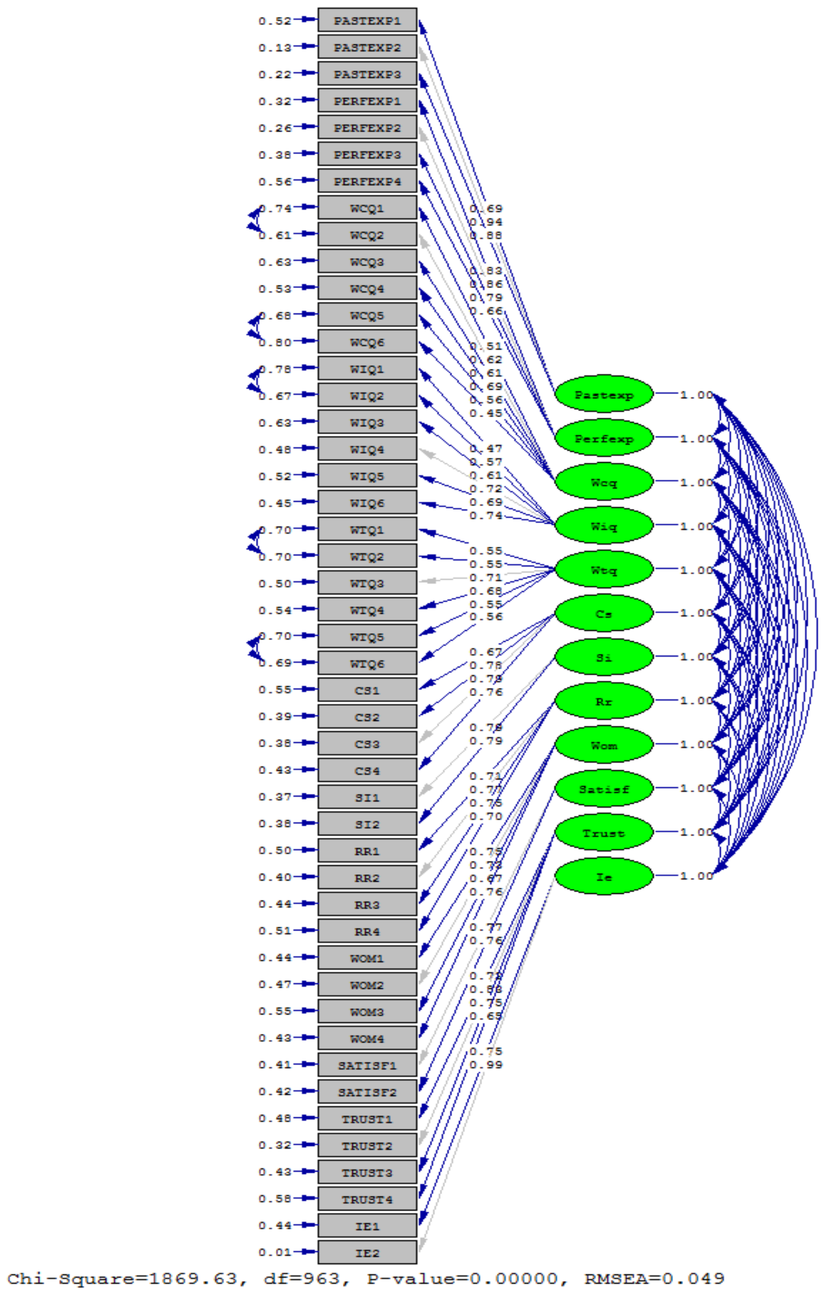
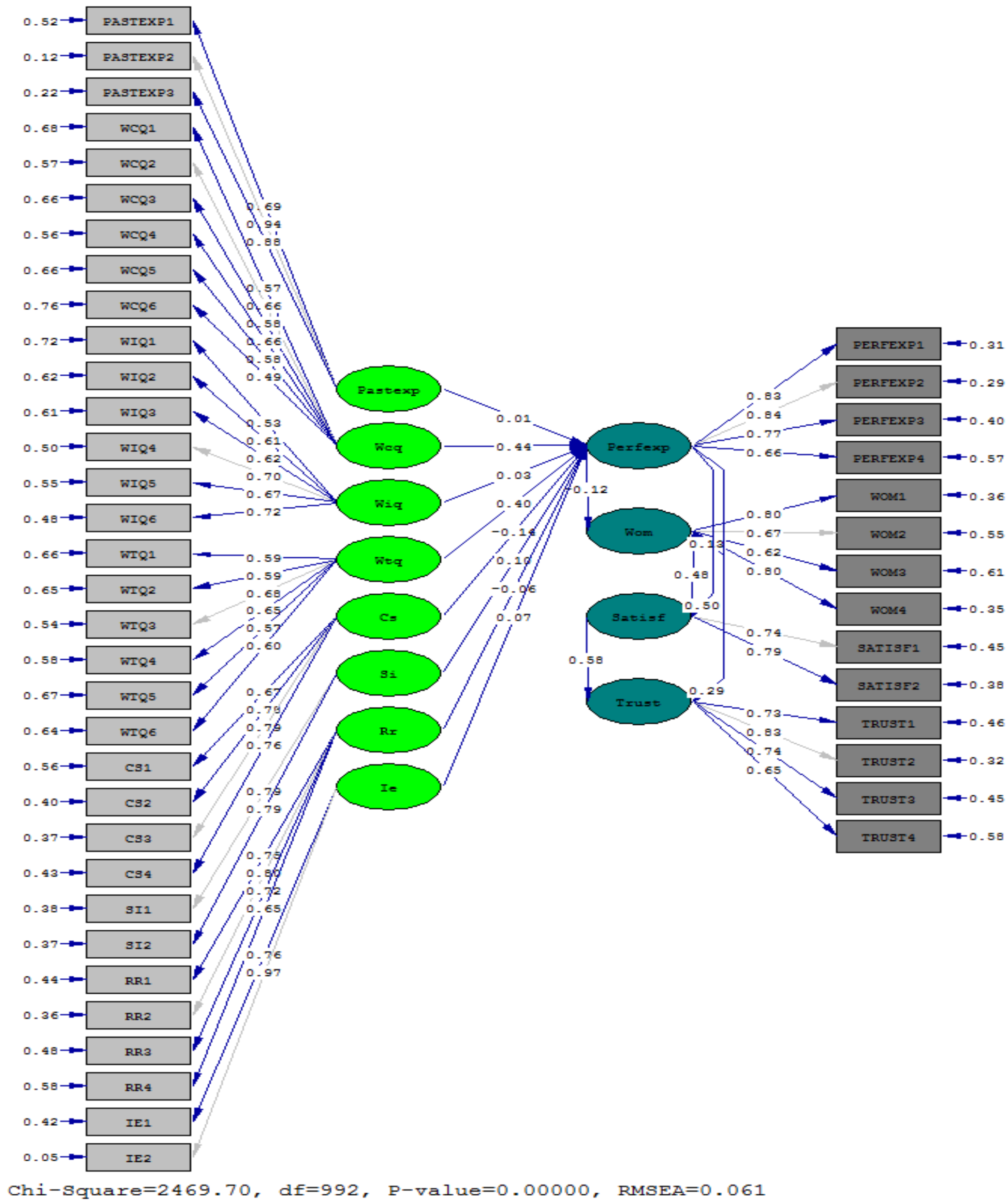


Figure 3: Structural Equation Modeling Standard Solution



5. CONCLUSION

Thanks to the information technology, which develops in parallel with the advancement of technology, people meet their needs by making online shopping. Online shopping offers customers many advantages such as comparing products and prices, accessing detailed information about products, getting advice from other customers who have experienced the product they intend to buy, and saving time. Therefore, increasing customer awareness caused the performance expectations of customers to change day by day. Brands should create their web sites in a way to meet the needs and wishes of customers by benefiting from the advantages offered by technology.

Meeting the expectations of customers from online shopping, in other words, ensuring customer satisfaction, has an impact on online trust. Also, customer satisfaction causes that word of mouth communication is positive or negative. Customers can convey their positive or negative thoughts to millions of people. While the similar experiences of different people related to the same brand are positive for the brand, the fact that it is negative creates pretty negative results for the brand. Therefore, customers' word of mouth marketing behavior can also affect the existing or potential customers of brands.

In our study, which covered the customers who shop online using sports shoe website, while the impact of web site content quality and technology quality on performance was found positive and information quality was found negative, Loureiro et al. (2018) found that only technical quality had a positive impact on performance expectation and that content and information quality did not have any impact. Loureiro et al. (2018) found that social impact has a positive impact on performance and that adopting the recommended comments has a negative impact on performance expectations. In the analysis results of our study, the adoption of both social impact and recommended comments does not have any impact on performance expectations. Our study supports the findings of Loureiro et al. (2018), who found that the sources of credibility and impact of internet experience on performance expectations were insignificant. Contrary to Loureiro et al. (2018), who found that past experience had a positive impact on performance expectations, in our study, it was found that this had a negative impact.

As a result of the analysis, the impact of performance expectation on customer satisfaction and trust was found significant, its impact on word of mouth communication was found insignificant. Loureiro et al. (2018), on the other hand, found that the impact of performance expectancy on customer satisfaction and word of mouth communication was significant, whereas, its impact on trust was insignificant.

The results of our study support Loureiro et al. (2018), who found that customer satisfaction has a positive impact on trust. However, while Loureiro et al. (2018) found that the impact of trust on word of mouth communication was significant and that the impact of customer satisfaction on word of mouth was insignificant; in our study, it is found that the impact of trust on word of mouth communication was insignificant and that the impact of customer satisfaction on word of mouth was significant. Contrary to Loureiro et al. (2018), who found that customer satisfaction had a mediating role in its impact on word of mouth communication, in our study, it was found that it has no mediating role.

The facts that the study covered only Kocaeli province and that it is conducted with only customers using the website of a certain sports shoe brands can be considered as the limitations of the study. Carrying out new studies in different sectors will be beneficial.

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PressAcademia
www.pressacademia.org/journals/rjbm
RJBM
ISSN 2148-6689
Research Journal of Business and Management YEAR 2020 VOLUME 7 ISSUE 2

SUSTAINABLE HUMAN RESOURCES MANAGEMENT FROM THE LANGUAGE OF REPORTS

DOI: 10.17261/Pressacademia.2020.1202
RJBM- V.7-ISS.2-2020 (4)-p.95-115

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Date Received: March 16, 2020 **Date Accepted:** June 16, 2020

To cite this document
Goc, K., Kusku, F. (2020). Sustainable human resources management from the language of reports. Research Journal of Business and Management (RJBM), V.7(2), p.95-115.
Permanent link to this document: http://doi.org/10.17261/Pressacademia.2020.1202

ABSTRACT

Purpose - Although the concept of Sustainable Human Resource Management (HRM) has been frequently discussed in recently, the measurement and dimensions of the concept are still vague. This study aims to explore Sustainable HRM practices and provide a guide to facilitate Sustainable HRM implementations and to measure its pertinent practices.
Methodology - The sample of this study consists of 36 sustainability reports of 29 firms listed on the BIST Sustainability Index. The reports belong to two consecutive fiscal years: 2014-2015 and 2015-2016. The researchers have conducted a content analysis to reports by using the indexing technique, in line with a coding guide adopted from The Global Reporting Initiative - Sustainability Reporting Guidelines-G4 (GRI-G4) principles.
Findings- This research has identified the discursive dimension of sustainable HRM in the context of Turkey. Following this purpose, the researchers have prepared a guide and posited the dimensions of Sustainable HRM elaborately. Moreover, the study has demonstrated the applicability of the triple reporting system to the Turkish setting.
Conclusion- Different stakeholder expectations require to take HRM with its macro and micro dimensions. Sustainable HRM stands out as a concept to respond to this demand. After its fast-paced introduction as of 2000, the concept has gained momentum specifically in the last decade. Conceiving the structure of Sustainable HRM with its economic, environmental, and social dimensions constitutes a critical step of meeting this expectation. This study has identified Sustainable HRM practices, which may guide companies to have a sustainable organizational form and provide researchers a measurement tool.

Keywords: Sustainability, human resources management, GRI reports, Borsa İstanbul, Turkey.
JEL Codes: J50, O15, M50, M10

1. INTRODUCTION

The concept of "sustainability" started to take place in management research as of the 1980s (Dyllick & Hockerts, 2002). At the outset, sustainability studies, by and large, used to focus on the economic and environmental dimensions[1] of the concept, whereas, from the 2000s on, the social dimension (such as moral and ethical values) of sustainability emerged as a vibrant research strand (Kira, 2003; Boudreau & Ramstad, 2005). Accordingly, the concept of Human Resources Management (HRM) has also become sustainability-oriented, thus elevating the concept of sustainable HRM in the literature (e.g., Zaugg, Blum & Thom, 2001; Guercini, Pedrini, 2014; Kramar, 2014; Ehnert, Parsa, Roper, Wagner, & Muller-Camen, 2016). Nevertheless, extant research has

[1] The environmental dimension includes the use, protection, and development of natural resources. The terms "Green" "Environmental" and" Ecologic" in the sustainability literature are considered synonymously in this study.

focused on one dimension, although economical, environmental, and social dimensions require holistic scrutiny to ensure sustainability entirely (Elkington, 1997). The primary motive of this study is to take these three dimensions seriously.

Along with spreading consciousness of sustainability worldwide, a growing number of organizations have tended to make their activities sustainable. On the other hand, social expectations, which are associated with blending the long-term profitability of the organizations with concepts such as social relations, justice, and environmental protection, arose and increased. This integration prompted the need for building sustainability on certain principles. In this respect, some institutions have engaged in guiding work to achieve sustainability in organizations. Despite these efforts, business organizations faced several problems in performing sustainability activities. Based on the developments in the field and the difficulties experienced by companies, Elkington (1997) stated that the decision-makers should establish auditing mechanisms in their organizations to meet the audience's expectations and market demands. The author further proposed a triple-reporting auditing system to measure sustainability based on economic, environmental, and social dimensions. Meanwhile, in parallel with the developments in the field, the Global Reporting Initiative (GRI) cropped up as a non-profit organization in the USA. The GRI has developed a rubric of reporting principles on corporate sustainability, which cover most of the standards set by global organizations such as the United Nations Global Compact (UNGC), the Organization for Economic Development and Cooperation (OECD), and the International Labor Organization (ILO). Thus, a straightforward reporting mechanism for organizations enabled them to document not only the economic, environmental, and social contributions of organizations but also the effects of organizational activities. Notably, the primary motive was to establish an accountability mechanism for investors.

The triple reporting system aims to expand the stakeholder knowledge on the company and set the principles required to see all the positive/adverse effects of the company activities. Thanks to these reports, firm performance and policies can be put forward qualitatively and quantitatively (Bennett, Bouma, & Wolters, 2002). Systematically reported information is re-evaluated periodically to ensure the fulfillment of expectations from organizations. When a constraint is reported as the cause of below-satisfactory results, the firm needs to correct processes that lead to unsustainable results. By so doing, firms can maintain their efforts to achieve their prescribed sustainability goals (Jackson, Boswell, & Davis, 2011). Such a report gives a message that the transparency of the internal processes will improve, thus eliminating the possible arising concerns among stakeholders due to confidential information (Jackson et al., 2011). Ho and Taylor (2007) emphasize that the company takes more responsibility for reporting, which is an indication of the company accountability in the eye of the stakeholders. In this way, the firm will be able to improve its global reputation. As time elapses, the records show that primarily large-scale companies concentrate their efforts to report their processes (Jackson et al., 2011). Managers' efforts to meet legal requirements, their belief that economic benefits can compensate for relevant costs, or their willingness to demonstrate responsibility for their stakeholders are viewed as the underlying reasons for firms to make more accurate social and environmental statements (Arowoshegbe, Emmanuel, & Atu, 2016). By sustainability reporting, the constituents who involved in the triple reporting process, including employees and external stakeholders, are able to increase their knowledge about the company and expand their relationship with other stakeholders in the company (Jackson et al., 2011). Reporting on the sustainability of a company sets up a criterion for the future of the companies and enables benchmarking with other companies (Jackson et al., 2011).

Leading global companies recognize the GRI principles as the "actual global standard" for sustainability reporting. Organizations can provide reliable information to their stakeholders. GRI's sustainability reporting guidelines consist of six main categories, namely, economic, environmental, social, product responsibility, human rights and labor practices, and decent work (Ehnert et al., 2016). Two of these categories pertain to Sustainable HRM. The first one is the category of "labor practices and decent work" that aims to reflect the quality of work and the working environment. This category includes nine key performance indicators. The second category includes "human rights" with six key performance indicators. Human rights dwell on issues such as non-discrimination or the prevention of forced and compulsory labor (GRI, 2014). These prescribed performance indicators apply to the affiliates of the companies in both developing and developed countries (see Ehnert et al., 2016).

In this vein, the sustainability-related reporting systems, based on the GRI reporting principles and performance indicators, are widespread in many countries. These reports, also known as Sustainability Reports, are prepared in various countries by organizations listed on the exchange markets of those countries. Given the Turkish setting, this study has drawn on the implementations by fifteen companies in 2014 reported by the Borsa Istanbul (BIST[2]).

[2] BIST is an abbreviation of Borsa Istanbul Joint Stock Company. It is an Exchange in which The Istanbul Stock Exchange (ISE) where the stocks are

This study aims to reveal the dimensions of Sustainable HRM systematically and, more specifically, to identify the discursive dimension of sustainable HRM fact in Turkey by examining the published reports documented by the BIST. By doing so, the study contributes to the literature by providing a better understanding of the Sustainable HRM and a guide for practitioners while carrying out sustainable HRM activities. The implementation of Sustainable HRM practices will make it more straightforward for companies to have a sustainable organizational form.

The remainder of this study is organized as follows. The next section introduces a conceptual framework of sustainability and Sustainable HRM. The following section articulates the relationship between sustainability and reporting, and elaborates on the methodology. In light of the developed guide, the researchers conducted a content analysis of the sustainability reports in the sample. Afterward, the findings were evaluated, and sustainable HRM practices, which companies declared their implementation, were determined. Finally, the study has created a Sustainable HRM guide discussed the results to explain the concept with all of its dimensions fully.

2. CONCEPTUAL FRAMEWORK

2.1. Sustainability

Elkington (1997) emphasized three fundamental dimensions of sustainability applicable in the business world and stated that the performance criteria for enterprises should be distributed along "economical," "environmental," and "social" dimensions. In other words, Elkington stated that the principles of integration with the environment, economic prosperity, and social equality should intersect, a violation of which impedes sustainability (Dyllick & Hockerts, 2002; Bansal, 2005; Wagner, 2013; Ehnert, Harry, & Zink, 2013). In support of this understanding, the PricewaterhouseCoopers[3] (2011) report emphasized the need to include economic, environmental, and social variables in all primary, strategic, and operational processes and decision-making mechanisms of firms to ensure sustainability in organizations. In a similar vein, Ingwe, Okoro, & Ukwayi (2010) conceptualized sustainability as a lifestyle, which supports equality for all aspects of nature and promotes practices related to economic, environmental, and social equality. As time elapsed, social injustice (Neumayer, 2011; Stewart, 2014; Alarcón & Cole, 2019; Ives, Freeth, & Fischer, 2020), equal opportunities in resource access (Zink, 2014), intensive consumption of goods and services in industrialized countries, the assurance social and economic development with no adverse effects on natural living conditions (Welford, 2016; Fuchs, 2017; Younis & Chaudhary, 2019) have been among the main topics discussed in the sustainability literature (Savaneviciene & Stankeviciute, 2017).

The developments in the dimensions of sustainability can be summarized as follows: According to Brundtland (1987), sustainability situates development discussions into a global framework in which consistent satisfaction of human needs is the ultimate goal. Dyllick and Hockerts (2002), on the other hand, elevated this notion to the business-world level and defined sustainability as the fulfillment of company's internal and external stakeholder (shareholders, employees, customers, pressure groups, communities, and the like) needs without compromising its ability to meet the needs of future stakeholders. For this purpose, firms have to maintain and expand their economic, environmental, and social capital base coupled with political sustainability. Based on this definition, Dyllick and Hockerts (2002) drew attention to three main points in sustainability. First, integrating short-term and long-term aspects; that is, the stock markets stipulate firms focus on short-term gains rather than to establish long-term success. Such an obsession with short-term profits is against the company's spirit of sustainability, which may satisfy the current and future interest of its stakeholders. However, firms may still prefer short-term economic gains to the costs of environmental and social degradation in the long run. The second point pertains to the integration of economic, environmental, and social aspects with the 'triple bottom line'. According to Gladwin, Kennelly, & Krause (1995) and Elkington (1997), the most critical point where sustainability differs from classical management approaches is the fact that economic sustainability per se does not suffice for a sustainable firm. Dyllick and Hockerts (2002) underlined that a narrow focus on short-term economic sustainability could be successful; however, long-term sustainability needs to be satisfied simultaneously along three dimensions. In addition, since these three dimensions of the "triple bottom line" are interrelated, it is highly likely that they can affect each other in various ways. The third point is the consumption of income rather than capital. The instinct of capital-base protection is a prevailing attitude in the business world and is widely accepted as a prerequisite for successful and responsible business administration. However, to

traded, the Futures and Options Market (VOB) and the Istanbul Gold Exchange (IAB) are united with a contract.

[3] PricewaterhouseCoopers, based in London, a firm providing multinational audit, tax and consultancy services and among the top 4 companies in the world. https://www.pwc.com/

achieve long-term sustainability, business people have to manage not only economic capital but also their natural capital[4] and social capital[5] (Dyllick & Hockerts, 2002).

Drawing on these contributions and critiques, some scholars have emphasized that the concept of sustainability encompasses the protection, renewal, and development of a system's economic, environmental and social resources (Senna & Shani, 2009); thus, companies should manage their impact on economic, environmental and social environments (Mariappanadar, 2003; Ehnert, 2009; Ehnert & Harry, 2012).

2.2. Sustainable Human Resources Management

Extant research shows that (Lees, 1997; Boudreau & Ramstad, 2005; Boudreau & Lawler, 2014), efficiency-oriented worries guide the HRM practices in most organizations. In other words, the implementation of HRM activities (selection, training, and development of employees, evaluation of their performance, and the like) aims internal efficiency. Despite its contribution to the organization's efficiency, adhering solely to these HRM activities may harm psychological and social issues related to third parties or stakeholders, such as the well-being of employees, their families, and communities. In a similar vein, some scholars argue that HRM activities have an impact on externalities such as environmental, social, and humanitarian aspects (Mariappanadar, 2003, 2012; Biglan, 2009; Avery & Bergsteiner, 2011). Primarily, organizational failure to adopt the social cost (material / moral adverse effects it has on society) of its operations and practices may yield undesired outcomes. For example, HRM practices intervene in employees' daily life to achieve organizational goals, thereby forcing them to sacrifice their non-work activities (e.g., leisure time, quality time with family members, and the like) (Greenwood, 2002; Mariappanadar, 2012). The negative external influences have urged further discussions on the concept of Sustainable HRM and led to widening the scope of efficiency-oriented HRM activities. In other words, scholars use the concept of Sustainable HRM as a tool to explain the negative externalities of organizational practices, to ensure an understanding of social issues, and to achieve a sustainable social goal (Mariappanadar, 2012). In the light of the developments mentioned above, Sustainable HRM means the adoption of HRM strategies and practices that not only render economic, environmental and social goals achievable but also provides to control the undesirable side effects and negativities in the long term both inside and outside the institution (e.g., Ehnert, 2009; Kramar, 2014; Ehnert et al., 2016).

According to Kramar (2014), the sustainability studies in HRM literature mainly revolve around three domains. The studies in the first group concentrate on the economic outcomes and sustainable competitive advantage, stressing the capability reproduction activities, and the internal ramifications of the HRM policies (Wilkinson, Hill, & Gollan, 2001; Wilcox, 2006). The second group of studies focuses on the social and environmental health and emphasizes the visible results (Mariappanadar, 2003; Branco & Rodrigues, 2006), including broader performance outcomes (environmental and social) primarily. The studies in the last group are called connections (Avery, 2005; Avery & Bergsteiner, 2011). This group examines the interplay between HRM and managerial practices, and their economic, environmental, and social consequences. Companies view responsibility activities as a moral concern. In other words, the studies in this group examine the interaction between HRM activities and environmental sustainability in terms of various internal and external outputs with a keen consideration of the context.

There are semantic difficulties in establishing sustainability and HRM linkage. Therefore, scholars approach Sustainable HRM with different perspectives and models (Kramar, 2014). The review of Sustainable HRM from different perspectives are summarized in Table 1.

[4] Dyllick & Hockerts (2002) explain natural capital in two ways. The first one is renewable (e.g., wood, fish, corn) or non-renewable (e.g., fossil fuels, soil quality, biodiversity) resources used in economic processes. Secondly, it is defined as tools that serve the ecosystem (e.g., preventing climate change, water treatment, soil improvement, reproduction of plants and animals).

[5] According to Dyllick & Hockerts (2002), social capital is divided into two as human capital and societal capital. Human capital is about the talent, motivation and loyalty of employees and business partners. Societal capital includes the quality of public services, such as a good education system, infrastructure, or a culture that supports infrastructure and entrepreneurship.

Table 1: Models and Perspectives on Sustainable HRM

Authors	The Focus of the Research	Related Applications
Gollan (2000)	Employee aspirations, needs, and, potentials should be the primary concern in the workplace. If there is a wide gap between the employer discourse and the workplace reality, the qualified and enthusiastic workforce may intend to quit. Sustainable HRM is a unidimensional concept.	Work arrangements, technology utilization, customer/supplier relations, multi-skilling & job redesign, production processes (teamwork, total quality management, training, and appraisal).
Zaugg, Blum, & Thom, (2001)	Sustainable HRM is based on three main goals: increasing employment, increasing individual responsibility using participatory leadership systems, and ensuring an appropriate work-life balance for employees. There is an individual-oriented approach.	Employability, promote individual responsibility, work-life balance.
Ehnert (2009)	Sustainable HRM is considered as a macro and micro level phenomenon.	*Micro-level (internal processes):* Productivity oriented practices, cost reduction, efficient and effective resource deployment, value creation; to make organizational resources and human resources sustainable, balancing resource consumption and resource reproduction; *Macro-level (external influence and causes)*: Responsibility to society, the need to provide legitimacy, employee welfare, social welfare, life quality.
De Prins (2011 cited in Rompa, 2011, pp. 16-18)	Sustainable HRM has been addressed based on four different perspectives. In this way, it focuses on establishing a strong relationship between organizational strategy and environment, utilizing efficiently from and approaching respectfully to the organizational workforce.	*Psychological perspective:* Stimulate dialogue with the employees, Support employees in their work-life balance, engage employees in decisions that affect them, policies targeted at the prevention of stress, flexible working opportunities, educational support; *Sociological perspective:* diverse workforce, employees' health, and safety, volunteer work, engagement policies, family-friendly personnel policies; *Strategic perspective:* recruitment, employee turnover, employee appraisal, and employability; *Green perspective*: eco - friendly employee behavior, green employer branding, environmental awareness training, promotion of environmentally sustainable behavior
Kramar (2014)	The outcomes of Sustainable HRM can be measured by evaluating individual, organizational, social, and ecological outcomes. HRM processes have negative and positive effects on different stakeholders.	*Organizational outcomes:* Quality of employment relationship, health and well-being of the workforce, and organizational productivity; *Individual outcomes:* Job satisfaction, motivation, work-life balance, organizational commitment, turnover rate; *Social outcomes:* being recognized among a range of potential sources of labor, being an employer of choice, the quality of relationships at work; *Ecological outputs:* Awareness in the use of resources such as energy, paper, water; production of environmentally friendly products and services; reduction of business travel-

		related costs.
De Prins, Beirendonck, De Vos, & Segers (2014)	Sustainable HRM is a form of personnel management, which respects the workforce and strikes a balance among the interests of employers, employees, and society. In the study, the "Respect, Openness, and Continuity (ROC)" model facilitates the implementation and dissemination of Sustainable HRM practices.	*Respect (seeking people in HRM):* Talent, employee loyalty, empowerment, health and well-being, employee participation; *Openness (HRM from the outside):* Diversity (diversity management), the aging workforce, work-life balance, environment, stakeholders, labor market; *Continuity (Long-term perspective):* Employability, career, succession, learning organizations, workplace innovation.
Järlström, Saru, & Vanhala (2016)	A four-dimensional sustainable HRM model has been introduced, including justice and equality, transparent HRM practices, profitability, and employee well-being. Despite its broad scope, the study neglected environmental responsibility.	*Justice & equality:* Diversity management, ethical values, exemplary behavior of managers, and obeying laws and regulations; *Transparent HR practices:* Recruitment and allocation of human resources, competence development, rewarding, career planning, employee participation, and open two-way communication, flexibility, and individuality (working hours, leaves, rewards, distance work, holidays, retirement); *Profitability:* Integration of organizational strategies and HRM, proactiveness in actions, long-term thinking, HR/managers' knowledge/experience; *Employee well-being: Preventing the exploitation of the employees, meeting their physical and mental demands, preventing the damage of the business relations of the employees with their managers and colleagues. Leadership style of managers (approachable, trustable, motivating)*
Tabatabaei, Omran, Hashemi, & Sedaghat (2017)	A Sustainable HRM model is proposed based on the Balanced Scorecard. The model focuses on economic and social practices.	*Learning and growth perspective:* Purposeful HR training and development, long-life learning, equal opportunity, equal opportunity for individual's growth; *Internal process perspective:* Developing sustainable working systems (developing human resources and raising new ones, protecting them from poor working conditions), fair reward systems, and motivating incentives compatible with sustainability goals, change toward sustainability, ensuring the training of human resources. *Stakeholder perspective:* Dialogue spaces for stakeholders, increasing employability, health and safety of human resources, work-life balance, control of negative externalities of HRM; *Value creation perspective:* Organizational reputation, social legitimacy, sustainable competitive advantage, increased productivity, and lastly, attraction and retention of skilled, motivated, and committed HR.

3. METHODOLOGY

Having aimed to explore the sustainable HRM practices in the Turkish setting and reveal the dimensions of the concept, this study has drawn its sample from the sustainability reports of the focal firms. The sampling frame of the study consists of the firm reports that conform to the BIST Sustainability Index between 2014 and 2016. The selection criteria are threefold. First, the companies quoted on the Borsa Istanbul are institutionalized organizations. Second, these organizations are obliged to document their activity reports and sustainability reports transparently. Third, also most importantly, they are subject to the Sustainability index appraisals established in BIST in 2014. All combined, these features evince that they take the issue of "sustainability" more seriously than other business enterprises. Accordingly, fifteen companies in the 2014-2015[6] period and twenty-nine companies in the 2015-2016 period were audited and included in the BIST sustainability index. While some companies published their sustainability reports online, others documented the report content in web sites to the target audiences under different headings. However, some organizations' reports were not available. Under these constraints, thirty-six available reports have constituted the sample of this study.

The research was carried out in two stages: In the first stage, the GRI G4 Sustainability Guidelines were examined in terms of "HRM" and a "Sustainable HRM practices guide" was created for analysis. In the second stage, the sustainability reports were subjected to content analysis in line with the guide created, and the data were digitilized by the indexing method.

In the content analysis, the textual meanings are systematically and objectively determined by unfolding their communicative aspects (Prichard, Jones, & Stablein, 2004). To achieve this procedure, a researcher gathers similar data under certain concepts and themes and presents it to the reader in an understandable way. While doing so, the initial step is data codification. Having examined the coded data, the researcher tries to divide them into meaningful sections/categories (Campopiano & De Massis, 2015) such as words, sentences, or paragraphs (Insch, Moore, & Murphy, 1997; Neuman, 2007). In this respect, Strauss and Corbin (1990) articulate three types of coding methods (cited in Yıldırım & Şimşek, 2016, pp. 244–246): The codification according to pre-determined concepts, the data-driven codification, and the coding in a general framework.

Given that this study relies on a sustainability guide, the first method applies to this study. Accordingly, each of the standardized Global Reporting Initiative principles was examined one by one, and all variables that may be related to Human Resources Management were considered as "Sustainable Human Resources Management" variables according to several keywords, codes, and meanings. Based on this procedure, the researchers have defined the Sustainable Human Resources Management along the economic, environmental, and social dimensions with a total of thirty-two variables. While classifying each item (by word, code, and meanings), the researchers assigned each variable to the most appropriate category. In case a bilateral representation potentially leads to confusion, the researchers omitted the variable from the coding, which increased the category validity (Insch et al., 1997).

Accordingly, all HRM-related variables, which constitute one of the economic variables specified in the Sustainability Guide, are considered as variables representing the "Economic Dimension of Sustainable Human Resources Management" according to several keywords, codes, and meanings (Table 2). A similar procedure was followed for the environmental and social variables. In sum, the researchers have identified the variables that represent the "Environmental Dimension of Sustainable Human Resources Management" (Table 3) and "Social Dimension of Sustainable Human Resources Management" (Table 4).

Table 2: Words, Codes, and Meanings Representing Economic Dimension

Sub dimensions and indicators	Code and Meanings
Employee-oriented expenses (Rewarding / Remuneration)	
1. Employee wages (G4-EC1)[7]	*EC1 (code) * Employee salaries * Retirement salaries * Dismissal payments *Insurance Payments
2. Fringe benefits (G4- LA2)	*LA2 (code), * Benefits, * Life Insurance, * Health Care, *Retirement right, *Disability and invalidity coverage *Stock ownership *Housing, *Interest-free loans, *Public transport assistance, *Educational grants, and *Redundancy payments.
3. Employer-provided retirement plan (G4-EC3)	*EC3 (code), * Retirement plans, * Individual Retirement, * Compensation plans
4. Offering wages above the minimum wage (G4-EC5)	* EC5 (code), * Local Minimum wage, * Entry level wage, * Salary, * Wage

[6] The date of preparation and first audit of the sustainability reports

[7] The measurement statements specified in the table are based on the Global Reporting Initiative (GRI) G4 Guidelines. For example, the meaning of the code 'G4-EC1' in the guideline is explained as "economic value created and distributed". Codes and meanings are the units that facilitate the scanning of variables in the report.

5. Employee protective arrangements and expenses (G4-EC2)	* EC2 (code), * Climate * Risk management, * effect on the workforce (e.g., the effect on health: temperature-related discomfort and diseases, *The necessity to change operation locations
Society oriented expenses	
6. Voluntary donations, investments for the benefit of the society (G4-EC1)	* EC1 (code), *Voluntary * Volunteering, * Donation, * Grant, * Charities, * Events

Table 3: Words, Codes, and Meanings Representing Environmental Dimension

Sub dimensions and indicators	Code and Meanings
1. Protecting the natural environment (G4- EN13)	* EN13 (code) * Partnerships, * Protection, * Habitat, * Nature, * Organizing and directing human resources to environmental activities, *habitats that are under the protection of the organization or which the organization has restored
2. Raising employee awareness (G4-EN6-9-19)	*EN6, * EN9, * EN19 (code), *Organizations' policies to get green (environmentalist) behavior to their employees, *energy and water use and *reduction of emissions
3. Avoiding harm (G4-EN34)	* EN34 (code), * Dialogue with local external stakeholders, *Grievances, *Conflict, * Environmental impact

Table 4: Words, Codes, and Meanings Representing Social Dimension

Sub-dimensions and indicators		Code and Meanings
Performance Indicators Related to the Quality of Work Environment		
Basic Human Rights	1- Investment contracts compatible with human rights articles (G4- HR1)	*HR1 (code), *Human rights
	2- Prevention of child labor (G4- HR5)	*HR5 (code) *Child Labor, *Human Rights
	3- Prevention of forced or compulsory labor (G4- HR6)	HR6 (code), *Forced labor, *Compulsory labor, *Child Labor, *Human Rights
	4- The existence of a grievance mechanism on human rights (G4- HR12)	*HR12 (codes), *Local community, *Complaint *Grievance mechanism
	5- Evaluation of human rights activities (G4- HR12)	* HR12 (code), * Human Rights, * Evaluation, *Assessment
	6- Maternity and Paternity Leave (G4- LA3) (G4- LA3)	*LA3 (code), *Maternity leave, *Paternity leave
	7- Compliance with minimum notice periods regarding operational changes (G4-LA4)	* LA4 (code), *Operational changes, *Notice periods
	8- Right to freedom of association and collective bargaining (G4- HR4)	* HR4 (code), *Collective Bargaining, *Association
	9- Suppliers' efforts to prevent negativities in labor practices (G4- LA15)	*LA15 (code), *Supplier, *Health and Safety Practices, *Mobbing, *Industrial Relations, *Wages and other payments, *Working Hours, *Employment practices, *Evaluation,
	10- Labor practices grievances mechanism (G4- LA16)	*LA16 (code), *Complaint, *Grievances *Business ethics
Occupational Health and Safety	11- Occupational health and safety committees formed with the participation of employees (G4- LA5)	*LA5 (code), *Occupational health and safety, *Committee / Team, *Responsibility, *Participation

	12- Evaluation of health and safety cases (G4- LA6-7)	*LA6-LA7 (code), *Deaths, *Accident frequency rate, *Occupational disease rate, *Lost Day rate, *Absenteeism rate, *Occupational accident rate, *Injury, *Serious diseases
	13- Contracts with unions cover health and safety issues (G4-LA8)	*LA8 (code), *Union, *Health and Safety *Contract
Diversity Management	14- Workforce diversity (G4- LA12)	*LA12 (code), *Gender, *Position, *Age group, *Nationality, *Minority etc. *Classification of employees according to different variables
	15- Equal remuneration for men and women (G4- LA13)	*LA13 (code), *Salary, *Wage / Remuneration, *Equality, *Gender
Social Relations	16- Operations with local community engagement (G4-SO1)	*SO1, *Participation, *Stakeholder Meetings
	17- Violation of the rights of the local community (G4- HR8)	*HR8 (code), *Local community, *violations
Performance Indicators Related to Staffing		
	1- Employee turnover and characteristics of new hires (G4- LA1)	*LA1 (code), *Distribution of new hires by age, gender and regions, *Employee turnover, *Recruitment, *Employee leaving
	2- Employment from the local community to senior management (G4-EC6)	* EC6 (code), *Local, *Employment, *Governance
Performance Indicators Related to Employee Development		
	1- Offering employees with training and education opportunities (G4- LA9)	*LA9 (code), *Education rates, *Education, *Training
	2- Lifelong learning opportunity for workforce continuity (G4-LA10)	*LA10 (code), *Career, *Talent Management, *Lifelong learning, *Support, *Courses, *Educational Opportunities, *Paid study permits
	3-Regular performance and career development evaluation (G4- LA11)	*LA11, *Performance Evaluation, *Performance Management *Career
	4- Training employees in human rights policies and procedures (G4 HR2- HR7)	*HR2, *HR7 (code), *Human Rights, *Education

As a result, the economic dimension, the environmental dimension, and the social dimension, with its three sub-dimensions, included six, three, and twenty-three variables, respectively. Following the Global Reporting Initiative (GRI) standards, the researchers have identified these variables as representing human resources.

Drawing on the guidance presented in Table 2, Table 3, and Table 4, the researchers conducted a content analysis of all reports in the sample. While digitizing the content analysis, the researchers have applied the indexing technique, which, as a popular method, measures the extent of adherence to GRI indicators (see Parsa & Kouhy, 2008; Ehnert et al., 2016). Accordingly, the specified variables are scored based on a precise rule. The scoring process took place on a dual basis. For each variable, the "1" score was assigned if it was mentioned in whole or in part, and "0" if it was not mentioned. Some firms provided additional information such as "not reported," "not disclosed," and "not applicable" if they did not refer to the relevant items. Such expressions were also counted as “not disclosing” and assigned as “0” points. A comparable score was then calculated for each of the relevant Sustainable HRM variables. The calculated score was obtained by dividing the total score of the variable that was reported by the companies to the highest possible score (Parsa & Kouhy, 2008; Ehnert et al., 2016).

$$\text{Calculated Score} = \frac{\text{the total score of the variable reported actually}}{\text{the highest potential score}} x100$$

The reliability of the content analysis depends on the reliability of the coder and coding categories (Creswell & Clark, 2011). Intercoder reliability means that two different coders code the same content similarly, or the same coder recodes the same content similarly in a different period and shows excellent consistency. The reliability of the categories pertains to the precise definition and exposition of the categories. The two stated reliabilities are closely related, and if the categories are not defined reliably, the coders will have low reliability. Insch, et al., (1997) state, in this regard, that the reliability of the content classification varies according to the registration units. According to the authors, a given study that concentrates on specified words and expressions has higher reliability than a study that uses paragraphs as the unit of analysis.

The analysis units were systematically explained in Table 2, Table 3, and Table 4 to strengthen the reliability of the report review in this study. During the classification of the data and content analysis, reliability concerns were tried to be minimized by mostly using codes, words, and expressions. Comparison/repeatability opportunities were created for future studies with the guidelines prepared for the examination of sustainability reports. Thus, the study aimed at a high level of reliability. Creating such guidelines increases reliability due to the use of the same categories and rules (Insch et al., 1997).

The first author's codings based on the guidelines have yielded 95% and 94% of consistency for 2014-2015 and 2015-2016, respectively. During the second coding round, a different coder has coded according to the same guide. The coder responses in a matrix form and the checks of response-compatibility enabled to compare the results of the two rounds. The comparison denoted 91% and 85% of compatibility for 2014-2015 and 2015-2016, respectively. The conflicting responses became reevaluated after a meeting with the second author to reexamine them. After further assessment, the compliance increased to 95% and 90% for the focal temporal brackets.

Qualitative data sampling requires qualitative validity, which can be measured by comparing data from different sources (e.g., transcripts and images) or different individuals. If the inferences drawn from existing texts are based on inferences, comments, or texts from previous studies, content analysis is valid (Creswell & Clark, 2011; Krippendorff, 2004). Weber (1990) defines the face validity in the content analysis as the conformity between the definitions of the researcher and the categories used to measure them. Since GRI provides standardized and detailed guidelines for reporting, companies are not allowed to make excessive subjective evaluations in their reports (Ehnert et al., 2016). This ensures that the superficial validity of the study is high. Semantic validity is that coding units make similar semantic associations (Weber, 1990). Persons familiar with the subject have semantic validity if they put the coding units in terms of language and meaning in the same categories. Based on the GRI principles, categories, and coding units, we can talk about an external compromise in the categories and code units of the guides created accordingly, which is considered sufficient for semantic validity.

4. FINDINGS AND DISCUSSIONS

Table 5 exhibits the distribution of the reporting rates for economic, environmental, and social dimensions of Human Resource Management related topics of Sustainability reports belonged to the periods of 2014-2015 and 2015-2016. An overall interpretation of the table shows that the representation of all three dimensions in the reports is satisfactory. However, the rate of the companies reporting in the 2014-2015 period to include variables that address human resources (85.22%) is higher than the 2015-2016 period (80%, 95). This shows that firms provided more detailed data/evaluations during the first reporting periods. Of course, an important issue that should also be emphasized here is that the reports do not prove the desired level of implementations of these practices in focal companies. To understand whether the company practices are at the desired levels, instead of discourse that represents employer insights, one should take into account employee opinions about practices.

Table 5: Reporting rates of Sustainable HRM dimensions in GRI Reports

Sustainability Dimensions Reported by Companies		**2014-2015 (%)***	**2015-2016 (%)***
Economic		97,16	85
Environmental		74,66	77,66
Social	Quality of Work Environment	87,24	84,35
	Staffing	70,5	64,5
	Employee Development	93,75	91,75
	Total	85,22	80,95

Findings within the Scope of Economic Dimension

"Economic dimension" embraces various economic support and investments by the organization in favor of its stakeholders. Six performance indicators of the economic dimension are associated with human resources management. These indicators can be divided into [8] "employee-oriented" and "society-oriented" (See Table 6). Firms report their situation within the framework of these indicators. As can be understood from the findings, the firms reporting for the first time presented more detailed data/evaluations within this scope. While the economic indicators expressed in the reports for the period of 2014-2015 are 97.16% on average, this rate decreases to 85% for the 2015-2016 period (See Table 5).

Table 6: Basic Performance Indicators Regarding Economic Dimension

Economic Dimension and HRM	**2014-2015 (%)***	**2015-2016 (%)***
Employee-oriented expenses (Rewarding / Remuneration)		
Employee Wages (G4-EC1)	100	96
Fringe benefits (G4- LA2)	100	92
Employer-Provided Retirement Plan (G4-EC3)	83	67
Offering wages above the minimum wage (G4-EC5)	100	67
Employee protective arrangements and expenses (G4-EC2)	100	92
Society-oriented expenses		
Voluntary donations, investments for the benefit of society (G4-EC1)	100	96

An employee-oriented economic performance indicator, "wages, side benefits, and supports provided by the organization to its employees" (e.g., pensions, insurance, company vehicles, private health insurance, public transport aids, educational scholarships, housing benefit) is an indicator of economic well-being and essential factor that increases employees' intention to stay in the company (Freitas, Jabbour, & Santos, 2011;Mariappanadar & Kramar, 2014; Cleveland et al., 2015). Another economic activity carried out on behalf of the employees is "offering wages above the minimum level." Providing wages above the minimum level will strengthen the relationship between the organization and society, ensure loyalty for employees, and attract potential employee candidates to the organization. The minimum wage is also a factor that positively affects the validation of organizational activities by society (Chapman, Uggerslev, Carroll, Piasentin, & Jones, 2005; Cleveland et al., 2015; Vihari & Rao, 2018). Sustainable firms will try to make a payment above the minimum wage, by which employees can meet their basic needs (e.g., food, shelter, service, clothing, health, and education) and maintain their lives in a dignified way. Another performance indicator evaluated accordingly is the provision of a pension plan for employees. Thus, employees will be able to live without worry about their long-term economic well-being. This will be a source of a reputation for the company (Chapman et al., 2005; Vihari & Rao, 2018) and will make employees more productive in the workplace (Cleveland et al., 2015). The latest performance indicator considered in this context is to protect employees against various changes. Within the scope of sustainability, organizations are also expected to carry out protective and remedial activities from the adversities of climate changes in their work environments, and hence employees. Such activities include practices/precautions and expenses to reduce the adverse effects (temperature-related illnesses and diseases) of climate change on employee health and other adverse effects of changing the locations of activities. According to the researches, due to the activities that the companies will perform in this context, the employees view their companies as attentive, kind, and helpful (Hur, Moon, & Choi, 2019), which leads to an increase in their motivation and organizational commitment.

By taking the employee-oriented performance indicators in economic dimension holistically, the following situation emerges: The explanations on the wages, benefits, and support provided to the employees and investments to protect the employees have been very high in the reports in both periods, and this can be considered as a very satisfactory situation. The rate of firms reporting for the other two indicators (paying above the minimum level and providing a pension plan) related to employees was significantly lower than the reporting made for other indicators, especially in the second period. In other words, the number of companies offering their employees a pension plan and trying to show that they pay more than the minimum wage is extremely low. This situation causes employees to have difficulties in meeting basic living standards.

The other performance indicator in the economic dimension is *society-oriented* and generally related to the corporate social responsibility activities of organizations. Social responsibility activities are expressed as optional practices of an organization targeting at different stakeholder groups to ensure social welfare (Hur et al., 2019). The voluntary donations, support, and grants made by the organization and its employees to external factors (e.g., non-governmental organizations, charities, funds for the

[8] This distinction was created in this working process. There is no such distinction in the GRI system

development of social infrastructure, social programs, arts, and education activities) evaluated within this scope are expenses focused on the development of the society. Opportunities for employees to gain practical experience in sustainability initiatives significantly increase not only their knowledge but also their interest and commitment to sustainability (Haugh & Talwar, 2010). Social responsibility activities of the companies for the external environment ensure that the employees are proud of the company of which the right image maintain in the society (Hur et al., 2019). Increasing the level of respect for employees for their institutions may lead to a more robust corporate identity understanding (Hameed, Riaz, Arain, & Farooq, 2016). Voluntary donations and investments made by institutions for the benefit of the society have been very high in the reports in both periods, and of course, this can be considered as a satisfactory situation.

As it is evaluated generally, it is understood that firms are sensitive about transferring resources for social activities. Expenses for voluntary investments for the benefit of the society is encouraged by the state through various mechanisms (e.g., deducting the expenses from taxes to be paid). Naturally, in the emergence of this result, there could be a significant share of that is being promoted.

Findings within the Scope of Environmental Dimension

The review of the HR literature has yielded several HR variables under the dimensions of Protecting the Natural Environment, Employee Awareness, and Avoiding Harm, which indicates the use of the natural environment and its resources (Wagner, 2011; Muster & Schrader, 2011; Sivamoorthy, Nalini, & Kumar, 2013; Marpa & Juele, 2016). The reason for the grouping is that the environmental principles in the guide mostly include terms and statistical expressions outside the HRM field.

Table 7: Basic Performance Indicators Related to Environmental Dimension

Environmental Dimension and HRM	2014-2015 (%)*	2015-2016 (%)*
Protecting the natural environment (G4- EN13)	58	71
Raising employee awareness (G4-EN6-9-19)	83	79
Avoiding harm (G4-EN34)	83	83

Whether in the field in which the organization operates or not, the programs, which aim natural habitat protection and giving the least harm to the environment by using environmental resources balanced and efficient, can facilitate the legitimacy of the organization (Wagner, 2011). Marpa & Juele (2016) states that natural and human-centered disasters have become worse with people's unconscious behavior, and it is not possible to eliminate such disasters. The authors go on to state that the basis of minimizing the negative impact of people on nature is to create awareness through education, and they emphasize that environmental awareness in individuals is an expectation of our zeitgeist. Sivamoorthy, Nalini, & Kumar (2013), on the other hand, advocate that raising awareness among individuals per se does not suffice; beyond that, environmental awareness should be supported with environmentally friendly practices. The GRI principles draw attention to this issue. Accordingly, while conducting its activities, the organization should be aware of the importance of the water and energy it uses for the local community and prepares programs to raise employee awareness. Another critical issue is the programs that are intended for reducing harmful gases and emissions to avoid environmental damage. Reducing emissions and greenhouse gases are regulated by the "United Nations Framework Convention on Climate Change" and "Kyoto Protocol". As a result, various incentives and rewards are offered by the states. Turkey's climate change policy in this context was regulated with Turkey Climate Change Strategy[9] (2010-2023) and Turkey National Climate Change Action Plan[10] (2011-2023) documents. Environmental activities are essential for public health, so they contribute to the organizational reputation.

Generally speaking, this dimension was reported less about Human Resources Management when compared with the economic and social dimensions. Similar situations also arise in report reviews in other countries (e.g., Vanderstraeten, 2015). This is so because Sustainable HRM is generally considered as a socio-economic issue by companies (Kramar, 2014), and environmental issues are approached as a technical issue. Therefore, environmental indicators are often specified in reports by presenting numerical data (e.g., carbon footprint, greenhouse gas emission) and not associated with human resource management activities.

[9] See. https://www.gmka.gov.tr/dokumanlar/yayinlar/Turkiye-Iklim-Degisikligi-Stratejisi.pdf
[10] See. http://www.dsi.gov.tr/docs/iklim-degisikligi/ideptr.pdf?sfvrsn=2.

Findings within the Scope of the Social Dimension

In the literature, the variables (such as employee recruitment, training, rights, work safety and health, representation, behaviors towards employees, working environment conditions), which Sustainability and Human Resources Management are mostly associated with, are gathered under this dimension. This dimension is evaluated in this study with 23 indicators in total within the sub-dimensions of "Quality of Work Environment," "Staffing," and "Employee Development" to establish a healthier relationship with HRM functions. The reporting rates of performance indicators determined according to the GRI guide, which we consider under these three dimensions, are given in Table 8.

Table 8: Basic Performance Indicators Related to Social Dimension

Sub Dimensions	**2014 2015 (%)**	**2015 2016 (%)**
Performance Indicators Related to the Quality of Work Environment		
Basic Human Rights		
Investment contracts compatible with human rights articles (G4- HR1)	83	83
Prevention of child labor (G4- HR5)	100	79
Prevention of forced or compulsory labor (G4- HR6)	92	75
The existence of a grievance mechanism on human rights (G4- HR12)	92	100
Evaluation of human rights activities (G4- HR12)	83	79
Maternity and Paternity Leave (G4- LA3)	92	88
Compliance with minimum notice periods regarding operational changes (G4-LA4)	58	46
Right to freedom of association and collective bargaining (G4- HR4)	83	83
Suppliers' efforts to prevent negativities in labor practices (G4- LA15)	100	92
Labor practices grievances mechanism (G4- LA16)	100	100
Occupational Health and Safety		
Occupational health and safety committees formed with the participation of employees (G4-LA5)	100	100
Evaluation of health and safety cases (G4- LA6-7)	92	96
Contracts with unions cover health and safety issues (G4- LA8)	75	79
Diversity Management		
Workforce diversity (G4- LA12)	100	100
Equal remuneration for men and women (G4- LA13)	100	100
Social Relations		
Operations with local community engagement (G4-SO1)	100	92
Violation of the rights of the local community (G4- HR8)	33	42
Performance Indicators Related to Staffing		
Employee turnover and characteristics of new hires (G4- LA1)	83	83
Employment from the local community to senior management (G4-EC6)	58	46
Performance Indicators Related to Employee Development		
Offering employees with training and education opportunities (G4- LA9)	100	100
Lifelong learning opportunity for workforce continuity (G4-LA10)	100	100
Regular performance and career development evaluation (G4- LA11)	100	100
Training Employees in Human Rights Policies and Procedures (G4 HR2- HR7)	75	67

Quality of Work Environment

A pleasant work environment should offer competitive wages, ensure trust and cooperation between employees and managers, adopt the idea of equality and justice for everyone, and provide employees with achievable goals and reasonable workload

(Agbozo, Owusu, Hoedoafia, & Atakorah, 2017). Work environments have physical, psychological, and social aspects, which are intertwined. Issues such as the office designs, occupational health, and safety are physical; factors that affect how employees feel are psychological; factors covering human rights, such as discrimination based on age, gender or racial past, and sexual harassment, are the social environment subjects. Thus, the work environment accommodates sustainable organizations in which not only social sensitivities but also physical and psychological employee-health are among primary concerns. On the other hand, focusing on the factors considered in the GRI principles, the quality of the work environment can be evaluated with four sub-titles as regulations on fundamental human rights, occupational health and safety, diversity management, and social relations.

An alignment between essential human rights and organizational activities appears as a strategy to reduce the investment risk of the organization. According to Ehnert et al., (2016), the reputation of an organization, whose records are contaminated with human rights violations, may be damaged, thus negatively affecting stakeholder investment. Wong (2017) states that the protection of human rights from a Sustainable HRM perspective is essential for ensuring the firm's social legitimacy. On the contrary, he states that it will leave an impression of a negative organizational image in society. In support of both authors, Cahaya & Hervina (2019) state that global stakeholders expect companies to demonstrate good human rights behaviors (e.g., the right to organize and collective bargaining, policies against child labor), and as a result, firms will both make economic profits (attracting investors) and guarantee to be sustainable. It means that they will gain and also be sustainable.

For this reason, Cahaya & Hervina (2019) state that making investment agreements on human rights issues and working with companies that have undergone human rights reviews is an important measure. It is seen that the reporting on this subject, except for a single performance indicator, is quite satisfying in both periods, slightly more satisfactory in the first period. The fact that the reporting is deficient on “Complying with the minimum notice periods related to the activity changes” appears to be alarming.

Performance indicators of *occupational health and safety* are related to the elimination or reduction of health problems and occupational risks that workers are exposed to due to the physical environmental conditions in the workplace (Agbozo et al., 2017). OSHA (2016) states that employers can be genuinely sustainable only when they ensure the safety, health, and well-being of their employees. Establishing committees with managers and employees together makes it easier to establish and improve the health and safety culture in the organization (Haugh & Talwar, 2010; Hirsig, Rogovsky, & Elkin, 2014). Otherwise, when the employees experience a severe injury that will cause long-term absenteeism in the workplace, the employees will not be able to be replaced easily, which will cause the companies to experience a significant decrease in their productivity (Hirsig et al., 2014). Also, official agreements between unions and firms on health and safety help to create a positive health and safety culture within the organization due to bilateral binding. In this context, although the reporting is generally very high in both periods, it is seen that reporting on the performance indicator of “Contracts with unions covers health and safety issues” is significantly lower. This case, unfortunately gradually (Erikli, 2018; Kağnıcıoğlu & Etci, 2019; Palaz & Poyraz, 2019) can be interpreted as a result of increasing rates of non-unionization in the business life in Turkey.

Workforce diversity gives information about the human capital of the organization. Gender wage equality is vital for keeping qualified employees in the organization. In cases of wage inequality, the organization loses its reputation and may face legal sanctions based on discrimination. Successful diversity management may lead to high levels of employee creativity and problem-solving capability (Mazur, 2015). It is pleasing to see that companies have made detailed reports on this issue.

As a reflection of the importance of companies for the development of a country, “operations carried out with local community participation” and “violations of the rights of the local community” are evaluated within the scope of social relations. The interests of different stakeholder groups are frequently brought to fore within the definitions of sustainability. For example, Tabatabaei et al., (2017) express sustainability as an effort to establish a constructive, continuous and purposeful communication between the organization and other parties, placing importance on the interests of different stakeholder groups. Similarly, Arreola (2015) states that a strong relationship with society should be established to prevent social violations, to manage the existing and potential effects of organizational activities on the local community, to determine social expectations and needs. Cahaya & Hervina (2019) states that the earnings they achieved by violating the rights of the local community threaten the sustainability of the companies. Although the reports contain a vast amount of information on “operations with local community involvement”, there is quite a little information on “violation of the rights of the local community”. According to Tarquinio, Raucci, & Benedetti (2018), firms emphasize such indicators less in their reports, as the state takes several measures (e.g., laws, standards, audits) against human rights violations.

Staffing

As economies increasingly rely on knowledge, the demand for qualified staff is increasing (Ehnert & Harry, 2012). "Employee turnover and characteristics of new hires" are expressed as an indication of how skilled organizations attract qualified staff (See App, Merk & Büttgen, 2012). However, demographic factors such as the aging population and low birth rate restrict the employability of skilled employees needed for the company's sustainable competitive advantage (Lis, 2012; Mak, Cheung, Mak, & Leung, 2014). Sustainability offers HRM a new way to tackle such challenges. For example, a study conducted in the USA by Renwick et al., (2016) shows that job seekers are more interested in environmentally supportive jobs, and many prefer green-friendly employers. However, this raises the question of "is the situation so innocent as it seems?" Because if the company can spend money on environmental concerns, it means that it can provide employees more wages and benefits (Ehnert, Harry, & Zink, 2013). It is seen that in both period reports about the employee turnover rate and the characteristics of new hires, given information is about 80%.

Another indication for staffing is "employment from the local community to senior management". In the society in which firms operate, the employment of the local community to the senior management will significantly improve the relations between the organization and the society; thus, mutual needs will be easily identified. Cohen et al., (2012) express the employment of international companies from the local community as an indicator of loyalty towards that society. Thus, employees familiar with the culture and business processes of that region join the company. Local employment also promotes business continuity, lowers costs, and enables building relationships with local stakeholders. Reporting on this issue is at a low level in both periods. The reason for this, even though they have foreign partners, can be expressed that almost all of the reporting organizations are Turkey-centered.

Employee Development

Scholars state that firms must provide their employees with learning opportunities and support them to generate new ideas to ensure sustainability (Klein, 2004; Harry, 2014). In support of this, Tabatabaei et al., (2017) described the training of human resources as a new injection of blood into the veins of the organization. This allows employees to adapt to the changing environment. Education is a fundamental task for organizations and is a continuous and permanent process that should be maintained throughout the life of individuals (Ehnert, 2009). By engaging in training, performance evaluation, and career management processes, companies ensure that employees contribute to the organization's strategic goals. Within the scope of training employees at work, evaluating their performance, and managing careers, there are satisfactory data/evaluations in the reports in both periods. However, it can not be said that the explanations in the reports on "Providing training to employees on human rights policies and procedures" are sufficient. This lack seems to be a reflection of the overall emphasis given to human rights in Turkey (Graham & Woods, 2006; Kuzey & Uyar, 2017).

5. CONCLUSION

As a face-paced domain, Sustainable HRM has attracted scholarly interest, which aims to contribute to the literature by analyzing institutional sustainability reports that may prove useful to publicly demonstrate the extent of a firm's desire sustainable HRM (Ehnert et al., 2016). In light of these insights, this study has concentrated on firms quoted to BIST Sustainability Index in the Turkish setting, revealed how much space they allocated for Sustainable HRM practices in their reports, and explored the extent of their sustainability implementations. The study has followed such a method based on the premise that extracting HRM practices from sustainability reports contributes to our understanding of Sustainable HRM structure and practices.

In this study, a content analysis was carried out under the guidance of GRI principles by grouping HRM-related practices under economic, environmental, and social dimensions. Such categorization efforts are considered to be the most appropriate way of validity and reliability in terms of reviewing sustainability reports systematically and making comparisons in future studies (Insch, 1997; Creswell & Clark, 2011; Neuman, 2007; İlgar & İlgar, 2013).

Although the data related to economic, environmental, and social dimensions are widely used in sustainability reports, the use of these three dimensions is not very common in HRM and sustainability literature (Ehnert et al., 2016). Scholars usually address a single dimension of sustainability and overlook the remaining two dimensions (Ehnert et al., 2013; Guerci & Pedrini, 2014; Ehnert et al., 2016; De Prins, Stuer, & Gielens, 2018 'social dimension'; Wagner, 2013; Paillé, Chen, Boiral, & Jin, 2014; Ahmad, 2015 'environmental dimension'; Ehnert, 2009; App et al., 2012 'economic dimension'). As discussed before, in line with the recommendation of Elkington (1997), this study has undertaken a more comprehensive evaluation by taking into account economic, environmental, and social dimensions.

Moreover, this study has divided the time frame into two temporal brackets while analyzing firm sustainability reports in Turkey. The reporting rates for the period 2014-2015 are 83.83% for HRM-related social indicators, 97.16% for HRM-related economic indicators, and 74.66% for HRM-related environmental indicators. To determine the reliability of the study, the sustainability reports for the 2015-2016 period were included into the analysis, and despite being slightly lower than the first reporting period, the reporting rate was over 75% for every three dimensions (80.20% for HRM-related social indicators, 85% for HRM-related economic indicators and 77.66% for HRM-related environmental indicators).

The study by Ehnert et al., (2016) explored only the social dimension of the GRI principles (labor force/employment, human rights, and society) employing the sustainability reports of 2010 of 138 Forbes companies. However, their scope of analysis on sustainable HRM practices was very narrow. The measured rates are slightly lower, yet close to those in Ehnert et al., (2016) (the rate of information in the reports is 73.7% for indicators related to Labor/Employment, 65.9% for human rights indicators, and 71.9% for Society related indicators). The authors interpreted that Sustainable HRM practices do not lag behind economic and environmental practices, which means that companies do not neglect Sustainable HRM practices. Compared to the data of companies in FORBES Global (USA, UK, Canada, Australia, European countries, such as Japan), we advocate that firms in Turkey do not neglect Sustainable HRM practices.

Not surprisingly, the HRM practices in the social dimension are reported at a high rate, given that they represent the essential functions of traditional HRM. The high rate of reporting of economic and environmental HRM practices seems to reflect contemporary trends. Economic HRM practices aim for employee well-being, whereas environmental HRM strives to develop environmental awareness and increase legitimacy.

This study has deemed the existing classifications in the literature insufficient and re-grouped performance variables in the GRI reports within the scope of "HRM." Thus, it tries to unfold the link between HRM and Sustainability principles. While doing this, we have adhered to the triple bottom line (Elkington, 1997), which is viewed as an indispensable part of sustainability. The HRM activities are comprehensively included since Sustainable HRM has expanded the boundaries of traditional HRM (Mariappanadar, 2003; Ehnert, 2009; Ehnert et al., 2013; Ehnert et al., 2016).

Among the performance indicators included in the concept of sustainability, those related to HRM can be summarized as in figure 1. This demonstration summarizes the basic dimensions of the Sustainable HRM concept.

Figure 1: Sustainable HRM Structure

Economic Dimension
Employee oriented expenses (Rewarding / Remuneration)
- Rumuneration (EC1,5)
- Fringe benefits (LA2)
- Pension opportunities (EC3)
- Employee protective expenses (EC2)

Society oriented expenses *(Social Responsibility Expenses)*
- Social responsibility expenses outside the organization (EC1)

Environmental Dimension
Awareness of employees
- Environmental policy of the organization and what has been done in this context, in order to give employees environmentalist behavior (EN6,9,19)

Protection of Environmental Resources
- Protecting the natural environment (EN13)

Avoiding Harm
- Avoiding environmental harm (EN34)

Social Dimension
The Quality of Work Environment
- Basic human rights (HR1,4,5,6,12-LA3,4,15,16)
- Occupational health and safety (LA5,6,7,8)
- Diversity management (HR3-LA12,13)
- Social relations (SO1-HR8)

Staffing
- HR procurement and selection (LA1-EC6)

Employee Development
- Education and training (LA9,10-HR2,7)
- Performance evaluation and career planning (LA10,11)

The economic dimension of Sustainable HRM consists of two main sub-dimensions: “Employee Oriented Activities” and Society Oriented Activities. The first sub-dimension means the economic value that companies offer directly for their employees, such as employee wages, benefits, and supports, retirement opportunities, and protective investments. The second sub-dimension is investments that do not directly affect company employees. It includes expenses such as grants, supports, volunteering activities etc. carried out by companies out of the organization. The environmental dimension of sustainable HRM encompasses variables, including the development of eco-friendly behavior for employees, the elevation of employee awareness, the protection of environmental resources, the introduction of grievance mechanisms to prevent environmental damage. The social dimension of sustainable HRM is addressed in three sub-dimensions: Quality of Work Environment, Staffing, and Employee Development. The safe, fair, and humane work environment is discussed under the sub-heading of “Quality of Working Environment”. The recruitment activities potential job candidates are discussed under the subheading of “Staffing”. Education, training, career planning, and performance evaluation variables, which concern both the professional and personal careers of the employees, are discussed under the sub-heading “Employee Development”.

As seen in Figure 1, we think that the internal and external roles of Sustainable HRM can be understood more straightforwardly. Scholars may use this demonstration as a guide to compare data of different years/countries, while practitioners can use it as a guide to help them conduct sustainable HRM activities in their businesses.

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PressAcademia
www.pressacademia.org/journals/rjbm
RJBM
ISSN 2148-6689
Research Journal of Business and Management YEAR 2020 VOLUME 7 ISSUE 2

AN IDENTITY EQUATION IN ORGANIZATIONAL LIFE: TURKEY CASE OF ARTICLE

DOI: 10.17261/Pressacademia.2020.1203
RJBM- V.7-ISS.2-2020(5)-p.116-127

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Date Received: April 8, 2020 **Date Accepted:** June 16, 2020

To To cite this document
Alay, H.K., (2020). An identity equation in organizational life: Turkey case of article. Research Journal of Business and Management (RJBM), V.7(2), p.116-127.
Permanent link to this document: http://doi.org/10.17261/Pressacademia.2020.1203

ABSTRACT

Purpose - The main purpose of the present study was to investigate cultural, religious and political identity differences in the role of the diversity climate perceptions, individual career outcomes and organizational effectiveness outcomes.
Methodology - The research is a quantitative research in terms of the data collection and analysis method.
Findings- It is determined that cultural, religious and political identity has a differentiating effect on perception of diversity climate, individual career outcomes and organizational effectiveness outcomes. As a result, this study which attempts to measure the perceptions shaping the attitudes and behaviors of employees with different identity structures, proceeded its tests means of quantitative research method and found its theoretical foresight supported.
Conclusion- All participants of the labor market need to understand that people are diverse and unique, and that diversities are not sufficient to justify discriminatory policies such as exclusion, marginalization and humiliation.

Keywords: Identity, cultural, political and religious identity, diversity climate, individual and organizational outcomes
JEL Codes: M10, M14, M54

1. INTRODUCTION

"Why are diversities so important for organizations?" is one of the most important questions waiting to be answered in today's business life. Diversities are important for organizations and there are many factors that reveal this importance. Among these factors are changing world dynamics, free mobility of the workforce, differentiation of the socio-cultural structures in organizational life. Especially, the changing position of women and their increasing number in business, the presence of employers from various political, religious, cultural identity and different sexual and emotional orientation. In the circumstances, organizations with uniform and homogeneous structures are replaced by organizations dominated by heterogeneous structures. In this context, organizations have to see these diversities and they must manage those diversities properly and they have to create a supportive diversity climate. Sustaining an organizational atmosphere that supports diversities would increase individual career outcomes and organizational efficiency. This situation will enable members of the organization to interact and work together in harmony. Thus, it will be opened up the acquirement of competitive advantage and long-term sustainability for organizations. For that reason, it is necessary to meet the need to manage diversities effectively.

In the 1990s, diversity management has been brought to the agenda with the studies carried out in USA. Diversity management is based on the idea that employees, who differ in many aspects such as ethnic identity, culture, sexual and emotional orientation, appearance, disability, educational status, lifestyle should be managed in a way that they work in harmony, add value to the organization and provide competitive advantage (Thomas, 2010,3). This idea suggests that when diversities are managed in a proper way, it will make a positive effect in both individual and organizational outcomes.

An important issue that comes up with the diversity management is the perception of diversity climate. Diversity climate is an important issue for labor force differences and it has become wildly popular in recent years. As it is well known, organizational

climate is about employees' perception regarding their working environment. On the other hand, the diversity climate is related to the employees perception the opportunities or obstacles the organization offers who are considered different within the organization.

According to Cox, the diversity climate is the overall perception by which employees think that their organizations put policies, practices and procedures into practice for the elimination of discrimination as well as the enhancement and protection of individual differences. Cox (1993,35) in his book Cultural Diversity in Organization, presented his model of transactional diversity climate and examined it under three factors. These are categorized as: *Individual factors* - identity, prejudice and discrimination, stereotypes, personality - *group/intergroup factors* - cultural differences, ethnocentrism, group conflicts - and *organizational factors* - organizational culture, structural integration, human resources system. Cox (1993,35), who argues that the perceived diversities at work has an impact on individual and organizational outcomes, classifies these outcomes as follows: Individual career outcomes include factors such as *job and career satisfaction, organizational commitment, promotion status, job performance ratio*. Organizational effectiveness includes factors such as *efficiency, quality of work, creativity and innovation, absenteeism, intention to quit, communication and harmony between employees, market rate, feasibility of objectives*. Cox's model has blazed the trail for many studies related to diversity climate (Thomas, 2010; Orlando, 2000; Prahalad and Bettis, 1986; Gilbert et al., 1999; Barak, 2000; Özbilgin et al 2013; Sürvegil, 2010; Dreachslin et al., 2004; Agars and Kottke, 2004; Richard, 2000; Mckay et al. 2009; Yeo, 2006).

This study addresses the diversities at the individual level in the context of identity structures. Previous studies largely focused on identity differences originated from gender and ethnicity. This study examines individual identity differences in the context of cultural identity, political identity, religious identity in Turkey as a developing country with various cultural structures and identities. As one of the main problems in developing countries, the fact that minorities in the working life are exposed to discriminatory, exclusive and marginalizing practices, and the scarcity of laws and regulations increases the significance of this topic. The study evaluates how employees with different identities perceived the diversity climate in their workplaces. Then, it focuses on the effects of differences in identity structures on individual outcomes such as organizational commitment and job satisfaction as well as organizational outcomes such as intention to quit, communication and collaboration between employees, behavioral innovation and organizational performance. The outcomes subjected to examination were selected based on a previously conducted meta-analysis study.

2. LITERATURE REVIEW

2.1. Diversity Climate

Hyde and Hopkins (2004,61) define the concept of diversity as the degree of heterogeneity of employees within the organization. The diversity climate, which has been a very popular subject recently, is "the overall perception by which employees think that their organizations put policies, practices and procedures into practice for the elimination of discrimination as well as the enhancement and protection of individual differences" (Lauring and Selmer,2011). Empirical research on the diversity climate is quite limited. Present studies typically focus on in its precursors rather than the consequences of the diversity climate. The first study on the diversity climate was conducted by Kossek and Zonia (1993,12). The aim of this study is to enhance the representation of minority groups within the organization. The second important study is about scale of diversity climate. The perception of diversity climate scale was developed by Mor Barak et al. (1998,23). This scale assesses the extent to which an institution supports diversities to provide an inclusive and fair climate, based on social identity and intergroup relations theories.

According to Sliter (2014), the diversity climate in an organization reflects the common perceptions of employees regarding the results of various forms of workplace harassment and discrimination against diversities. From this point of view, organizations with a positive diversity climate do not show tolerance towards harassment and discrimination, while organizations with a negative diversity climate overlook marginalization, harassment and discrimination of others. Pitts and Wise (2010) state that the diversity climate consist of the psychological climate (perceptions, attitudes and beliefs about diversities) and behavioral climate (ways of interaction of different racial and ethnic groups in a given environment). From this perspective, the concept of diversity climate covers the whole of attitudes, perceptions and beliefs developed against diversities between groups in the work environment.

2.2. Identity Structure

Identity acquires its meaning as the answer given to this specific question 'Who am I?'. In addition, identity have attempted to define it within the framework of the individual life and considerations (Bauman, 2017,25). Every person has an identity, which cannot be limited to the information contained in the official records. Foremost among them are belongings. This sense of belonging could be felt towards a nation, an ethnic and religious group, a more or less large family, a vocation, an institution, a certain social circle, a city, a village, a sports team or professional organization, a group of friends, a union, a political party, group of people sharing the similar sexual orientations or similar physical disabilities, a community got harmed by same negative effects. The list is quite long and even unlimited (Maalouf, 2018, 16). Each of these has different degrees of significance. Certainly none of them are pointless. They are defined as the genes of the soul, provided that it is known that most of them are not innate. They are also the building blocks of personality. Personality is one of the main factors that determine identity.

As Milan Kundera aptly explains in his classic aphorism, the identity of any person comes into being his existence hurts. This aphorism proves that at every stage of life, people have some attitudes towards their belonging and wounds that determine the hierarchy between them (Mollaer, 2014, 8). People do not forget when they are persecuted because of their religion, when they are humiliated or mocked because of their skin color or accent. Identity consists of a wide variety of belongings, but at the same time, identity is a phenomenon in which we experience it as a whole. According to Maalouf, ''a person’s identity is not the result of successive juxtaposition of some self-ordained belongings, identity is not a patched rag bag, it is a pattern drawn on a stretched canvas'' (Maalouf, 2018, 26).

2.2.1. Cultural identity

Our cultural identities formed by the culture itself are the focal point of the social identities we belong to. The power of our cultural identity shows the degree of importance we attach to our culture while defining ourselves (Gudykunst, 2015,23). The cultural identity of the people in America reflects the degree to which they identify themselves as Americans whereas the fact that Turkish people describe their cultural identities by referring to their sub-cultures actually indicates its multicultural structure. In this context, if one attempts to classify cultural identity in Turkey, ethnic-based identity structures such as Turkish, Kurdish, Armenian, Laz, Greeks, Romany, Caucasian, Arabic, Bulgarian, Bosnian, Pomak and Albenian ethnicities. In comparison with other minorities, the most crowded ethnical and cultural identity in Turkey is Kurdish identity.

2.2.2.Political identity

Individual identities are under the domination of collective identity. Individuals attempts to participate in social life by displaying an essentialist attitude are also resistance against the impositions of social identity. This resistance testifies to the effort for the affirmation of individual existences in overall society. In this context, the melting pot in which individual identity and collective identity intertwine is political identity (Pamuk, 2017, 90).

Another aspect that shapes political identity of Turkish population is ideological perspective. It is also accepted that religious identity plays a role in the construction of political identity. In this context, when people classify political identities in Turkey they use categories such as nationalist, conservative, liberal, democrat, socialist and anarchist (Cotton, 2017.98).

2.2.3. Religious identity

Religion has been one of the most important institutions affecting individuals and societies since the beginning of human history. Societies has always believed in a religion, albeit in various ways, and performed religious rituals. Although its exact number is not known today, it is thought that there are about five thousand religions and sects in the world (The Book of Religions, 2014).

There is no single form for religion. Every religion has different forms of meaning. Religion itself is open to different interpretations. In this context, Islamic identity also cannot be interpreted as a monolithic structure. People who believe in the same God in their faith creates different religious ways by their interpretations formed in their deeds and life practices. It testifies that Sunni Muslim and Shia Muslim (Alevism), two different forms of Islam, construct different forms of meaning in different geographies (Pamuk, 2017: 68-69). Alevis composes the largest segment among religious minorities in Turkey. (Minority Right Group International 2011 Report). Other religious identities that continues their existence in Turkey are Jews, Christians, Assyrians, and Yazidis.

Although they take different forms, religious arrangements and rituals determine the lifestyle of the society and the individual, and encompass all areas of the society. But modern societies emphasize that religion should take a backseat in the public sphere. However, it is wrong to consider modern societies completely anti-religious, secularist and materialist. Because, even though it has been thrown into the background, religion remains as a significant part of daily life by undergoing different changes. In other words, large-scaled social transformations in modernity prompted traditional religious structures to evolve into a new understanding of holiness (Arslan, 2015: 55-72). In this context, different religious identities such as atheism, deism, agnosticism, paternalism and materialism become increasingly popular.

2.3. Individual and Organizational Outcomes

In the literature, we frequently encounter in organizational life the concepts related to the individual and organizational outcomes. It is obvious that diversities in identity are related to outcomes such as job satisfaction, organizational commitment, the intention to quit work, the environment for communication and cooperation, behavioral innovation, organizational performance, yet this relationship has not been adequately studied. The issue of job satisfaction as the summation of various elements like wages, the physical working conditions (Lawler, 1976, 345), all the positive and negative characteristics regarding the level of success, the awards given for these achievements, the relationships maintained with colleagues and managers because of this work (Blum and Naylor, 1986,128), is mostly connected with different identities such as diversities in tenure, employment status, age, income and gender. However, other identity diversities have not been taken into account. Organizational commitment (Smith et al. 1983,23), defined as the degree to which an employee embraces the values and goals of a particular organization, and the desire to invest in the organization in the long run and remain a member of it, has been studied more in the context of racioethnicity, gender and age. The intention to quit (Tett & Meyer, 1993, 259; Vandenberghe et al. 1998,1314), which reflects a subjective decision that employees would consider leaving their organization if they are not satisfied with their working conditions, has been also evaluated with similar identity diversities. Communication and cooperation, as the fundamental and compulsory functions of any organization, have been associated with diversities such as employment status, human resource practices, language and religion. Behavioral innovation, which enables the formation of an innovation culture among individuals, teams and management circles, has been associated with the frequency of innovation proposals that employees would generate as a result of original thinking/behavior, managerial attitudes towards innovation proposals, and the methods that management takes in adopting innovations (Yavuz, 2010,143). Organizational performance (Ensari et al. 2016) defined as the compilation of many variables such as communication and collaboration between employees, culture of the organization, corporate policies and practices, leadership structure, the environment for creativity and innovation, organizational climate with high organizational commitment is mainly associated with demographic diversities.

In this framework, this study is an attempt to provide an alternative model in the literature by considering the individual career outcomes and organizational effectiveness outcomes in the context of diversities in cultural, political and religious identities.

2.4. Conceptual Framework and Hypotheses

Theories and conceptions play a guiding role in explaining the research topics. Accordingly, the fundamental theories and institutions on which the diversities are based in the Social Psychology and Behavioral Science literature are listed as "Social Identity Theory, Intergroup Relations Theory, Symbolic Interactionism Theory, Social Categorization Theory, Equality Theory, Ethnic Identity Theory". Social Identity Theory and Equality Theory contribute significantly to the creation of our conceptual framework since its model focuses on identity structures among employees.

Social identity theory is one of the fundamental theories of social psychology trying to explain the behaviors between groups, group memberships and processes for group formation. People tend to divide others into groups and give superiority to their own group. The underlying reason is the tendency for people to make positive self-assessment. When people construct this positive self-assessment they consider their own group as superior and identify themselves with this group. At this point, the concept of social identity comes to the forefront. Social Identity Theory, developed by Henri Tajfel and John Turner in the mid-1970s, explains this concept in the most comprehensive way. They called as minimal group paradigm, demonstrates the fact that even normally non-existent artificial groups are sufficient for people to favor their own groups, affirming their superiority. If we evaluate this situation in terms of working life, the dominant or minority status of the groups brings along a series of individual and organizational advantages and/or disadvantages.

Similar to the social identity theory, Equality Theory, Adams (1963,430) argues that the individual perception for equality is not independent from the values and norms of his/her social group. Every individual has a learning story. However, to the extent that he/she learns the same values, social norms, the same language and culture from the group he/she belongs, his/her psychological responses become similar to theirs. In this context, individual identity testifies to one's existence. Individual identity affects our world of thought, our social status and our working life.

There is a common point upon which these theories that diversities in individual identity have some consequences for individuals and organizations.In this framework, the perception for diversities among minority and majority groups differ in terms of their identity structures within organization life. On the one hand, minority groups are considered as the group that increases the value of the workforce, while the dominant majority is seen as the source of resistance to change. In this case, leaders who manage to balance them are building multi-participatory heterogeneous organizational structures with an organizational climate that would benefit from diversities (Freeman and Huang, 2014,305). Ellemer and Rink (2016,39), in their research they focused on diversities in terms of gender and ethnic identity, indicate that heterogeneous business groups are more creative, innovative and have more qualified performances compared to homogenous groups. On the other hand, they emphasize that not all diversities have equal benefits and advantages, and their study result could take many forms and ways.

It is determined that the perception regarding organizational support for diversities has a positive relation with individual outcomes such as organizational commitment, job and career satisfaction (McKay et al. 2007; Gonzalez and Denisi, 2009; Buttner et al. 2019); and a negative relation with organizational outcomes such as intention to quit, absenteeism, conflict, and performance (Mc Kay et al. 2008; Boehm et al. 2014; Kaplan et al. 2011; Madera et al. 2016, Ensari et al. 2016). On the other hand, Avery et al. (2013) in their study found that women and minorities lose the chance to land a job due to prejudices regarding their identity and are directly disqualified in recruitment processes. A similar study reveals that psychological contract violations occurred among employees with different ethnic identities in the USA are related to the awareness and perception regarding racial and other diversities in identity. If minorities have a positive perception regarding justice, organizational commitment and communication-oriented cooperation increases however, by contrast if the same perception is negative, efficiency decreases and the intention to quit increases (Buttner et al. 2010,321).As a result of this views, basic predictions of this study is that the diversities in the identity structures of the employees affect individual and organizational outcomes. Individual outcomes includes job satisfaction and organizational commitment; organizational outcomes consists of intention to quit, communication and cooperation environment, behavioral innovation and perceived organizational performance. In this study, identity structures of employees are evaluated in three categories, respectively cultural identity, religious identity and political identity. Based on the preceding discussion, the following two hypotheses:

H_1:Identity structures of employees have impact on individual career outcomes.

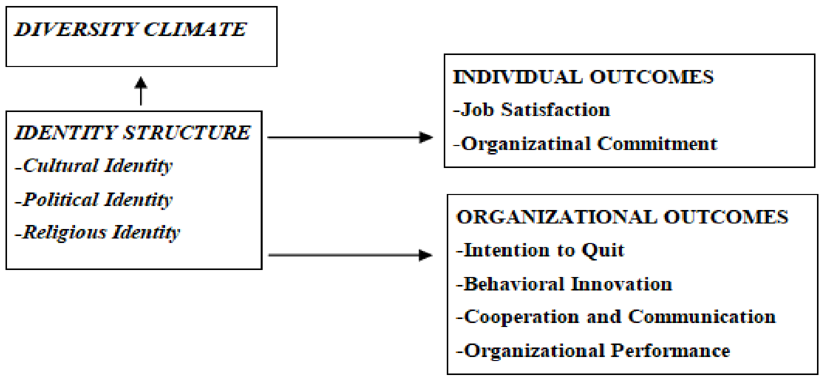
H_2: Identity structures of employees have impact on organizational efficiency outcomes.

According to Akerlof and Kranton, *people's identities define who they are and their social categories, describing their instant, daily interactions for several years, lifelong and generations* (2016, 16). As a result of these interactions, individuals define, evaluate and classify themselves by taking into account the social group they belong to. Thus, they identify with the group in which they placed themselves. This identification constitutes the social identities of individuals (Turner, 1985, 89). Identity structures differ in many contexts such as gender, age, marital status, educational background, sexual orientation, ethnicity, religious belief, political or ideological view.

According to Mead's (1934, 21) Symbolic Interactionism Theory, employees attach meaning to the organization according to the results of social interactions they experience in the organization. The meaning attributed to the organization itself contributes to the formation of the perception regarding this climate. In this context, the diversity climate is a metaphorical concept that explains the interaction between minorities and others within the organization.When organizations develop and establish policies, rules or practices, some of them pay attention to employees' satisfaction, while others simply choose to pursue their own interests. However, each employee develops various attitudes and behaviors against organizational practices that directly or indirect (somehow) affect himself and other employees. In this regard, the opportunities and obstacles offered to those defined as “others” within the organization determine the formation of diversity climate perception (Sürvegil, 2010).In this context, the diversities in the identity structures of the employees affect the perception of the diversity climate within the organization. Based on the preceding discussion, the following hypothesis has been developed:

H_1: Identity structures among employees have a differentiating effect on the diversity climate perception

Figure 1: Research Model



3. DATA AND METHODOLOGY

3.1. Sample

The sample of the study consists of 532 employees from different sectors in Istanbul. The reasons for choosing Istanbul as the sample area can be listed as follows:

- Istanbul is a metropolis hosting the greatest proportion of Turkish labor force
- Istanbul is a city that enables the cohabitation of people with different cultures and identities
- Istanbul is the engine of Turkish economic development
- Istanbul draws immigration to a very a great extent.

By means of the snowball sampling method, the study reached these sample size and sent a survey via mail and 534 of these group responded to this survey. After identifying 2 missing and incorrectly coded questionnaires, 532 employees were included in the research. Frequency distribution was examined in order to define distribution of employees identity. In this context, the distribution of employees' identity orientation diversities can be seen in Table 1:

Table 1:Frequency Distribution of Identity Structures

IDENTITY STRUCTURES		Frequency	Percentage
Cultural Identity	Turkish	274	51.5
	Kurdish	173	32.5
	Immigrant	43	8.1
	Armenian	42	7.9
	Total	532	100
Religious Identity	Sunni Muslim	300	56.5
	Alevi	72	13.5
	Atheist	64	12.1
	Deist	53	9.9
	Christian	22	4.1
	Agnostic	21	3.9

	Total	532	100
Political Identity	Conservative	60	11.2
	Nationalist	75	14.2
	Social Democrat	136	25.6
	Liberal	94	17.6
	Socialist	167	31.4
	Total	532	100

The resulting distribution of cultural identity in our data is in parallel with Turkey's cultural structure. Similarly, distribution of religious identity is also in parallel with the social structure in Turkey as demonstrated by the fact that Sunni Muslims constitute 60% of the population. It was expected that the number of Christians and Armenians would be close but almost half of Armenians are Deist in terms of their religious identity.

3.2. Measures

Diversity climate scale was developed by McKay Avery and Morris (2008) which contains 4 items. *Organizational commitment scale* was developed by McKay et al. (2007) which contains 4 items. *Job satisfaction scale* was developed by Brimhall, Lizano and Mor Barak (2014) which contains 4 items.*Intention to quit work scale was developed by* McKay, Avery, Tonidandel, Morris, Hernandez, and Hebl (2007) which contains 2 items. *organizational performance scale* was developed by Erdem, Gökdeniz and Met (2011) which contains 7 items.*perception for the communication and cooperation environmentscale* was developed by Avcı (2005) which contains7 items. B*ehavioral innovation scale* was developed by Wang and Ahmed (2004) which contains 4 items. The reliability coefficients of the scales used in the research are over 0.80.

3.4. Analysis

The research is a quantitative research in terms of the data collection and analysis method. In the test of our research model, Explanatory Factor Analysis method was used to evaluate the validity of the scales.Cronbach Alpha (α) model was used in reliability analysis. Independent Sample T-Test and One Way Analysis of Variance (ANOVA) are used to examine whether the identity structures of employees have a differentiating effect on the variables in the research model and Sheffe and Tukey-B Tests to find the origin of the difference. In the event that the Sheffe and Tukey-B Tests from the SPSS analysis did not yield any findings, we also made evaluations by looking at the mean differences. Prior to analysis, we determined classifications in the data set as follows: For cultural identity categories are Turkish and others (Kurdish, Armenian, Immigrant); for religious identity they are Sunni Muslim and others (Alevi, atheist, deist, Christian); and for political identity they are conservative + nationalist, social democrat + socialist and liberals.

3.5. Results

Explanatory factor analysis was performed on the items of the all variables of the research model. Two measures were used to test the fit between the data and the factor analysis to be performed: Bartlett Test of Sphericity (BTS=1850.649 for diversity climate, BTS(= 2130,649 for organizational effectiveness outcomes, BTS=1501,928 for individual career outcomes; p <.00) and Kaiser Meyer Olkin (KMO value for the overall variable was over the 0.80,indicating a very good fit of factor analysis). Cronbach's alpha value is 0.918 for job satisfaction and 0.941 for organizational commitment. The Cronbach's alpha value is 0.906 for behavioral innovation; 0,904 for communication and collaboration environment; 0.976 for intention to quit work; and 0.943 for perception of organizational performance. Cronbach's alpha value is 0.870 for diversity climate 0.870. This result indicating excellent internal consistency. Table 1 present result of the ANOVA (including the F-test and significance levels) and Independent t-Test for the overall scale as well as for each of the variables in the research model. Table 2 is the complement of the Table 1, presenting the means that showed significant differences for the interaction.

Table 2: Results of Anova and Independent t-Test

Independent Variable	Diversity Climate	Job Satisfaction	Organizational Commitment	Intention to Quit	Cooperation and Communication	Behavioral Innovation	Organizational Performance
Political Identity (F value)	14,67**	17,81**	13,84**	15,37**	4,47*	6,23*	2,65*
Cultural Identity (t value)	4,15*	4,1*	3,83*	2,68*	1,74*	2,38*	3,3*
Religious Identity (t value)	5,78*	4,26*	4,65*	5,68*	2,64*	3,47*	3,47*

*p<.05. **p<.01

With respect to research model, which deals with political identity differences in the diversity climate perception, Table 2 indicates that on average, conservative+nationalist employees (M=3.22) had more positive perceptions than social democrat+socialist employees (M=2.74). Religious identity in the diversity climate perception, sunni muslim employees (M=3.58) had more positive perceptions than others (Alevi, atheist, deist, Christian M=2.36). Cultural identity in the diversity climate perception, Turkish employees (M=3.92) had more positive perceptions than others (Kurdish, Armenian, Immigrant M=2.98). A similar trend was revealed with respect to individual outcomes (Job satisfaction and organizational commitment) and organizational outcomes (intention to quit, cooperation and commucnication, behavioral innovation, performance).

Table 3: Mean Differences of the Independent Variables

Independent Variable	Diversity Climate	Job Satisfaction	Organizational Commitment	Intention to Quit	Cooperation and Communication	Behavioral Innovation	Organizational Performance
Political Identity							
Conservative+Nationalist	3,7261	3,7848	3,8326	3,3217	3,5217	3,9152	3,7118
Liberal	3,0053	3,2044	2,9851	3,0263	3,0263	3,2123	3,5764
Social Democrat+Socialist	2,7481	2,642	2,4924	2,1432	2,4432	2,8466	2,4405
Religious Identity							
Sunni Muslim	3,585	3,3558	3,6142	3,225	3,3495	3,2975	3,6381
Others	2,3653	2,8772	2,6455	2,5841	2,1318	2,445	2,4865
Cultural Identity							
Turkish	3,9279	3,8695	3,846	3,4949	3,7238	3,96	3,9997
Others	2,9884	2,9109	2,7171	2,7868	2,1811	2,0203	2,4363

4. DISCUSSIONS

The goal of the present study was to investigate cultural, religional and political identity differences in the role of the diversity climate perceptions, individual career outcomes and organizational effectiveness outcomes. Integrating insights gleaned from a variety perspectives especially social identity theory and equity theory, we developed hypotheses concerning the relationship between employees' identity differences on the diversity climate perception, job satisfaction, organizatonal commitment, intention to quit, cooperation and communication, behavioral innovation, performance.

It is determined that cultural identity has a differentiating effect on perception of diversity climate, individual career outcomes and organizational effectiveness outcomes. In general, Turkish employees have a usually positive perception regarding the diversity climate. However, it is shown that the perceptions of employees who have Kurdish, Armenian and Immigrant cultural identities united in the category of others are significantly lower than Turkish employees.. For example, if we evaluate the negative perception among Kurdish group, it can be said that factors such as nationalism and alienation/marginalization are effective in this outcome, as Altun (2013, 78) stated in his research focused on the transformation of Kurdish identity into the Kurdish problem. Similarly, it can be said that Armenian employees have been subjected to discrimination due to both their ethnic origins and religious beliefs. In terms of individual career outcomes, Turkish employees have higher job satisfaction and organizational commitment compared to others. Likewise, Turkish employees who have higher job satisfaction and organizational commitment in terms of organizational outcomes have lower intention to quit from work, their perceptions about communication and collaboration environment are usually positive, their behavioral innovation perceptions are usually positive, and they have usually positive perception on organizational performance. It can be said that this situation is a natural result of the differentiation of perceived diversity climate according to cultural identity. When employees categorized as others/minority have negative perception regarding the diversity climate, it also increases the likelihood that they think their working environment as unfair, they have low confidence in management, do not have a sense of belonging to the organization and feels dissatisfaction, thereby increasing their intention to quit job. Various studies examining the impact of race and ethnicity on the perception of diversity support these results (Prahalad and Bettis, 1986; McKay et al. 2007; Cordova and Cervantes, 2010; Armenta and Hunt, 2009; Ely and Thomas, 2001; Ragin et al. 2012; Chua, 2013; Buttner et al. 2012; Chin,2010; Ellemers & Rink, 2016). Buttner and Lowe, (2017, 179), stated that discriminatory and unfair practices increase their intention to quit of minority employees in workplace. In a similar study conducted with migrated workers in Australia and focusing on diversities in ethnic identity, it was found that the positive diversity climate affects their working attitudes, increases their emotional commitment and positively affects their psychological capital (Newman et al. 2018, 1).

It has been determined that religious identity has a differentiating effect on the perception of diversity climate. Sunni Muslims usually consider their working environment as an even factor supporting and showing respect to diversities. It is determined that the other religious groups, Alevi, Deist, Atheist, Agnostic and Christian workers, have occasionally positive perception regarding the diversity climate. It is determined that the organizational commitment of Sunni Muslim employees is usually high. It is found that organizational commitment and job satisfaction of employees belonging to other religious identities are occasionally low and their intention to quit is usually high. In terms of Turkish social structure, religious diversities in business life could bring about a series of negative consequences. It is difficult to determine the number of employees harassed or marginalized because of their religious identity in Turkey. However, as it is known, the practices of religious beliefs in the workplaces might cause tensions. There are strong findings indicating a negative perception towards other religious identities and the presence of sectarian conflicts in Turkey.On the other hand, there is discrimination against Alevis in the workplaces (Kayabaş & Kütküt, 2011). Alevis' complaints regarding the discrimination they encounter are usually answered with the response of "oppressive tolerance". This means that all complaints of discrimination, all reminders for diversities are quietly slided over or completely denied. Besides the increasing presence and popularity of deists in Turkey is considered as the softened version of atheism by the government and religious institutions. They are also subjected to negative criticism (Girit, 2018).

It is determined that political identity has a differentiating effect on the perceived diversity climate. In addition, these differentiating effects have influence on both individual career outcomes and organizational effectiveness outcomes (except organizational performance). In this context, it is determined that employees with conservative + nationalist political identity have generally positive perception of the diversity climate, higher job satisfaction and organizational commitment compared to other identities. It is also determined that employees with social democrat + socialist identity occacionally have a positive perception on diversity climate, usually low job satisfaction and low organizational commitment. This situation is interpreted as a result of the transformations in the structural form of post-modern societies. Nowadays, the concept of "class inequalities" declines and gives way to inequalities and antagonisms shaped by the distribution of political power (Aktaş, 2011, 210). Given the fact that political power shapes perception, attitudes and behaviors in working life, the result of this research is not a coincidence: Employees of conservative + nationalist political identity have high individual career outcomes and organizational effectiveness outcomes and they diversity climate perception is usually positive. This finding coincides with the fact that political power suppresses, ignores and silences others as Heller and Feher (1988) stated in their book, "The Postmodern Political Condition".

As a result, this study which attempts to measure the perceptions shaping the attitudes and behaviors of employees with different identity structures, proceeded its tests b means of quantitative research method and found its theoretical foresight supported.

5. LIMITATION AND FUTURE RESEARCH

There are several limitations of this study. The most important difficulties we encountered during the process of data collection in this study are the political and economic developments of Turkey during this same period, and employees refusing to respond or refuse to participate in the research because they have the fear and anxiety of losing their jobs.

It is also found that the participants who did not hesitate to express their gender, age, educational status, marital status which are described as superficial differences, -were concerned about giving information about their political identity, cultural identity and religious identity. The majority of associations, religious institutions and non-governmental organizations refused to participate in this study for inseure structure of Turkish society.

Furthermore, it is important to note that the social norms in the country, causing employees to be afraid to explain their sexual orientation, have a very negative impact on the data collection process.

Last limitation may be regarded as the way that the survey is conducted. Online surveys make the data collection easier but it can lower the sincerity of the answers. . For this reason, it is presumed that the participants gave correct answers to the questions.

For a further study a research can be conducted on different identities and also different variables. . In addition, future studies could apply large-scaled studies for quantitative, qualitative or mixed research methods.

6. CONCLUSION

All participants of the labor market need to understand that people are diverse and unique, and that diversities are not sufficient to justify discriminatory policies such as exclusion, marginalization and humiliation. First and foremost we have to admit that people have equal rights despite their diversities. As a requirement of the modern managerial approach, it is necessary to focus on topics such as the function of leadership, career management and mentoring, training for diversity and sensitivity, employees' realm of freedom in order to reduce discrimination in working environment, to manage the diversities properly and create a supportive diversity climate.

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