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CONTENT

THE EVALUATION OF THE TOTAL QUALITY MANAGEMENT IN PRIMARY EDUCATION SCHOOLS ACCORDING TO THE OPINIONS OF THE TEACHERS AND ADMINISTRATORS

Sinan Tartar[1], Saduman Kapusuzoglu[2]

[1]Milli Eğitim Bakanlığı, Bolu-Merkez-Sarıcalar Özel Eğitim İş Uygulama Merkezi. sinantartar@mynet.com
[2]Hacettepe University. saduman.kapusuzoglu@hacettepe.edu.tr

ABSTRACT

The purpose of this research is to investigate the opinions of teachers and administrators related to the total quality management applications carried out in primary education schools. In accordance with this purpose, the opinions of the teachers (n=202) and administrators (n=74) have been gathered by the scale consisted of four dimensions and developed by Oter (2006) and the data was analyzed and assessed by statistical techniques (Mean, Mann-Whitney U, Kruskal-Wallis). As a result it was found that teachers and administrators have agreed on the sub-dimensions (Acceptance of TQM philosophy, Appropriateness of school structure, High level support for TQM applications, Establishment of TQM system) of Total Quality Management. There was no significant meaningful difference among teachers and administrators related to sub-dimensions with duty. There was no meaningful difference among the teachers with gender. There was meaningful difference with work duration among the opinions of teachers.

Keywords: Primary education, teacher, administrator, administration, total quality management
JEL Classification: I20, I21, L15

İLKÖĞRETİM OKULLARINDA TOPLAM KALİTE YÖNETİMİ ÇALIŞMALARININ ÖĞRETMEN VE YÖNETİCİ GÖRÜŞLERİ DOĞRULTUSUNDA DEĞERLENDİRİLMESİ

ÖZET

Bu araştırmanın amacı, ilköğretim okullarında yürütülen toplam kalite yönetimi uygulamalarını öğretmen ve yönetici görüşleri doğrultusunda değerlendirmektir. Bu amaç doğrultusunda, öğretmen (n=202) ve yönetici (n=74) görüşleri Öter (2006) tarafından geliştirilen ve dört boyuttan oluşan ölçek yoluyla toplanmış ve elde edilen veriler istatistiksel teknikler (Ortalama, Mann-Whitney U, Kruskal Wallis) yoluyla analiz edilerek yorumlanmıştır. Sonuç olarak, öğretmen ve yöneticiler TKY'nin alt boyutlarına (TKY felsefesinin yerleşme düzeyi, TKY okul yapısının uygunluğu, TKY çalışmalarında üst düzey destek olup olmadığı, TKY sisteminin kurulup kurulmadığı) katılmaktadırlar. Öğretmen ve yöneticilerin söz konusu alt boyutlara ilişkin görüşleri görev tanımına göre anlamlı bir farklılık göstermemektedir. Cinsiyet değişkenine göre de öğretmenleri puanları arasında anlamlı bir farklılık yoktur. Kıdem yönünden ise, öğretmenlerin görüşleri arasında anlamlı bir farklılık görülmüştür.

Anahtar Sözcükler: İlköğretim, öğretmen, yönetici, yönetim, toplam kalite yönetimi
JEL Sınıflandırması: I20, I21, L15

1. GİRİŞ

Kalite kavramının içeriği belirlenirken, farklı referanslarda değişik tanımlarla karşılaşırız. Türkçe Sözlük'te kalite, Fransızca kaynaklı olarak gösterilmiş ve tek sözcükle "nitelik" biçiminde tanımlanmıştır. Niteliğin tanımı ise, "varlıklar arasında bulunan ve nicelikle ilgisi olmayan ayrımları şu ya da bu bakıma göre oluşturan durum, bir şeyin nasıl olduğunu belirten durum" betimlemesiyle yapılmıştır (TDK,1979). İngilizce sözcüklerde, kalitenin karşılığında önceki tanımlarla birlikte, "bir şeyin yetkinlik derecesi" ifadesinin de yer aldığı görülmektedir (Neufeldt, 1990, aktaran: Aksu, 2002). Dr. K. Ishikawa'ya göre kalite, en ekonomik, en kullanışlı ve her zaman

tüketiciyi tatmin eden ürünün üretilmesidir (Muluk vd., 2000). ISO 8402 Kalite Sözlüğünde ve ISO 9000 serilerinde kalite; açıkça belirtilen ve ifade edilmemiş gizli ihtiyaçları tatmin edebilme konusunda bir yeteneğe sahip olan mal/veya hizmetin özellik ve karakteristiklerinin, görülebilir ayırıcı niteliklerinin toplamıdır (Halis, 2000). Amerikan Kalite Kontrol Derneği ise kaliteyi, "bir mal ya da hizmetin belirli bir gerekliliği karşılayabilme yeteneklerini ortaya koyan karakteristiklerin tümüdür"şeklinde tanımlamaktadır (Bolat, 2000). Avrupa Kalite Kontrol Birliği'ne göre kalite; bir mal veya hizmetin belli bir ihtiyacı karşılayabilme yeterliliklerini ortaya koyan özelliklerin tümüdür. Bu özelliklerden bazıları boyut, biçim, kimyasal-fiziksel özellikler, ömür ve güvenilirliktir (Kovancı, 2001). Japon Sanayi Standartları Komitesi'ne göre kalite, ürün ya da hizmeti ekonomik bir yoldan üreten ve tüketici isteklerine cevap veren bir üretim sistemidir (Elif, 1999). Bugünkü anlamıyla TKY, felsefe ve ilkeler bütünü olma yanında, uygulama araçlarıyla bir yönetim biçimidir (Özden, 2000). TKY; bir kuruluştaki herkesin katılımı (employee involvement) ile süreçlerin, ürünlerin ve hizmetlerin sürekli iyileştirilmesi (continuous improvement) suretiyle iç ve dış müşteri kalite (internal/external costomer) gereksinimlerinin karşılanması ve müşteri tarafından tanımlanan kaliteyi ürün ve hizmet yapılanmasında oluşturmaya çalışan bir yönetim biçimidir (Soylu vd., 1998). TKY "İç ve dış müşteri beklentilerinin aşılmasını temel amaç olarak alan, çalışanların bilgilendirilip yetkilendirilmesini ve takım çalışmalarıyla tüm süreçlerin sürekli iyileştirilmesini hedefleyen bir yönetim felsefesi" olarak tanımlanabilir (Gürsoy ve Büyükbaş, 2002). TKY, müşterilerin ihtiyaçlarını en iyi şekilde karşılayan bir yaklaşım olduğu kadar, maliyetleri de düşüren bir yönetim tarzıdır (Turan, 1998). TKY, tüm örgüt süreçlerinin sürekli geliştirilmesine, iyileştirilmesine ve müşteri memnuniyetinin sağlanmasına yönelik, çağdaş katılımcı bir yönetim anlayışıdır (Türkmen, 1995).

Yukarıdaki tanımlar incelendiğinde, örgütler açısından yaygın bir kabul gören tanıma göre, kalite üretilen bir ürün ya da hizmetin özelliklerinin toplamı olup bunun temel belirleyicisi de müşteri beklenti ve ihtiyaçlarının karşılanmasıdır. Kısaca kalite, müşteri merkezli açıdan müşteri beklentilerine uygunluk, müşteri ihtiyaçlarının ve doyumunun karşılanması olarak tanımlanabilir. Şu halde örgütler açısından kalitenin temel belirleyicisi, müşteri olmaktadır (Şişman ve Turan, 2001). Kalitenin en önemli özelliği, etik anlamda üreticinin emeğinin, tüketicinin ise, yine emeği ile kazandığı paranın karşılığının alınmasındaki temel değer olarak taşıdığı anlamdır (Taptık ve Keleş, 1998).

TKY, dinamizme sahip, karmaşık bir örgütleme gösteren toplumsal ve kültürel yapının başta ekonomik aktiviteler olmak üzere her alanda insanların (müşterilerin) tatmin edilmesini amaçlayan bir stratejidir. Salt "mükemmellik" anlamına gelmeyen, fakat böyle bir yaklaşımla yola çıkan TKY, günümüzde sanayi alanında hedeflenen "sıfır hata" ereğini de aşarak "sürekli iyileştirme" kavramını esas almıştır (Yahyagil, 1998).

Juran, lshikawa ve Deming gibi yazarların bakış açılarına göre, bir organizasyonun temel amacı, çevresindeki toplumun istikrarına katkıda bulunabilmek, müşteriye yararlı ürün ve hizmetler üretebilmek ve organizasyonun mensuplarına tatmin ve gelişme sağlayacak bir ortam oluşturabilmek için varlığını sürdürmektir (Hardjono ve diğerleri, 1997, aktaran: Yıldırım, 2002). Bu da ancak TKY alanında uzmanlaşmış profesyonel eğitimcilerle mümkün görünmektedir. TKY'nin diğer yönetim, sistemlerinden olan en önemli farkı, her çeşit organizasyonu daha mükemmele götürebilecek, bir yönetim sistemi olarak evrensel bir kabul bulmasıdır. Bu kabulün altında yatan en önemli neden, kurumların ihtiyaçlarını, geleneksel yaklaşımlardan çok farklı bir boyutta de-ğerlendirerek oluşturduğu sentezi yaratan düşünce tarzı, yani felsefesidir (Yenersoy, 1997). TKY güçlü bir yönetim paketi olup sadece sözde kalan bir felsefe değildir. Pratikte de uygulanmaktadır. Bu yöntemde üç unsur bulunmaktadır. Birincisi; işe ilişkin mantıksal bir düşünce biçimi geliştirmek, ikincisi, kaliteyi geliştirmek için çalışanları motive etmek, üçüncüsü ise pazarlama şansını artırıcı bir şirket kültürü meydana getirmektir. TKY'nin felsefesi; gelişme ve yeni buluşlar için tüm çalışanların, analiz, problem çözme ve karar verme tekniklerinin sistematik bir biçimde kullanılmasına dayanmaktadır (Takan, 2000: 3).Toplam kalite felsefesine göre kalite herkesin işidir, yani tüm örgütün kalitesidir. Bu yeni felsefe müşteri ihtiyaçlarının ve beklentilerinin hızlı, sürekli ve hatasız olarak tüm çalışanların katkılarıyla uygun bir maliyetle karşılanmasını amaçlamaktadır (Ersen, 1997). Örgüt üyeleri arasındaki işbirliği ve samimiyet beraberinde başarıyı getirecektir. Örgütte bir takım ruhunun oluşturulması, kararların verilere dayalı olarak alınması, dürüstlük ve yanlış yapmama gibi özellikler her türlü ilişkinin temelini oluşturmaktadır (Özdemir, 1996). Toplam kalite yönetimi, düşünen, sorgulayan, koşullara uyum sağlayan ve bunların sonucunda kaliteyi yaratan bir yönetim olarak anlaşılmalıdır (Düren, 2000).

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Eğitim örgütlerinde TKY kültürü belirlenir ve yerleştirilirse insanlar birbirlerinin davranışlarından beklentilerini anlayabilir, hangi davranışların doğru, hangilerinin yanlış olduğuna daha iyi karar verebilir ve ilişkilerini ayarlayabilirler. Yönetici-öğretmen-yardımcı personel ve öğrencilerin kendilerinin kararlarına ve davranışlarına rehberlik eden normlara, değerlere ve prensiplere sahip olmaları gerekir. Bunlar, onlara yeni durumlarla karşı karşıya kaldıklarında o durumu en iyi şekilde yorumlama imkânı sağlayacaktır. Burada önemli olan, bu değerlerin herkes tarafından olabildiğince iyi algılanıp olumlu ortamlarda sürekli geliştirilmesidir (Cafoğlu, 1996).

Eğitimde kalite denildiği zaman, eğitim sisteminin beğenilmesi, kusursuzluğu insanların yenilikleri izleyebilme bilgi ve becerisine sahip olması; kısaca, bu davranışları gösteren insanların yetiştirilmesi akla gelmektedir (Temel, 1999). Eğitimde kalite, eğitimin kullanma amaçlarına uygunluğu ve mezuniyet sonrasında iş dünyasında oluşan işveren taleplerinin öğrencilerce yerine getirilmesi; öğrenci performansı, deneyimi ve teorik-uygulamalı bilgi donanımıdır. Eğitimde kalite doğru eğitimin, doğru zamanda, doğru kişilere, doğru mekânda, doğru eğitimlerle verilmesiyle gerçekleşir (Bulut, 1998).

TKY, çevre ile iletişim ve etkileşim içerisinde, çevrenin ihtiyaçlarını takip eden, okulu etkileyen unsurları dengede tutan, değişime açık, okul içerisinde öğretmen, öğrenci ve personel arasında ahengi sağlayan, iyi ilişkiler kuran, demokratik, hoşgörülü, anlayışlı, statükocu olmayan geniş görüş açısına sahip, eldeki kaynakları rasyonel kullanan bir yönetim felsefesidir. TKY'nin eğitime uygulanması, ancak okul yöneticisinin bu kavramı benimsemesiyle mümkün olacaktır (Şimşek, 2000). Bir toplumun çağdaş uygarlık düzeyine çıkmasında en önemli öğe, eğitimdir. Eğitim sisteminin yapısal özellikleri ve amacı, çağdaş uygarlığı yakalamanın ve kalkınmayı sağlamanın temelini oluşturmaktadır. Ancak, sistemin yapısal özelliği ve amacının ideal ölçüde olması bir anlam ifade etmemektedir. Önemli olan bu sistem içerisindeki insan girdisinin niteliğidir. Bu insan en ideal sistemi çalışmaz hale getirebileceği gibi, en olumsuz koşulları içeren bir sistemde nitelikli ürünler ortaya çıkartabilir (Celep, 2001). TKY uygulamalarında insana verilen önem, eğitim kurumlarında, diğer örgütlere göre daha bir önem kazanmaktadır. Çünkü okullar insan yetiştiren kurumlardır (Yıldırım, 2002). TKY uygulamalarında insana verilen önem, eğitim kurumlarında, diğer örgütlere göre daha bir önem kazanmaktadır. Çünkü okullar insan yetiştiren kurumlardır (Yıldırım, 2002).

Klasik çağ filozoflarının geliştirdiği "eğitimin kökleri acı, meyvesi tatlıdır" görüşü geleneksel eğitim anlayışının çocuğa acı veren uygulamalarına haklılık sağlamışsa da artık bu anlayış tarihe karışmalı ve eğitimin kökleri de meyvesi gibi tatlı olmalıdır. Önemli olan çağa uyum gücünde "kafa yapısı" geliştirmektir. Bu sebeple eğitim; öğrenme, düşünme, yapma gibi temel süreçlerin öğrenilmesine ağırlık vermelidir. Kısaca eğitim, geleceğin şartlarında başarılı olacak insanları yetiştirmelidir (Bilgen, 1993).

Geleneksel okullarda, öğretmen-öğrenci ilişkileri, öğrencilerin aynı hız ve biçimde öğrendikleri varsayımı ve öğretmenden öğrenciye tek yönlü bilgi akışı sistemi üzerine kurulmuş olup, 19. yüzyılın kitle üretimine yönelik fabrikaların hiyerarşik düzenini yansıtmaktadır. Yeni teknolojilerin işe koşulduğu okullarda ise, öğrencilerin yalnızca öğretmenlerden değil, birbirlerinden, çevrelerinden kendi hız ve tempolarında öğrenmelerine olanak tanınmaktadır. Yeni teknolojilerden etkilenmeleri verimliliğe dönüştürebilmek için de yönetici ve öğretmenlerin hizmet içinde ve öncesinde bilgilendirilmeleri, okulların rekabet ortamı içerisine sokulmasını kaçınılmaz kılmaktadır. TKY'nin "müşteri doyum ilkesi" uyarınca, nelerin öğretileceği Talim Terbiye Kurulu ve öğretmenlerce değil, o eğitimin sonuçlarını kullanacak sektörlerce ve eğitimin hedef kitlesince belirlenmesi günümüzde bir zorunluluk olarak ortaya çıkmaktadır. Ancak değişime hazırlıklı olmak, hatta değişimi yönetmek görevi, büyük ölçüde okul sisteminin dinamik bir parçası olan ve önderlik görevi üstlenen yönetici ve öğretmenlere düşmektedir. Bu dönüşümlerin gerçekleştirilmesinde TKY'den bir araç olarak yararlanılabilir (Bayrak ve Ağaoğlu, 1998).

MEB Kasım 1999 tarihi itibariyle İlköğretim ve Ortaöğretim kurumlarında TKY uygulamalarını başlatmış, Şubat 2002 tarihinde de TKY çalışmalarının nasıl uygulanması gerektiğini açıklamıştır. İlköğretim kurumlarında TKY uygulamalarının etkili bir şekilde yerine getirilmesinde yönetici ve öğretmenlere büyük sorumluluklar düşmektedir. TKY konusunda birçok araştırma yapılmış, yapılan araştırmaların çoğu ya öğretmenleri ya da yöneticileri kapsamaktadır. Yönetici (Müdür/Müdür Yardımcısı) ve öğretmenleri karşılaştıracak çalışmalarda eksiklik hissedilmektedir. İlköğretim okullarında TKY çalışmalarının ne durumda olduğu, öğretmen ve

yöneticilerin TKY çalışmalarını nasıl değerlendirdiklerine ilişkin görüşleri bu araştırmanın problemini oluşturmaktadır.

2. VERİ SETİ VE METODOLOJİ

2.1. Araştırmanın Modeli

Araştırma tarama modelindedir. Tarama modelleri, geçmişte ya da halen var olan bir durumu var olduğu şekliyle betimlemeyi amaçlayan araştırma yaklaşımlarıdır. Bu yaklaşımda araştırmaya konu olan olay, birey ya da nesne kendi koşulları içerisinde var olduğu gibi tanımlanmaya çalışılır (Karasar, 2002). Bir grubun belirli özelliklerini belirlemek için verilerin toplanmasını amaçlayan çalışmalara tarama (survey) araştırması denir (Büyüköztürk, 2010). Bu doğrultuda yapılan bu çalışma ile Bolu ili merkez ilçesinde bulunan ilköğretim okullarında görev yapan öğretmenlerin ve yöneticilerin, ilköğretim okullarında toplam kalite yönetimi çalışmalarının değerlendirilmesine ilişkin görüşleri var olan şekliyle belirlenmeye çalışılmıştır.

2.2. Araştırmanın Çalışma Evreni

Bolu ili merkez ilçesinde toplam 39 ilköğretim okulu vardır. Bu okulların 29'unda toplam kalite yönetimi çalışmaları yapılmaktadır. Dolayısıyla çalışmanın evrenini bu 29 okulda yer alan öğretmen ve yöneticiler oluşturmuştur. Bu okullarda 480'i branş, 438'i sınıf öğretmeni olmak üzere toplam 918 öğretmen ve 28'i müdür, 50'si müdür yardımcısı olmak üzere 78 yönetici vardır. Araştırmanın evreni 78 yönetici ve 918 öğretmenden oluşmuştur. Araştırmanın örnekleminin belirlenmesi sürecinde kota örnekleme yöntemi kullanılmıştır. Bu örnekleme olasılığa dayanmasa da elemanların seçimi titizlikle, yanlılıklardan uzak olarak yapılırsa pekala da temsili ve genellenebilir olabilir (Bailey,1987; Aktaran: Balcı, 2010). Araştırma evreninden yola çıkılarak, kota örnekleme yöntemine göre, okullarda çalışmakta olan 918 öğretmen arasından 202 öğretmen, 78 yöneticinin arasından ise 74 yönetici örneklemde yer almıştır.

2.3. Veri Toplama Aracı

İlköğretim Okullarında Toplam Kalite Yönetimi Çalışmalarının Öğretmen ve Yönetici Görüşleri Doğrultusunda Değerlendirilmesini belirlemek amacıyla veri toplama aracı olarak ölçek kullanılmıştır. "İlköğretim Okullarında Toplam Kalite Yönetimi Çalışmalarının Öğretmen ve Yönetici Görüşleri Doğrultusunda Değerlendirilmesi Ölçeği", Öter (2006)'in hazırlamış olduğu "İlköğretim Okullarında Toplam Kalite Yönetimi Çalışmalarının Değerlendirilmesi" tez çalışmasından alınmıştır.

Araştırmanın veri toplama aracı iki bölümden oluşmaktadır. Birinci bölümde öğretmen ve yöneticilerin kişisel bilgilerini elde etmek amacıyla kişisel bilgi formu hazırlanmıştır. Kişisel bilgi formunda öğretmen ve yöneticilerle ilgili kişisel bilgilere ulaşmak için maddeler bulunmaktadır. Bu bölümde öğretmen ve yöneticilere cinsiyet, mesleki kıdem, öğrenim durumları ve görevleri sorulmuştur.

İkinci bölümde ilköğretim okullarında görev yapan öğretmen ve yönetici görüşlerinden hareketle ilköğretim okullarında TKY çalışmalarının değerlendirilmesine ilişkin görüşleri içeren maddeler bulunmaktadır. Araştırmada, öğretmen ve yöneticilerin belirtilen maddelere ait katılma düzeyleri "Tamamen Katılıyorum (5)", "Katılıyorum (4)", "Kararsızım (3)", "Katılmıyorum (2)" ve "Tamamen Katılmıyorum (1)" olmak üzere beşli likert tipi dereceleme ölçeği kullanılarak tespit edilmeye çalışılmıştır.

İlköğretim okullarında toplam kalite yönetimi çalışmalarının değerlendirilmesi ölçeği, toplam 52 madde ve dört alt boyuttan oluşmaktadır. Alt boyutlar, "TKY Felsefesinin Yerleşme Düzeyi (1-15)", "TKY Okul Yapısının Uygunluğu (16-30)", "TKY Çalışmalarında Üst Destek Olup Olmadığı (31-35)", "TKY Sisteminin Kurulup Kurulmadığı (36-52)" şeklindedir.

Geliştirilen ölçeğin Cronbach Alpha katsayısı 0,975 olarak hesaplandığı belirtilmiştir (Öter, 2006). Yapılan çalışmada elde edilen verilerin analizi sonucunda aynı ölçeğin Cronbach Alpha katsayısı 0,979 olarak hesaplanmıştır. Ölçeğin güvenirlik katsayısının yüksek seviyede olması ve geliştirici tarafından belirlenen güvenirlik katsayısı ile gösterdiği uyum sonuçların güvenilir olduğunun göstergesidir.

2.4. Veri Toplama Aracının Uygulanması

Araştırmada kullanılan verileri uygulamak için, onay alınmıştır. Onay alındıktan sonra veri toplama aracı Mayıs 2012 tarihinde ilköğretim okullarında bizzat araştırmacı tarafından Bolu il merkezinde bulunan yönetici ve öğretmenlere uygulanıp toplanmıştır. Uygulama öncesi öğretmenlere ve yöneticilere sözlü olarak ölçeklerle ilgili gerekli açıklamalar yapılarak ne şekilde cevaplayacakları ve cevapların kesinlikle araştırmanın amacının dışında kullanılmayacağı belirtilmiştir.

3. BULGULAR

Araştırma sonunda elde edilen bulgular aşağıda tablo halinde sunulmuş ve açıklanmıştır:

3.1. Birinci Alt Probleme İlişkin Bulgular ve Yorumlar

Bu başlık altında "İlköğretim okullarında görev yapan öğretmenlerin toplam kalite yönetimine ilişkin görüşleri nelerdir?" sorusunun cevabı verilmiştir. Öncelikle araştırmaya katılan öğretmenlerin boyutlara ilişkin olan ve ölçekten alınan toplam puanlarına ait betimsel istatistikler gösterilmiştir. Ardından her bir boyuta ilişkin olarak öğretmenlerin ne düzeyde cevap verdikleri belirlenmiştir.

Tablo 1: Öğretmenlere Ait Puanların Betimsel İstatistikleri

Boyut	n	En düşük puan	En yüksek puan	$\overline{X}$	S
TKY Felsefesinin Yerleşme Düzeyi	202	18.00	75.00	56.4445	10.66913
TKY Okul Yapısının Uygunluğu	202	21.00	75.00	52.2921	9.53229
TKY Çalışmalarında Üst Destek Olup Olmadığı	202	5.00	25.00	17.9059	3.85251
TKY Sisteminin Kurulup Kurulmadığı	202	17.00	85.00	63.4554	11.89090
Toplam	202	69.00	260.00	19.50990	33.13593

Tablo 1. incelendiğinde öğretmenlerin, TKY felsefesinin yerleşme düzeyi alt boyutundaki ortalamaları 56.4445, TKY okul yapısının uygunluğu alt boyutundaki ortalamaları 52.2921, TKY çalışmalarında üst destek olup olmadığı alt boyutundaki ortalamaları 17.9059 ve TKY sisteminin kurulup kurulmadığı alt boyutundaki ortalamaları ise 63.4554 olarak tespit edilmiştir. Öğretmenlerin boyutlara ilişkin görüşleri ile ilgili tespit edilen bulgular şunlardır: Öğretmenlerin boyutlara ilişkin görüşleri ile ilgili tespit edilen bulgular şunlardır: TKY felsefesinin yerleşme düzeyi alt boyutu için, öğretmenlerin tespit edilen puanı "katılıyorum" aralığına denk gelmektedir ($\overline{x}$ =3.766). TKY okul yapısının uygunluğu alt boyutu için, öğretmenlerin tespit edilen puanları "katılıyorum" aralığında yer almaktadır ($\overline{x}$ =3.486). TKY okul yapısının uygunluğu alt boyutu için, öğretmenlerin tespit edilen puanları "katılıyorum" aralığında yer almaktadır ($\overline{x}$ =3.486). TKY çalışmalarında üst destek olup olmadığı boyutuna ilişkin öğretmenlerin tespit edilen ortalamaları da "katılıyorum" aralığındadır ($\overline{x}$ =3.581). Son olarak TKY sisteminin kurulup kurulmadığı boyutunda elde edilen öğretmen puanlarının da ortalaması "katılıyorum" düzeyindedir ($\overline{x}$ =3.732). Öğretmenlerin ölçekten ve ayrı ayrı boyutlardan almış oldukları puanların ortalamaları incelendiğinde, bütün alt boyutlara "katılıyorum" düzeyinde cevap verdikleri görülmüştür. Araştırmanın bu bulgusu Aksu (2009)'nun araştırma sonuçlarıyla benzerlik göstermektedir. Aksu'nun yapmış olduğu araştırma sonucunda da, kalitenin ölçülmesi ve değerlendirilmesi, kaliteyi geliştirmede liderlik, katılımın sağlanması, insan kaynaklarının yönetimi, TKY genel ve vizyoner liderlik alt boyutlarında algılarının "sıklık" düzeyinde olduğu belirlenmiştir.

3.2. İkinci Alt Probleme İlişkin Bulgular ve Yorumlar

Bu başlık altında "İlköğretim okullarında görev yapan yöneticilerin toplam kalite yönetimine ilişkin görüşleri nelerdir?"sorusunun cevabı sunulmuştur. Araştırmaya katılan 74 yöneticiye ait alt boyutlara ilişkin olan ve ölçekten alınan toplam puanların betimsel istatistiklerine yer verilmiştir. Daha sonra her bir boyuta ilişkin olarak yöneticilerin ne düzeyde cevap verdiklerinden söz edilmiştir.

Tablo 2: Yöneticilere Ait Puanların Betimsel İstatistikleri

Boyut	n	En düşük puan	En yüksek puan	$\overline{X}$	S
TKY Felsefesinin Yerleşme Düzeyi	74	18.00	75.00	56.9730	10.05733
TKY Okul Yapısının Uygunluğu	74	26.00	75.00	58.2297	9.91408
TKY Çalışmalarında Üst Destek Olup Olmadığı	74	6.00	25.00	17.3378	4.38640
TKY Sisteminin Kurulup Kurulmadığı	74	26.00	85.00	63.0135	12.10965
Toplam	74	87.00	260.00	195.5541	33.15267

Tablo 2. incelendiğinde yöneticilerin, TKY felsefesinin yerleşme düzeyi alt boyutundaki ortalamaları 56.9730, TKY okul yapısının uygunluğu alt boyutundaki ortalamaları 58.2297, TKY çalışmalarında üst destek olup olmadığı alt boyutundaki ortalamaları 17.3378 ve TKY sisteminin kurulup kurulmadığı alt boyutundaki ortalamaları ise 63.0135 olarak tespit edilmiştir. Yöneticilerin boyutlara ilişkin görüşleri ile ilgili tespit edilen bulgular şunlardır: TKY felsefesinin yerleşme düzeyi alt boyutu için, yöneticilerin tespit edilen puanı "katılıyorum" aralığına denk gelmektedir ($\overline{x}$ =3.798). TKY okul yapısının uygunluğu alt boyutu için, yöneticilerin tespit edilen puanları "katılıyorum" aralığında yer almaktadır ($\overline{x}$ =3.886). TKY çalışmalarında üst destek olup olmadığı boyutuna ilişkin yöneticilerin tespit edilen ortalamaları da "katılıyorum" aralığındadır ($\overline{x}$ =3.467). Son olarak TKY sisteminin kurulup kurulmadığı boyutunda elde edilen yönetici puanlarının da ortalaması "katılıyorum" düzeyindedir ($\overline{x}$ =3.706). Yöneticilerin, ölçekten ve ayrı ayrı boyutlardan almış oldukları puanların ortalamaları incelendiğinde, araştırmaya katılan öğretmenler gibi bütün alt boyutlara "katılıyorum" düzeyinde cevap verdikleri görülmüştür. Araştırmaya katılan yöneticilerin de öğretmenler gibi toplam kalite yönetimine olumlu bir bakış açısına sahip olduğu görülmüştür.

3.3. Üçüncü Alt Probleme İlişkin Bulgular ve Yorumlar

Bu başlık altında "İlköğretim okullarında görev yapan öğretmen ve yöneticilerin toplam kalite yönetimine ilişkin görüşleri arasında manidar bir farklılık var mıdır?" sorusuna cevap aranmaya çalışılmıştır.

Tablo 3: Toplam Kalite Yönetimine Görüşlerinin Görev Tanımına Göre TKY Felsefesinin Yerleşme Düzeyi Boyutuna İlişkin U Testi Bulguları

Görev Tanımı	n	Sıra Ortalaması	Sıra Toplamı	U	p
Öğretmen	202	137.17	27708.00	7205.000	.647
Yönetici	74	142.14	10518.00		

Tablo 3. incelendiğinde, öğretmen ve yöneticilerin, toplam kalite yönetimine ilişkin görüşleri TKY felsefesinin yerleşme düzeyi boyutunda manidar bir farklılık göstermemektedir, U=7205.00 p>0.05.

Tablo 4: Toplam Kalite Yönetimine Görüşlerinin Görev Tanımına Göre TKY Okul Yapısının Uygunluğu Boyutuna İlişkin U Testi Bulguları

Görev Tanımı	n	Sıra Ortalaması	Sıra Toplamı	U	p
Öğretmen	202	136.43	10668.00	7055.000	.475
Yönetici	74	144.16	10668.00		

Tablo 4. incelendiğinde, öğretmen ve yöneticilerin, toplam kalite yönetimine ilişkin görüşleri TKY okul yapısının uygunluğu boyutunda manidar bir farklılık göstermemektedir, U=7055.00 p>0.05.

Tablo 5:Toplam Kalite Yönetimine Görüşlerinin Görev Tanımına Göre TKY Çalışmalarında Üst Destek Olup Olmadığı Boyutuna İlişkin U Testi Bulguları

Görev Tanımı	n	Sıra Ortalaması	Sıra Toplamı	U	p
Öğretmen	202	142.06	28696.00	6755.000	.217
Yönetici	74	128.78	9530.00		

Tablo 5. incelendiğinde, öğretmen ve yöneticilerin, toplam kalite yönetimine ilişkin görüşleri TKY çalışmalarında üst destek olup olmadığı boyutunda manidar bir farklılık göstermemektedir, U=6755.00 p>0.05.

Tablo 6: Toplam Kalite Yönetimine Görüşlerinin Görev Tanımına Göre TKY Sisteminin Kurulup Kurulmadığı Boyutuna İlişkin U Testi Bulguları

Görev Tanımı	n	Sıra Ortalaması	Sıra Toplamı	U	p
Öğretmen	202	138.74	28025.00	7426.00	.935
Yönetici	74	137.85	9530.00		

Tablo 6. incelendiğinde, öğretmen ve yöneticilerin, toplam kalite yönetimine ilişkin görüşleri TKY sisteminin kurulup kurulmadığı boyutunda manidar bir farklılık göstermemektedir, U=7426.00 p>0.05.

Tablo 7: Toplam Kalite Yönetimine Görüşlerinin Görev Tanımına Göre Toplam Puana İlişkin U Testi Bulguları

Görev Tanımı	n	Sıra Ortalaması	Sıra Toplamı	U	p
Öğretmen	202	137.47	27768.50	7265.500	.723
Yönetici	74	141.32	10457.50		

Tablo 7. incelendiğinde, öğretmen ve yöneticilerin, Toplam kalite yönetimine ilişkin görüşleri toplam puan bakımından manidar bir farklılık göstermemektedir, U=7265.00 p>0.05.

Yukarıdaki tablolar incelendiğinde yönetici ve öğretmen görüşleri arasında bütün boyutlarda toplam puan bakımından manidar bir farklılığın oluşmadığı görülmektedir.

4.4. Dördüncü Alt Probleme İlişkin Bulgular ve Yorumlar

Bu başlık altında "Öğretmenlerin toplam kalite yönetimi çalışmaları konusundaki görüşleri ile öğretmenlerin cinsiyet, mesleki kıdem, öğrenim durumu, görev türü (Sınıf Öğretmeni/Branş Öğretmeni) değişkenleri açısından

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anlamlı bir farklılık var mıdır?" sorusu cevaplanmaya çalışılmıştır. Araştırmaya katılan öğretmenlerin görüşleri, ölçekten aldıkları toplam puan ve her bir alt boyut açısından değerlendirilecektir.

Cinsiyet değişkeni açısından, incelenen boyut puanları ve toplam puan açısından istatistiksel açıdan manidar bir farklılık görülmemektedir. Cinsiyet değişkenine göre öğretmenlerin puanları arasında, TKY felsefesinin yerleşme düzeyi boyutunda U=4784.000, p>.05, TKY okul yapısının uygunluğu boyutunda U=4967.500, p>.05, TKY çalışmalarında üst destek olup olmadığı boyutunda U=4707.000, p>.05, TKY sisteminin kurulup kurulmadığı boyutunda U=5044.000, p>.05 ve ölçekten elde edilen toplam puanlar arasında U=5044.000, p>.05, manidar bir farklılık tespit edilmemiştir.

Hizmet yılı değişkenine göre öğretmenlerin ölçekten aldıkları toplam puan ve ölçekte yer alan tüm alt boyutlardan aldıkları puanları bakımından manidar bir farklılık tespit edilmiştir. Nitekim hizmet yılı değişkenine göre öğretmenlerin puanları arasında, TKY felsefesinin yerleşme düzeyi boyutunda U=3004.500, p<.05, TKY okul yapısının uygunluğu boyutunda U=31960.000, p<.05, TKY çalışmalarında üst destek olup olmadığı boyutunda U=3452.000, p<.05, TKY sisteminin kurulup kurulmadığı boyutunda U=3360.500, p<.05 ve ölçekten elde edilen toplam puanlar arasında U=3024.000, p<.05, istatistiksel olarak manidar bir farklılık olduğu belirlenmiştir. Elde edilen bulgular, kıdem süreleri arttıkça öğretmenlerin genel olarak TKY uygulamalarına ilişkin algılarının arttığını göstermektedir.

Görev türü değişkenine göre öğretmenlerin ölçekte yer alan tüm alt boyutlardan aldıkları puanları ve ölçekten aldıkları toplam puan bakımından manidar bir farklılık bulunamamıştır. Görev türü değişkenine göre öğretmenlerin puanları arasında, TKY felsefesinin yerleşme düzeyi boyutunda U=4824.500, p>.05, TKY okul yapısının uygunluğu boyutunda U=5024.000, p>.05, TKY çalışmalarında üst destek olup olmadığı boyutunda U=4838.500, p>.05, TKY sisteminin kurulup kurulmadığı boyutunda U=4955.000, p>.05 ve ölçekten elde edilen toplam puanlar arasında U=4832.000, p>.05, manidar bir farklılık tespit edilmemiştir.

TKY felsefesinin yerleşme düzeyi, TKY okul yapısının Uygunluğu, TKY sisteminde üst destek olup olmadığı, TKY sisteminin kurulup kurulmadığı boyutları için, öğrenim durumu değişkenine göre, öğretmenlerin puanları arasında manidar bir farklılık tespit edilmemiştir. Ayrıca öğretmenlerin toplam puanları arasında da manidar bir farklılık olmadığı görülmüştür. Çoklu karşılaştırmalar incelendiğinde de, hiçbir boyutta, farklı öğrenim grupları arasında manidar bir farklılık olmadığı belirlenmiştir.

4.5. Beşinci Alt Probleme İlişkin Bulgular ve Yorumlar

Bu kısımda, "Yöneticilerin toplam kalite yönetimi çalışmaları konusundaki görüşleri ile yöneticilerin cinsiyet, mesleki kıdem, öğrenim durumu, görev türü (Müdür /Müdür Yardımcısı) değişkenleri açısından anlamlı bir farklılık var mıdır?" sorusu cevaplanmaya çalışılmıştır. Araştırmaya katılan yöneticilerin görüşleri, ölçekten aldıkları toplam puan ve her bir alt boyut açısından değerlendirilecektir.

Yöneticilerin cinsiyet değişkenine göre hiçbir boyut ve toplam puan bakımından manidar farklılık göstermediği görülmüştür. Alt boyutlara ve toplam puana ilişkin U değeri ve manidarlık katsayısı şu şekildedir: TKY felsefesinin yerleşme düzeyi alt boyutu: U= 125.500 p>.05, TKY okul yapısının uygunluğu alt boyutu : U=78.500 p>.05, TKY çalışmalarında üst destek olup olmadığı alt boyutu: U=109.000 p>.05, TKY sisteminin kurulup kurulmadığı alt boyutu: U=79.000 p>.05, Toplam puan: U=88.500 p>.05.

Yöneticilerin hizmet yılı değişkenine göre hiçbir boyut ve toplam puan bakımından manidar farklılık göstermediği görülmüştür. Alt boyutlara ve toplam puana ilişkin U değeri ve manidarlık katsayısı şu şekildedir: TKY felsefesinin yerleşme düzeyi alt boyutu: U= 383.000 p>.05, TKY okul yapısının uygunluğu alt boyutu: U=434.500 p>.05, TKY çalışmalarında üst destek olup olmadığı alt boyutu: U=380.000 p>.05, TKY sisteminin kurulup kurulmadığı alt boyutu: U=429.000 p>.05, Toplam puan: U=426.500 p>.05.

Yöneticilerin görev türü değişkenine göre bütün alt boyutlarda ve toplam puan bakımından manidar farklılık gösterdiği tespit edilmiştir. Yönetici grubunu oluşturan müdür ve müdür yardımcılarının toplam kalite yönetimine ilişkin görüşleri arasında manidar bir farklılık olduğu saptanmıştır. Alt boyutlara ve toplam puana ilişkin U değeri ve manidarlık katsayısı şu şekildedir: TKY felsefesinin yerleşme düzeyi alt boyutu: U= 310.000 p<.05, TKY okul yapısının uygunluğu alt boyutu:U=425.000 p<.05, TKY çalışmalarında üst destek olup olmadığı

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alt boyutu : U=385.500 p<.05, TKY sisteminin kurulup kurulmadığı alt boyutu: U=387.500 p<.05, Toplam puan: U=361.000 p<.05.

Öğrenim durumu değişkenine göre yöneticilerden elde edilen puanlara ilişkin bulgular şı şekildedir: TKY felsefesinin yerleşme düzeyi alt boyutu için : χ^2 (sd=2 n=74) = 6.275, p<.05, TKY okul yapısının uygunluğu alt boyutu için: χ^2 (sd=2 n=74) = 4.787, p>.05, TKY çalışmalarında üst destek olup olmadığı alt boyutu için: χ^2 (sd=2 n=74) = 2.973, p>.05, TKY sisteminin kurulup kurulmadığı alt boyutu için: χ^2 (sd=2 n=74) = 2.269, p>.05, Toplam puan için: χ^2 (sd=2 n=74) = 4.607, p>.05.

5. SONUÇ VE TARTIŞMA

İlköğretim okullarında toplam kalite yönetimi çalışmalarının öğretmen ve yönetici görüşleri doğrultusunda değerlendirilmesine ilişkin olarak yapılan çalışmanın sonucunda, öğretmen ve yöneticilerin toplam kalite yönetimi çalışmalarını katılıyorum düzeyinde benimsedikleri ortaya çıkmıştır.

Öğretmenlerin ölçekten ve ayrı ayrı boyutlardan almış oldukları puanların ortalamaları incelendiğinde, bütün alt boyutlara "katılıyorum" düzeyinde cevap verdikleri görülmüştür. Araştırmanın bu sonucu Aksu (2009)' nun araştırma sonuçlarıyla benzerlik göstermektedir. Aksu'nun yapmış olduğu araştırma sonucunda da öğretmenlerin TKY'ye ilişkin algılarının alt boyutlarda ve ölçek genelinde "sıklıkla" düzeyinde algılandığı belirlenmiştir. Bu durum öğretmelerin toplam kalite yönetimine ilişkin olumlu bir bakış açısına sahip olduğunun bir göstergesidir. Öğretmenler, çalışmakta oldukları okul genelinde toplam kalite yönetiminin benimsendiğini ve toplam kalite yönetimi ile ilgili tüm çalışanların bir görev yüklendiğini belirtmiştir. Ayrıca toplam kalite yönetimi faaliyetlerinin, bu yöntemle ilgili eğitim almış olan çalışanlar tarafından bir plan dahilinde gerçekleştirdiğini söylemektedir. Faaliyetlerle ilgili ödüllerden memnun oldukları görülen öğretmenler, öğrenci başarısına dönük gelişmeler olduğunu ve okullarındaki gelişmenin hiçbir zaman durmayacak bir süreç olduğunu gösterir nitelikte cevaplar vermiştir. Ayrıca öğretmenler tarafından toplam kalite yönetimlerinin, Milli Eğitim Bakanlığı, bakanlığa bağlı diğer kurumlar ve sivil toplum örgütleri ile koordineli şekilde yürütüldüğü konusunda cevaplar verildiği belirlenmiştir.

Cinsiyet değişkenine göre öğretmenlerin puanları arasında, istatistiksel açıdan manidar bir farklılık görülmemektedir. Bu bulgular Öter (2006)'in yaptığı çalışmanın sonuçları ile örtüşmektedir. Türkmen (2006)'in yapmış olduğu araştırmada da cinsiyete göre öğretmenlerin TKY uygulamalarına ilişkin algıları arasında anlamlı bir farklılık oluşmadığı tespit edilmiştir. Türkmen'in araştırmasına göre her iki grupta ilköğretim okullarında TKY ile ilgili yapılan çalışmaların yetersiz olduğu görüşünde birleşmiştir. Bu araştırmada ise genelde erkek ve bayan katılımcıların maddelere "katılıyorum" düzeyinde cevap verdikleri görülmektedir. Bu durum öğretmenlerin TKY seminerlerinden ve TKY il formatörlerinden etkili bir şekilde yararlandığının sonucu olarak görülebilir.

Elde edilen sonuçlar, kıdem süreleri arttıkça öğretmenlerin genel olarak TKY uygulamalarına ilişkin algılarının arttığını göstermektedir. Bu bulgular, Sarı (2002), Hamedoğlu (2002), Yiğit ve Bayraktar (2003) tarafından yapılan araştırmalarda elde edilen; "Yönetici ve öğretmenlerin kıdem süreleri arttıkça TKY uygulamalarına ilişkin algı ortalamaları da yükselmektedir." sonucuyla da örtüşmektedir. Bu durumun sebebi, kıdemi fazla olan öğretmenlerin TKY çalışmalarına daha fazla katılmaları, TKY felsefesine olan inançlarının arttığı, deneyim sahibi olmaları, yönetici, veli ve öğrencilerle daha etkili iletişim kurmaları olabilir. Kıdemi az olan öğretmenlerin ise okul kültürüne daha geç uyum sağlamaları, gerekli seminerlerden yeteri kadar faydalanamamaları, okulda alınan kararlara yeteri kadar katılmaması olarak düşünülebilir.

Görev türü değişkenine göre öğretmenlerin ölçekte yer alan tüm alt boyutlardan aldıkları puanları ve ölçekten aldıkları toplam puan bakımından manidar bir farklılık bulanamamıştır. Bu durum Türkmen (2006)'in yapmış olduğu araştırma bulguları ile örtüşmektedir. Türkmen'in yapmış olduğu araştırmada katılımcıların ilköğretim okullarında TKY ile ilgili yapılan çalışmaların az derecede olduğu görüşünü paylaşmaktadır. Bu araştırmada ise katılımcı görüşlerinin her iki alan değişkeninde de bütün alt boyutlarda ve madde boyutunda "katılıyorum" düzeyinde çıkmış olması, sınıf ve branş öğretmenlerinin TKY ile ilgili yapılan çalışmalardan ve seminerlerden etkili bir şekilde yararlandıkları şeklinde yorumlanabilir.

Yöneticilerin cinsiyet değişkenine göre hiçbir boyut ve toplam puan bakımından manidar farklılık göstermediği sonucuna ulaşılmıştır. Bu bulgular Türkmen (2006) tarafından yapılan "İlköğretim Okullarında Toplam Kalite

Yönetimi Uygulamalarına İlişkin Müdür ve Öğretmen Görüşlerinin Değerlendirilmesi" adlı araştırma sonuçlarıyla da örtüşmektedir. Türkmen (2006)'in yapmış olduğu araştırma sonuçlarında her iki katılımcı grup da TKY ile ilgili yapılan çalışmaları orta derecede bulmuştur. Ayrıca Sarı (2002) tarafından yapılan "İlköğretim Okullarında Toplam Kalite Yönetimi Projesi Uygulama Sonuçları" adlı verileriyle de örtüşmektedir. Katılımcı grup içindeki bayan yönetici sayısının az olması da yönetici görüşlerinin cinsiyet değişkenine göre hiçbir boyut ve toplam puan bakımından manidar bir farklılık göstermemesinin bir nedeni olarak görülebilir.

Yöneticilerin hizmet yılı değişkenine göre hiçbir boyut ve toplam puan bakımından manidar farklılık göstermediği sonucuna ulaşılmıştır. Türkmen (2006)'in yaptığı araştırmada, mesleki kıdem durumlarına göre yöneticilerin TKY uygulamalarına ilişkin algılarının arasında anlamlı fark oluştuğunu göstermiştir. Anlamlı farkın genelde 6-10 yıllık mesleki kıdeme sahip yöneticiler ile 21 yıl ve üstü mesleki kıdeme sahip olan yöneticiler arasında olduğu sonucuna varmıştır. Türkmen (2006), 21 yıl ve üstü mesleki kıdeme sahip olan yöneticilerin algı ortalamalarının daha yüksek olduğunu ifade etmiştir. Yiğit ve Bayraktar (2003), Sarı ve Hamedoğlu (2002)'da yönetici ve öğretmenlerin, kıdem süreleri arttıkça TKY uygulamalarına ilişkin algı ortalamalarının da yükseldiğini tespit etmiştir. Saptanan bu bulgular araştırma sonuçlarıyla örtüşmemektedir. Araştırma grubunda 16 yıl ve mesleki kıdeme sahip yöneticilerin fazla olması bu farklılığın bir nedeni olarak görülebilir. Yöneticilerin kıdem sürelerinin fazla olması, TKY seminerlerine daha fazla katılmış olmalarına, TKY hakkında daha fazla bilgi sahibi olmuş olmalarına, TKY felsefesini daha iyi kavradıklarına ve bu durumunda mesleki kıdem değişkenine göre yönetici görüşleri arasında anlamlı bir farkın oluşmamasına yol açtığı şeklinde yorumlanabilir.

Elde edilen bu sonuçlara bakılarak, eğitim örgütlerinin etkinliklerinin artırılması noktasında önemli bir yeri olan TKY yaklaşımına, öğretmen ve yöneticilerin olumlu bir bakış açısına sahip olduğunu söyleyebiliriz. Öğretmenler, çalışmakta oldukları okul genelinde toplam kalite yönetiminin benimsendiğini ve toplam kalite yönetimi ile ilgili tüm çalışanların bir görev yüklendiğini belirtmiştir. Ayrıca toplam kalite yönetimi faaliyetlerinin, bu yöntemle ilgili eğitim almış olan çalışanlar tarafından bir plan dahilinde gerçekleştirildiğini söylemektedir. Faaliyetlerle ilgili ödüllerden memnun oldukları görülen öğretmenler, öğrenci başarısına dönük gelişmeler olduğunu ve okullarındaki gelişmenin hiçbir zaman durmayacak bir süreç olduğunu gösterir nitelikte cevaplar vermiştir. Ayrıca öğretmenler tarafından toplam kalite yönetimlerinin, Milli Eğitim Bakanlığı, Bakanlığa bağlı diğer kurumlar ve sivil toplum örgütleri ile koordineli şekilde yürütüldüğü konusunda cevaplar verdiği sonucuna ulaşılmıştır. Bu sonuçlar Kökçü'nün (2000) "İlköğretim okullarında toplam kalite yönetiminin uygulanabilirliği" araştırmasında öğretmenlerin, okulun eğitim-öğretim etkinliklerinin planlanmasına katılımlarının sağlandığı, mesleki gelişim gereksinimlerinin önemsendiği, hizmet içi eğitim ve programlarını yeterli bulduğu, yöneticilerin okulda işbirliği, güven, mesleki dayanışma ve iletişimi geliştirdiği araştırmasına işaret etmektedir.

Araştırmaya katılan yöneticilerin de öğretmenler gibi toplam kalite yönetimine olumlu bir bakış açısına sahip olduğu görülmüştür. Yöneticiler, çalışmakta oldukları okul genelinde toplam kalite yönetiminin benimsendiğini ve toplam kalite yönetimi ile ilgili tüm çalışanların bir görev yüklendiğini belirtmişlerdir. Bunun yanı sıra tüm çalışanların toplam kalite yönetimi ile ilgili eğitim ve seminerlerden geçtiğini ve yapılan çalışmaların da bir plan dahilinde gerçekleştirildiği şeklinde yanıtlar vermişlerdir. Yöneticiler, tam öğrenmenin amaçlandığı okullarda, öğrenci başarısına dönük olarak çalışıldığını ve asıl amacın öğrencilerin öğrenmesi olduğuna işaret etmişlerdir. Ayrıca yöneticiler gelişmenin de değişim gerektiren bir süreç olduğunu ve bu değişimin bağımsız bir şekilde değil, aynı alanda yer alan (MEB'e bağlı diğer okullar) ve sivil toplum örgütleri ile iş birliği içinde yürütülmesi gerektiğine dikkat çekecek düzeyde yanıtlamalar yapmışlardır. Bu sonuçlar, Bayrak ve Ağaoğlu'nun (1998), yapmış oldukları araştırmada yönetici ve öğretmenlerin toplam kalite yönetimine ilişkin görüşlerinin arzu edilen yönde ve birbirine yakın olduğu sonucu ile tutarlılık göstermektedir.

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FACTORS AFFECTING EFFECTIVE MANAGEMENT OF LIMITED RESOURCES IN SOUTH AFRICAN COMPREHENSIVE UNIVERSITIES

Winnie Dlamini

University of South Africa (Unisa). dlamiw@unisa.ac.za

ABSTRACT

The recent #FeesMustFall campaign coupled with the declining funding of universities calls for effective management of limited resources. Since procurement is the largest expense accrual function in any organisation, these institutions have more obligation of being responsive to the management of limited resources. The purpose of this article is to determine the factors affecting the effective management of the limited resources in South African comprehensive universities. A qualitative approach using multiple cases was adopted. Face-to-face interviews were conducted using open-ended questions. The findings revealed that the effective management of limited resources in the South African comprehensive universities is affected by the policies, non-compliance, thresholds, supplier rotation and centralisation. Consequently, these institutions do not contribute sufficiently to the university's overall objectives for competitive advantage and sustainability. It is recommended that South African comprehensive universities streamline operations, remove internal barriers, impose strict compliance measures and communicate the vision across the university.

Keywords: South African comprehensive universities, limited resources, procurement best practices.
JEL Classification: M10, I23, I28

1. INTRODUCTION

Universities in South Africa (SA) face a predicament of declining public funding, increasing inflation as well as the #FeesMustFall campaign which left South African universities with a shortfall of R2.33 billion (Writer, 2015; Mthombeni, 2016). Moreover, the operating costs of universities have escalated; raising the cost of higher education by 8% - 12% per annum (The Mercury, 2013). The role of procurement therefore, becomes increasingly important as these institutions have to do more with constrained resources. The situation forces these institutions to look for value-creation and cost-saving opportunities much more than before in order to gain a competitive advantage (Bloch, 2011:5). In order to maximise the limited resources, Rudzki and Trent (2011:7) highly recommend the adoption of procurement best practices (PBPs) as one of the dimension for success. According to Gilbert (2008:1055), a best practice is a technique or methodology that through experience and research has proven to reliably lead to a desired result. However, developing and sustaining procurement best practices is not an easy task. This is because the adoption of these practices is time consuming, entails breaking down barriers in internal resistance, demands a new approach to suppliers, demands considerable investment in good leadership, training, performance measurement and technology (Booth, 2010:70).

In addition, the value or the strategic importance of the procurement function has not been realised by many organisations (Cousins, Lamming, Lawson & Squire, 2008:8). Also, the implementations of PBPs require senior management commitment, formulation of organisational structure that permeates the implementation of PBPs, transformational leadership, as well as adequately skilled, experienced and qualified staff. Moreover, the procurement function requires streamlined processes and the employment of PBPs in order to efficiently manage limited resources (Dlamini, 2016). Streamlining of procurement processes and implementing PBPs involve knowing exactly which best practices should be employed. Furthermore, it requires developing measurable performance standards in order to identify possible failures and develop corrective measures

(Ngatara & Ayuma, 2016:234). Yet, most of these elements are lacking in most universities (Dlamini, 2016). Thus, many institutions fail to save costs, minimise waste and impact the bottom-line needed for long term sustainability.

Consequently, universities expenditure in South Africa increased to R55.6 billion during the 2014 financial year, which is estimated at a 12.1% increase per annum (StatsSA, 2015). Most of the expenditure (i.e. 50% or R27.5 billion) is consumed by compensation of employees, followed by the procurement of goods and services which accounts for R19.3 billion (35%), procurement of non-financial assets which tallies to R5.5 billion (10%) and other payments which equates to R2951 billion(5%). Figure 1 below illustrates the universities' expenditure in South Africa in 2014.

Figure 1: Breakdown of Universities Spending 2014
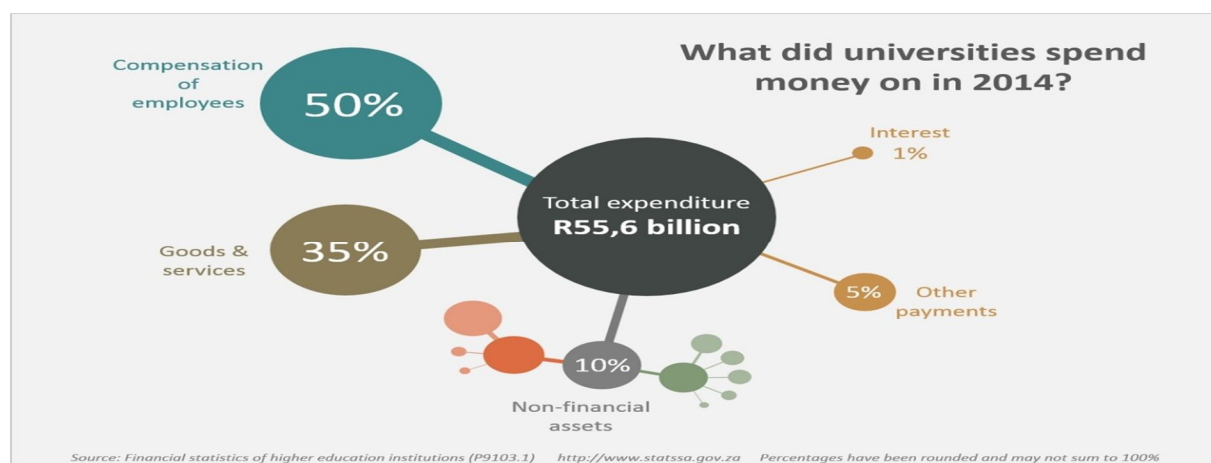
Source: StatsSA, 2015

Universities, plays a vital role in producing knowledge, generating socially committed graduates, and providing various services for enabling this country to pursue social equity, justice and higher standards of living for all, and contributing to the revitalisation of the African continent. Therefore, universities in South Africa are at centre of the government agenda as stated in the Higher Education Act 101 of 1997. But, they are expected to do more with fewer resources as they are non-profit-making institutions and dependent mostly on government subsidies for sustainability. Hence, these institutions comply with most public procurement policies and Acts. However, adherence to procurement procedures and fairness has been a challenge in the public sector as well as in comprehensive universities as part of public entities (Green, 2014). Comprehensive universities (CUs) are unique institutions within the higher education domain with regard to the broad range of knowledge offerings that they impart, from career-focused to professional, from specialist to general academic along a horizontal axis (Boulton & Lucas, 2011:2512). In addition, financial crises brought about by the infringement of policies have been observed as a challenge that has surfaced in the South African universities procurement system. This has led to five of the 23 public universities being placed under administration between 2011 and 2012 (Flanagan, 2012).

Hence, this article seeks to determine the factors affecting the effective management of limited resources in South African comprehensive universities. The layout of this this article is as follows: the next section starts by expounding literature on the importance of procurement within an organisation, introduces procurement best practices and present a synopsis of South African comprehensive universities' procurement policies and practices. Then, data and methodology is presented, followed by findings and discussion. The article concludes by providing recommendations and further research on effective management of the limited university resources.

2. LITERATURE REVIEW

Procurement accounts for most of an organisation' expenditure; therefore, its operation affects the bottom line of the entire organisation (Fourie, 2011:15; Burt, Petcavage & Pinkerton, 2012; Bozarth & Handfield, 2013:210). The procurement function plays a crucial role in assisting organisations in their endeavours to drive cost reduction programmes. The programmes include measures such as improving material acquisition and delivery, reducing cycle-times, enhancing the process of improving the bottom line and bringing more value to the customers at a lower rate when compared to their competitors (Turner, 2011:89). According to Hugo and Badenhorst-Weiss (2011:7), the efficiency of the procurement function may impact three key organisational areas, namely:

> ➢ The profit leverage effect: this reflects that a small percentage of savings in the purchase price may cause a relatively large percentage increase in the organisation's profit.
> ➢ The turnover/total cost balance: the procurement function has a major impact on the net income of the firm by balancing the income from turnover (sales) with the cost of inputs that are required to generate turnover.
> ➢ The return on investment (ROI): the most efficient procurement processes have the potential to lower costs of sales, which means that the gross income, and accordingly, the total income of the organisation may increase.

The areas mentioned above shows the value and impact of the procurement function and how it can reduce supply risks and volatility in revenues and earnings. Figure 2 below, illustrates how these elements combine to enhance the organisation's performance and it reflects how efficient procurement enhances profits using revenue. It also displays cost-related measures to improve return on invested capital (ROIC) and cash flow for the organisation. Also, the working capital and capital expenditure can enhance invested capital which, in turn, also improves cash flow and ROIC. Therefore, it is important that the procurement function manages the acquisition of limited resources effectively and efficiently in order to make a meaningful contribution to other functions in the organisation, such as production or operations, marketing human resources, public relations and finance. These functions rely on procurement's timeous supply of good quality materials and services to operate efficiently and effectively (Hugo and Badenhorst-Weiss, 2011:11). The efficiency and effectiveness in the procurement function may be achieved through the introduction of PBPs.

Figure 2: Performance Improvement Framework
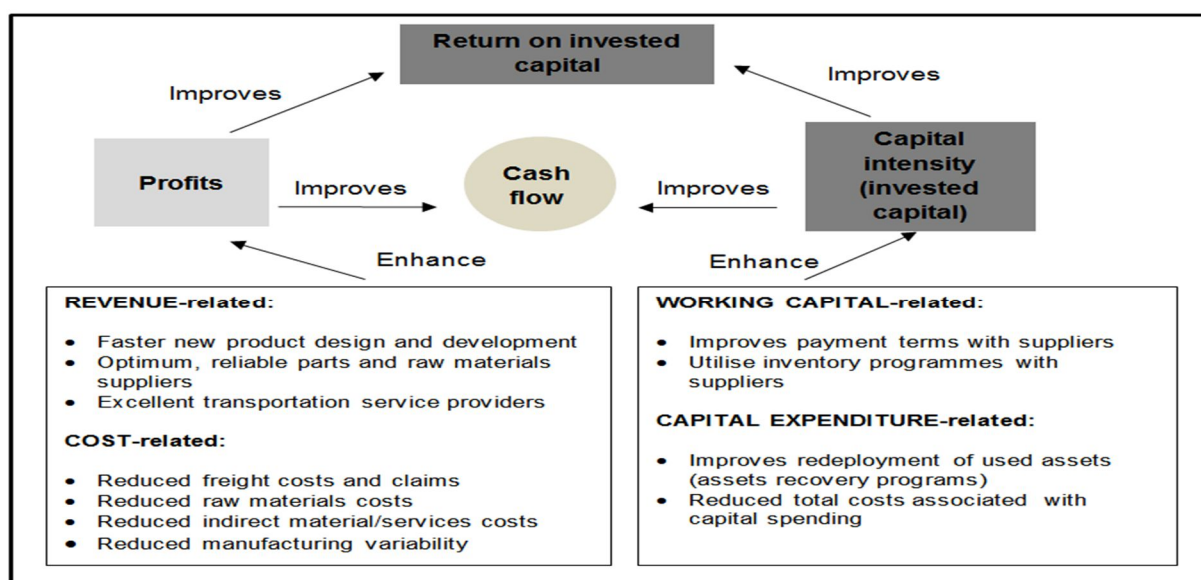
Source: Rudzki and Trent (2011:6)

2.1 Review of Procurement Best Practices

Procurement best practices (PBPs) are described as a supply management philosophy, which encompasses a set of well established, common practices employed by leading edge organisations when conducting their procurement. The aim is to consistently and continuously improve spend and supplier base optimisation to increase return on investment and the bottom-line, to sustain and grow in the long term (Dlamini, 2016). PBPs are generally adopted by institutions that have evolved from reactive purchasing to supply management level. A number of studies have been conducted on procurement best practices, among others Cox (1996), Nelson, Moody and Stegner (2005), Bernardes and Zsidisin (2008), and Burt, Petcavage and Pinkerton (2010). However, not all modern organisations have fully adopted PBPs in order to reap the benefits that are brought by its application (Rudzki, Smock, Katzorke & Steward, 2006:4). Most organisations underestimate the positive impact that the application of PBPs can have on the bottom line of an organisation (Blanchard, 2010:56). Some organisations realise the potential that the procurement function has, but sometimes do not conserve the practice and eventually remain stuck on the elementary stages of development (Nelson, *et al.*, 2005: 12). The few that constantly strive to embrace PBPs rely on the expertise of the procurement function to drive profitability improvements programmes that translate to innovation and increased value creation (Cousins, *et al.,* 2008:8).

2.2. Summary of Procurement Best Practices

Table 1 presents a summary of PBPs and description of best practices and contribution to improve procurement efficiency and effectiveness.

Table 1: Summary of Procurement Best Practices

Procurement best practice	Description of best practices and contribution to procurement efficiency and effectiveness
Strategic commitment from senior executives	Eagerness of top management in giving procurement full support in the formulation and implementation of aligned strategies (Schuh *et al.*, 2009).
Translating corporate goals into procurement objectives	Align procurement strategies with overall organisational goals, thereby creating and sustaining a competitive advantage for the whole organisation (Ireland & Webb, 2007).
Organisational design	Formalising viable systems of communication, dividing labour, coordination and control is called organisational design (Rudzki & Trent, 2011:64). There is a general recognition of importance of the reporting line of procurement, but there are still some situations where the most senior procurement manager is not placed at a sufficiently high level within the overall organisation in order to clearly outline communication and integration processes with regard to decision-making (McClelland, 2006; Handfield *et al.,* 2011:167).
Education and training	Motivational tool used to increase individual skills (Monczka *et al.*, 2010:285).
Performance measurement	Analysing organisational processes and methods against leaders in the competition for improvement (Comm & Mathaisel, 2005: 229).
Innovation and technology	Automation and application of computer software to procure, e.g. e-sourcing, e-reserve auctions and e-procurement (Rudzki *et al.*, 2006:122). Through innovation of technology, efficiency becomes eminent and costs are drastically reduced.
Managing supply chain	Denotes the way in which supply processes within and outside the organisation are structured and managed (Van Weele, 2010:251). This

	management approach enables business enterprises and government institutions to react to intense global competition by using information technology and new forms of inter-organisational relationships with the aim of increasing customer satisfaction, market share and profits.
Risk management	Ensure profitability and continuity of the organisation (Moller, 2012:39).
Research	A systematic collection, classification, analysis and interpretation of information on all issues related to materials supply (Lysons & Farrington, 2006:629). Research in procurement assist management to make informed decisions based on sound knowledge.
Consortium procurement	Leverage economies of scale through bulk purchases (Burt *et al*., 2010:259).

2.3. A synopsis of South African Comprehensive Universities

In South Africa comprehensive universities (CUs) were primarily established to increase accessibility particularly to disadvantaged rural and poor students into quality higher education. The CUs in South Africa include the University of South Africa (Unisa), University of Venda (UV), University of Johannesburg (UJ), Walter Sisulu University (WSU), University of Zululand (UNIZULU) and the Nelson Mandela Metropolitan University (NMMU) (International Education Association of South Africa (IEASA, 2012:15). CU's are expected to cater for diversity, student mobility, responsiveness and flexibility (Department of Education (DoE, 2004:5). Therefore, CUs contribute meaningfully to poverty alleviation measures. However, with so many directives laid on the CUs, it was inevitable that challenges and opportunities would result. Mbabane (2010:3) highlight these challenges which among others include defining and repositioning themselves, curriculum and programme mix, diversity issues and integration disputes. Yet, the emergence of CUs also presented opportunities of pooling resources and capacity which needs to be embraced in public procurement policies and practices.

2.4. Public Procurement Policies and Practices of Comprehensive Universities

2.4.1. Public Procurement

Public procurement is a process used by the state to acquire, and manage goods, works and services required to fulfil the public function (Arrowsmith & Quinot, 2013:1; Watermeyer, 2012:35). Public procurement involves procuring goods and services which are consumed by the public, therefore, efficiency and effectiveness are vital to minimise the possibility of service delivery protests. The sector is very large and has huge expenditures (Pauw, Woods, van der Linde, Fourie, & Visser, 2009:229; Van Weele, 2005:340). Owing to the magnitude and nature, this sector impacts mostly on socio-economic developments (Watermeyer, 2012:35). This means the procurement system cannot afford to be flawed, as massive losses could result. Therefore, it is logical that this sector is highly regulated. Due to the greater scrutiny and transformation of the public procurement sector, it is imperative to understand its objectives. According to Le Roux de la Harpe (2009:514), the objectives of public procurement are political in nature and aim to serve the socio-economic need of people:

- to obtain goods and services in such a manner that **value for money** (efficiency) is achieved

- to avoid corruption and conflict of interest through ethical conduct and **integrity**

- **accountability**

- to offer equal opportunities and equal treatment of providers **(equity)**

- **fair and impartial treatment** of providers

- **effective** implementation of industrial, social and environmental objectives

- **open** competition of public markets to international trade

The objectives of public procurement, therefore, aim at value creation, in terms of acquiring quality goods and services in a timely fashion and at a minimal cost, while managing risk and ensuring that socio-economic

objectives are achieved. In South Africa, the primary and secondary objectives of public procurement are entrenched in the Constitution of the Republic of South Africa, Act No 108 of 1996. This Act institutes government's policy for applying the preferential system. It also establishes requirements for the award of contracts to be lawful, reasonable and procedurally fair. Table 2 below indicates the content of these objectives and their source reference.

Table 02:   **Primary and Secondary Objectives of Public Procurement in South Africa**

	Objective	Reference
Primar	A procurement system that is fair, equitable, transparent, competitive and cost effective.	Section 217 (1)
Secondary	A procurement policy that may provide for: ▪ categories of preference in the allocation of contracts; and ▪ the protection or advancement of persons, or categories of persons, disadvantaged by unfair discrimination.	Section 217 (2)

Source: Bolton (2006); Watermeyer (2011)

2.4.2. Procurement Policies and Practices of Comprehensive Universities

Procurement in all CUs is governed by their respective procurement or supply chain policy and to some extent, public procurement policies and regulations such as the Promotion of Equality and the Prevention of Unfair Discrimination Act, 2000 (Act 4 of 2000), Preferential Procurement Policy Framework Act, 2000 (Act No 5 of 2000), Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003), Prevention and Combating of Corrupt Activities Act, 2004. (Act No. 12 of 2004), Public Finance Management Act (Act No. 1 of 1999), Framework for Supply Chain Management (2003) and Construction Industry Development Board Act, 2000 (Act 38 of 2000). The policies provide a framework governing the procurement process and procedure to be followed when acquiring goods and services for the each university. Issues such as ethical standards and conflicts of interests, all procurement transactions and interactions with suppliers, including supplier selection and evaluation, are subject to the provisions outlined in the code of ethics and conduct, and policies related to the prevention of fraud/corruption and other irregularities are also encouraged. In addition, the principle of the declaration of interest is included within the procurement system employed by the comprehensive universities. Furthermore, confidentiality and accuracy of information is incorporated to ensure that the procurement process is respected by all stakeholders (Unisa, 2009; NMMU, 2012). The policies also address foci such as among others: compliance, thresholds, supplier rotation and centralisation. These focus areas will be briefly discussed.

> ➢ *Non- compliance*

The procurement policies emphasise that responsibility centre managers are accountable for the reasonable use of the resources and comply with policies, procedures and applicable legislation. The policies further stipulates that the acquisition of goods and services must conducted in line with the related policies such as; the public tender policy, purchasing procedures, policy on official signing powers, electronic payments and contracts and other related financial policies. The objectives of procurement in Unisa are (i) to promote the proficient supply of goods and services through the promotion and application of *best procurement practices* (ii) to ensure that the university conducts business with entities that are committed to ethics and social responsible practices (iii) to set out the rules and authority levels for the acquisition of goods and services (Unisa, 2009). However, South African public sector including universities faces many unethical challenges that range from non-compliance with regulations to corruption, negligence, and incompetence, inadequate measures for monitoring and evaluating, and fraud (Ambe & Badenhorst-Weiss, 2011:438).

> ➢ *Supplier rotation*

Determining the right number of suppliers to maintain and how often to rotate them is a critical step in effective supplier management (Hugo and Badenhorst-Weiss, 2011:69). Some institutions prefer to deal with a

few competent suppliers as they deem it difficult to manage a large number of suppliers (Monczka *et al.,* 2010:230). In South Africa, supplier rotation is promoted by the government since procurement is used as a tool for social justice and results in job creation and encourages fair labour practices (Ambe & Badenhorst-Weiss, 2011:440). Thus, in the National Treasury Practice Note no. 8 of 2007/2008, it is stated that suppliers per commodity or service should be done on a rotation basis in order to stimulate competition amongst the suppliers. These CUs promote and reinforce broad based black economic empowerment (BBBEE) in support of improving the socio-economic conditions in South Africa with this practice. However, in terms of section 47 (4) (c) of the Public Finance Management Act (PFMA), institutions of higher education are not obliged to employ Preferential Procurement Policy Framework Act (PPPFA) regulations, but the universities embraces it where possible in support of improving the socio-economic responsibilities in South Africa (Unisa, 2009; UNIZULU, 2013). Hence they rotate suppliers on a continuous basis.

➤ *Thresholds*

Regulation of the threshold values is a practice that is drawn from section 76 (4) (c) of the Public Finance Management Act (PFMA) of 1999. The threshold values stipulate the certain ranges for procurement of goods and services give guidance on whether petty cash, verbal or written quotations or competitive bids should be followed (National Treasury, 2007:1). Table 3 below displays an example of the categories of threshold values used by CUs.

Table 3: Thresholds Categories for Acquisitions of Goods and Services

Category	*Requirements**
Up to R2,000	One verbal quotation
R2,001 to R10,000	Two written quotations
R10,001 to R500 000	Three written quotations from approved suppliers using attached RFQ document
R500 001to R1 999 9999	Four written quotations from approved suppliers using attached RFQ document
R 2 million and more	Tender process apply

Source: NMMU SCM policy (2012); National Treasury (2011)

Furthermore, the policy of "value for money" is applied when acquiring goods and services according to the universities' thresholds values (National Treasury, 2011:5). The National Treasury's Code of Conduct for Supply Chain Management (SCM) practitioners is also used by most procurement employees and other role players such as universities to enforce threshold values. In addition, disciplinary actions are taken against employees that do not comply with the codes of the policy and thresholds values (Unisa, 2009; NMMU, 2012).

➤ Centralisation

Hugo and Badenhorst-Weiss (2011:30) put forward the most general organisational structures, namely; centralised, decentralised, a hybrid or combination, and also the use of cross-functional teams. With regard to the decentralised organisational structure, the organisation assigns full autonomy to each of its units, while centralisation means that all purchases are made from a central office. Each organisational choice has advantages as well as disadvantages; hence some organisations usually balance the shortcoming of each alternative by adopting a hybrid method (Handfield *et al.,* 2011:162). Table 4 below presents the advantages and disadvantages of the centralised and decentralised structures of procurement.

Table 4: Advantages and Disadvantaged of Centralised and Decentralised Structures

Type of structure	Advantages	Disadvantages
Centralised	– Materials and products are standardised – Negotiation power is increased and volume discounts are made possible – Staff are afforded the opportunity of	– There is slow response time to regional plants – There is resentment from geographically dispersed business unit management

	becoming experts – Control is improved – Administrative costs are reduced – Supplier relations are enhanced – Information systems integration is facilitated – Duplication of effort is eliminated	– There is a tendency to bypass the central buying office – There is less integration with user departments – Staff structure is top heavy – There is a lack of insight into the requirements of dispersed plant units
Decentralised	– There are better relations between decentralised purchasing and other functions – There is good service delivery to regional plants – There is faster reaction time to user departments in emergencies – Support of local suppliers generates goodwill – There is a greater autonomy for profit centres – Interdivisional competition can improve purchasing performance	– There is loss of economies of scale – Suppliers are confused by dealing with many offices – There is duplication of staff and facilities – Control over the functions is much more difficult – There is a greater likelihood of communications breakdown – There is focus on local units and under-emphasis on strategic issues

Source: Hugo & Badenhorst-Weiss (2011: 31)

Generally, centralisation is performed by specialists and results in efficiency. Most CUs have adopted a centralised system. However, the trend in the Central and Eastern European countries has changed for a decentralised approach (Organisation for Economic Co-operation and Development (OECD), 2000:3). Matthews (2016) also, raised a concern that universities ignore evidence that decentralisation works better than centralisation. As to whether CUs should centralisation or decentralise is mystery at this stage.

3. DATA AND METHODOLOGY

A qualitative approach using multiple cases was adopted. This approach is suitable since the topic addressed in this study was not previously researched to this extent and there was no evidence that it had been addressed previously with the same audience at South African comprehensive universities (Creswell, 2009:18). Face-to-face interviews were conducted using open-ended questions since in-depth information was required to understand the problem. The interviews lasted from 45 to 60 minutes and were scheduled at a time that was convenient for the participants. These interviews were audio-recorded and transcribed with the permission of the participants. Due to the sensitivity of the information pertaining to this study, it was necessary to maintain a sense of sensitivity to participants' discomfort relating to sensitive issues and experiences. For this reason a debriefing was offered to participants if needed, immediately after the interviews or at a time convenient to participants.

There are twenty three public universities in South Africa and two newly-established National Institutes of Higher Education. The participants were chosen from the six comprehensive universities. The sample was drawn from three comprehensive universities with diverse historical backgrounds were chosen; historically distance education, historically advantaged university and historically disadvantaged. Thus, purposive sampling was used. The participants of the study were general procurement staff and management from the three comprehensive universities because they possess expert knowledge about the procurement policies and practices. The comprehensive universities were preferred because they encompass elements that prevail in all three types of universities found in South Africa (academic university, university of technology and comprehensive universities). According to Saunders, Lewis & Thornhill (2012:287) cumulative results of the diverse cases of data collected help to understand and answer the research questions fully. Data was analysed using Computer Aided Computer Qualitative Data Analysis Software (**CAQDAS**) called Atlas ti. Data analysis process involves reflection and engagement with the collected raw data through coding and grouping of concepts and themes to identify key themes in the data, and eventually to draw an interpretation about the data (Quinlan, 2011:425).

4. FINDINGS AND DISCUSSIONS

Five factors emerged from the findings on the management and procurement of the limited resources namely; policy, non-compliance, thresholds, supplier rotation and centralisation. The findings revealed that comprehensive universities in South Africa are restricted by policies which also guide their procurement. Non-compliance to the policies and procedures was also found to be a challenge in these universities. Thresholds are also used by the universities to guide procurement values. Supplier rotation came out strongly as a socially responsible empowerment tool even though some participants complained about the effectiveness of this practice. In addition, centralisation was one practice that universities use but, sometimes not for the right reasons. Consequently, the procurement function of these institutions does not contribute sufficiently to the university's overall objectives for competitive advantage and sustainability. According to the participants, this challenge was exacerbated by complying with the rigid, cumbersome and unclear public procurement policies that govern procurement in South Africa. Table 5 below summarises the main findings and provides supporting quotations from the data.

Table5: Summary of Findings

Sub-themes	Findings	Quotes
Policy	▪ Procurement is guided by governmental policies and those of the respective universities. ▪ Policy serves as guidelines that promote ethical conduct, ensures integrity, transparency and open systems. ▪ Policies are regarded as rigid and do not take the acquisition of special or unique items into consideration.	*But, you must remember we, procurement, we need to follow what the government is saying. (4:128)* *… you need to be transparent and you need to be open, you need to be fair and you need to be all of those things and you don't ask for freebies. You hear what I am saying. (9:106).* *… there were things that were, they were like blocking things to happen before you could do something for example you couldn't, if an item is more than R50 000, it needs three quotations, if our policy says three quotations its says three quotations you can't do without you know having three quotations only to find that it's is not about the quotations, sometimes it's about the service, the uniqueness of the service. (4:189).*
Non-compliance	▪ Non-compliance was evident within and outside the procurement department of some universities.	*There was non-compliance. Still now there is non-compliance. (5:12).* *To tell you the honest truth, it's very difficult to, I don't know whether it's difficult for end-users or its ignorance, but from our side we enforce it. If somebody submits something that is not adhering to the procurement policy, we reject the requisition until such time that you fully adhere to the policy. (3:21)*

		Mh! there are loopholes, but basically we want everything to come to here, but there are still loopholes. We find that some of the things were delivered in the departments, which is not right. We still are working on that as well. (5:107)
Thresholds	▪ Comprehensive universities make use of procurement thresholds that are specified in their policy and procedure manuals.	*…the process is you have to get quotations, depending on the value. The policy will tell you that if you want to buy something for this much, you have to obtain so many quotations. (3:4).* *the three quote rule that applies. You send the specification. You ask people to give you and quote you. You do it in evaluations to see which one is best because even though the policy talks about the three quote, the lowest quotation or the lowest cost, but sometimes it's not always the case because when you do a technical evaluation you find that this company cannot fulfil your needs but it's the cheapest company, so you end up going with the one at the highest score who's going fulfil your needs but which the price would be a little bit higher as well. There's always that conflict in requirements. There's always the contradiction, so which is why we look at the proviso because we are looking at the value for money. Price is one component of the entire value chain because mind you price itself is a cost. It's a total cost of ownership.*
Supplier rotation	▪ Use the rotation of suppliers, and emphasised that procurement is used as an empowerment tool	*…we want to make a point that we share the pie with every supplier so it's an ideal, it's the best practice to rotate suppliers; you mustn't forget the issue of procurements goes with empowerment. (1:143).*
Centralisation	▪ Centralisation is mostly used to take responsibility for BEE procurement purposes.	*…we have got a centralised procurement department. I believe that the benefits for a centralised procurement department is somebody needs to take responsibility for BEE but centralised buying, we have got all the people doing the procurement activities in one building (9:78).*

Most CUs follow public procurement policies because, in South Africa procurement is used as a tool for social justice (Ambe & Badenhorst-Weiss, 2011:440). This means that public procurement supports the socio-economic values of the country. To some extent, the National Treasury's Code of Conduct for SCM Practitioners is used by university employees and other role players involved in the procurement process. The participants interviewed asserted that their procurement process and procedures are generally guided by the policy. According to Fourie (2011:33) and Leenders, Johnson, Flynn and Fearon (2006:61) the phases of the procurement cycle should be designed in line with the broad policy and the strategy of the procurement function, coordinated and communicated well with the other functions in the organisation for synergy and compliance purpose. The participants narrated that their procurement is guided by the policies from the government and their respective universities. However, some of the participants raised concerns about the rigidity of policies that is blocking innovation and creativity in procurement. The participants mentioned that the policies do not take into considerations the acquisition of special or unique items and thus restricts effective management and procurement according to the best practices into considerations. The challenge of policies is not exclusive to the CUs, the National Treasury (2015) highlighted that public procurement policy and regulations are habitually unclear and cumbersome.

Conversely, the participants felt that the use of policy as a compliance tool was inefficient, not followed or not enforced. Even though there are prescriptions of how to conduct procurement, there are still issues of non-compliance that were experienced in this regard, thus, restricting the management of limited resources eventually resulting in fraud and maladministration (Leach, 2012; Phakathi, 2013). According to Mohamedbhai (2016), corruption in higher education has been a challenge for many years. This issue is confirmed by Ambe & Badenhorst-Weiss (2011:438) where they reiterated that public procurement in SA faces many challenges ranging from non-compliance with regulations to corruption, negligence, incompetence, inadequate measures for monitoring and evaluating, and fraud. In some instances, participants stated that non-compliance was more prevalent on the side of the users and not in the procurement function itself. Some participants articulated that they enforce compliance by rejecting non-complying orders, but admitted that it is difficult to enforce compliance in order to save the limited resources of the universities under these conditions. As indicated in the introduction, adherence to procurement procedures and fairness is a challenge in the public sector as well as in CUs as part of public entities (Green, 2014).

All the comprehensive universities make use of procurement thresholds that are specified in their policy and procedure manuals. The thresholds quote different values and procedures that should be followed for specific thresholds, for example, when to obtain quotations or follow the tender processes (National Treasury, 2007). The universities have different threshold limits guided by the National Treasury regulations and SCM Guidelines and Reforms. However, some participants complained that the thresholds limit the purchasers from getting value for money and does not take into account the total cost of ownership. Arrowsmith (2012) proposed flexibility and simplifying complex rules that set boundaries thereby, promoting value for money and taking into consideration total cost of ownership. However, universities in South Africa are classified as unscheduled public entities and therefore, are not bound by the PFMA. Thus, they are free to adjust threshold values to suit their own environment. However, this is not easy for universities as they are subsidised by the government and this explains the reasons for conforming to the government legislation even when they are autonomous.

It was surprising that some participants regarded the rotation of suppliers as an ideal situation when contrasting it to the best practice. According to Burt *et al.*, (2010:41) the ideal situation is to reduce the supply base and deal with a few competent suppliers. The reasons for reducing the number of suppliers on the database leads to increased leverage, reduced costs, and better relationships with suppliers, which assist the institution to respond better to increased competitive pressure and changing customer requirements or expectations (Ogden & Ellram, 2003). However, the response was startling when the participants who occupy senior positions validated that supplier rotation is a best practice. This ideology could be the result of conforming to the government prescriptions of social justice. Even though the intention of empowerment is a good gesture for social development conversely; it did not seem to be serving the purpose of best practice as some managers referred to it.

Most universities seemed to favour centralised system. Hugo and Badenhorst-Weiss (2011:30) suggests three types of procurement systems, namely; centralised, decentralised, a hybrid or combination. But it came as a surprise though that the reasons cited for the use of centralisation was to take responsibility for BEE procurement purposes mostly. None of the participants mentioned that they prefer centralisation for control purposes, reducing cost or standardisation of processes. It did not come through that participants understood the advantages and the disadvantages of centralisation. There is no best approach between centralisation and decentralisation according to OECD (2000:5) as circumstances, culture, level of economy and market development vary from country to country. A hybrid approach seems to be the best solution to balance the system.

5. CONCLUSION

The purpose of this paper was to determine the factors affecting the effective management of the limited resources in South African comprehensive universities. The study highlighted some of the factors affecting the effective management of limited resources in South African comprehensive universities. It is therefore, recommended that South African comprehensive universities should employ PBPs in order to streamline operations, remove internal barriers to curb unethical conduct and non-compliance to policies and communicate the vision to the procurement staff and the organisation as a whole. In addition, these universities may introduce innovation and relevant technology for spend visibility, reducing costs and implementing shorter cycle times. Furthermore, it is advisable that these institutions should set performance targets and continuously measure and evaluate the planned against the actual output. Also, sensitising the entire university community to comply with procurement policies and procedures, creating awareness on procurement's impact on value maximisation and contributions to the corporate objectives should be viewed as a strategic requirement. Lastly, instilling the culture of efficiency and cost savings measures for the whole university to reduce maverick spending by introducing spend analysis, and the consolidation of purchases for groups should be considered for sustainability.

This paper contributes to theory and understanding of procurement by adding value to the understanding of PBPs in universities that could help the CUs to gain a competitive advantage. Although this article may contribute to the understanding of PBPs in South African universities and has highlighted the gap between theory and practice, there are limitations that are worth declaring:

- Since the approach of this research study is qualitative in nature, it is not possible to generalise the results to the other universities in South Africa.

- Access to information and participants was difficult due to the sensitivity of procurement information.

It is recommended that future research be repeated in a different context, for example, with all three types of universities found in SA, as findings might differ.

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A STUDY OF THE EFFECTS OF COMPETITIVE STRATEGIES ON STAKEHOLDERS RELATIONSHIP MANAGEMENT AND STAKEHOLDER BEHAVIOR

Zafer Adiguzel[1], Cemal Zehir[2]
[1]Gebze Technical University. zafercan81@yahoo.com
[2]Yildiz Technical University. cemalzehir@gmail.com

ABSTRACT

In the 21st century, the businesses can communicate and share information rapidly and efficiently by using technologies that are in constant development and change and can gain more at less cost. These developments and changes in the business world force us to reconsider the stakeholder concept in more detail and in a comprehensive manner and to examine the need for more open and clear management style. The concept of stakeholder management is very important for the businesses in terms of their position, their corporate structure, which customer groups effect the businesses, how they could survive and be successful, and how they would respond to the needs and requirements of the stakeholders. When we examine the stakeholder concept in traditional sense, we can see that the stakeholders such as the employees, shareholders, suppliers, customers, society, non-governmental organizations, government and media have a significant effect on businesses. In this study, the employees were examined as a primary stakeholder and a research carried out to understand how their attitudes and behaviours were effected from competitive strategies. In order to ensure the continuity of the business and implementation of its activities, the businesses should evaluate and analyse the main stakeholders thoroughly and fulfil necessary responsibilities.

Keywords: Competitive strategies, strategy, stakeholders, stakeholder behavior, management
JEL Classification: D23, L20, M10

1. INTRODUCTION

The concept of stakeholder theory is defined as the management of mutual relations with the stakeholders in business sector in order to create or add value to the business (Freeman, 1984, Freeman et al, 2010). The stakeholder theory mainly concerns about what kind of the relationships exist between the managers and the stakeholders and what other kind of relationships are possible (Freeman, Fitil & Parmar, 2004, p. 364). The main purpose of the stakeholder theory is to examine stakeholders relationships management decisions and to study their results and effects in detail (Freeman et al, 2010.; Friedman & Miles, 2002.; Jones, 2011.; Laplume, Sonpar & Litz, 2008). The literature search also indicates the need of reconsidering the concept of stakeholder theory and expanding it to explain the inner process between the organisations and stakeholders (Jones, 2011). The stakeholder theory provides various alternatives for the businesses in order to balance the benefits obtained from the stakeholders in any business sector. The first of the principles outlined in the stakeholder theory is to determine the objectives of the business. This principle is important in terms of how the competitive strategies effect the management- employee relations and employee behaviours, the position of the business and the competitors in the sector. Stakeholder management is especially important in improving the performance of employees in order to gain business growth and better development. A possible way to do this is to determine the responsibilities of the business towards their employees, which in return would ensure employees to embrace the company and lead to better organisational performance. We have developed research models in order to obtain of the results, the 16 companies in the telecommunications sector, 493 white-collar employees carried out on conjunction with the survey, The correlation and regression analyses are SPSS 21.00 Statistical Software Program has been used for the evaluation of data.

2. LITERATURE REVIEW AND HYPOTHESES

The stakeholder theory is defined as the management of the relationships with the individuals and employees in a coordinated manner and in line with the business objectives and the failure or success of the business as a result of the selection made by the stakeholders (Freeman et al. 2004). The new perspective of the stakeholder theory tries to explain how the value was created by the interaction with internal stakeholders; employees, shareholders and managers and external stakeholders; customers, suppliers and how these relationships would work (Freeman et al. 2010). The impact of the decisions taken on the management of stakeholder relationships has not been fully understood yet due to the different conditions in the sectors. The business management should be aware of the importance of the cognitive and emotional processes underlying the relationships between individuals, which also shapes the behaviour between stakeholders and companies (Brickson, 2007). However, a number of new studies in the literature emphasis on stakeholder relations and show the importance of the effects of stakeholder management (Jones, 2011.; Laplume et al.; 2008 Freeman et al. 2010). Contrary to the studies that carried out to understand and to shape the of management actions, these studies put emphasis on stakeholders perspectives and behaviours, thoughts and ideas and what effects them. This stakeholder management approach sees the indivudual relationships in a company as a network (McVea & Freeman, 2005). In stakeholder relationships management, the relationship and the interaction between individuals should be analysed together to gain mutual benefits (Freeman et al. 2010).

3. COMPETITIVE ADVANTAGE THEORY

Competitive Advantage Theory is an approach that considers the impact of other companies on the business. Positive competitive advantage may affect the success and failure of a company and may ensure an advantageous position for the business against other firms in the sector, together with internal and external environmental factors. Thereby, the database can show the best way to use the internal and external resources of the company (Grant, 1991). Porter states that the companies need to analyse their position in the market very well in order to implement cost leadership and differentiation strategies (Porter, 1985).The cost leadership and differentiation strategies are very important competitive strategies that helps businesses to gain competitive advantage. The companies need to differentiate their products and or services in business sector to make their customers feel special. The way to use resources in the most effective way passes through determining the correct strategy. The cost leadership in products or services may ensure the continuity and profitability of the business and the product differentiation may to raise awareness against the competitors.

3.1. Cost Leadership Strategy

The cost of leadership of the business means being superior to competitors in the market with lower cost and lower price. According to Porter, the cost leadership can be ensured in a specific discipline chain. This chain consists of; the establishment of active and efficient facilities, benefiting from experienced personnel, control of expenses, keeping the cost of sales, advertising and R&D at minimum (Porter, 1980). The cost leadership strategy have short-term benefits rather than long-term benefits. The reason is the danger of cost strategy preparation without foreseeing the changes in developments that may occur in the future. At the same time, a strict cost-conscious focus may lead to compromise on the necessary spending. A survey was conducted about the cost leadership strategies and the employees were asked questions about their thoughts on lowering the costs and keeping costs of functions in the value chain under control or lowering them. The scale was created by studying the questions used in literature. These are; (Porter, 1980), (Slater & Narver, 1993), (Rozenzweig et al. 2003), (Change et al. 2003), (Chaston & Mangles, 1997), (Dess & Davies, 1984), (Lynch et al. 2000), (Vorhies et al. 1999).

3.2. Differentiation Strategy

The importance of differentiation strategy for businesses is to evoke the feeling of unique product inside customers and sustain this strategy. Businesses can increase their profit margin by differentiation, by providing low cost-unique products or services to their customers. The differentiation strategy allow businesses to gain customer loyalty and can prevent other companies from entering the market and put the businesses into an advantageous position against the substitute products that can be offered to the market (Porter, 1980).

Literature study has been carried out and several resources has been used to create a scale about how the differentiation strategy was implemented in the company and questions were asked to the employees. The resources used in the creation of the scale are; (Dess & Davies, 1984), (Lynch et al. 2000), (Vorhies et al. 1999), (Porter, 1980), (Slater & Narver, 1993), (Chaston & Mangles, 1997), (Kohli & Jaworski, 1990), (Yamin, et al. 1999), (Celuch, et al. 2002), (Chang, et al. 2003), (Rozenzweig, et al. 2003).

4. FACTORS FOR ANALYZING THE RELATIONSHIPS WITH STAKEHOLDERS

Companies, in terms of competitive strategies, both able to better the performs and their existing the performance for protect, with stakeholders, particularly employees, prefers to have a relationship egalitarian and deliberativ (Solomon, 2001 p. 257). One of the most important goals of the business, creating a strong network with stakeholders, located stakeholder relations management: both participation in decision and inter-business information sharing, also under the influence of stakeholder behavior effect: Employee Behaviours and Social Perspective size, companies have their own values, providing to be compatible with the values of stakeholders, the confidence with stakeholders to develop solutions that may occur has been creating complex problems. These efforts, great of importance in terms of ensuring the sustainability of enterprises (Svendsen & Laberge, 2005 p.103).

4.1. Inter-Business Information Sharing

The businesses should maintain healthy information exchange with the other businesses and therefore communication tools holds critical function in relationship with stakeholders. The communication that established between the functions of internal structures, together with the transfer and analyse of the information and ideas obtained from the external circle hold significant importance in ensuring the continuity of the business. The communication disorders between employees and shareholders may cause conflicts in the business (Paulraj, Lado & Chen, 2007 pp.1-20). In order to ensure the success of mutual relations, the businesses should implement effective information sharing, utilisation of duties, responsibilities and workflow (Jansson, 2005 pp.1-13). Another important issue in inter-business information sharing is to prevent any communication conflict that may occur with other companies. To prevent potential conflicts between stakeholders is very important in terms of protecting the business from damages and disallowing the creation of negative atmosphere between stakeholders. A conflict can be defined as a dispute between two individuals or groups, generated from sharing resources or differences in purposes, values, ideas or perceptions. (Stoner,1978 p.345). If the businesses can manage conflicts with good communication, they can see the positive effects, however, if they cannot manage it well, they have to face negative consequences and this may damage the image and reputation of the businesses (Duane, 1999). Inter-business Information Sharing Scale (13 variables) (Mohr & Speakman, 1994; Monczka et al., 1998; Medina-Munoz, Garcia-Falco, 2002; Leonidou, Palihawadana & Theodosiou, 2006).

4.2. Participation in Decisions

The stakeholders' participation in decisions can be an effective and efficient factor for business to achieve its objectives and goals. It is necessary for businesses to share their decisions with internal and external stakeholders and receive and evaluate the feedbacks. Stakeholder participation in decision making process will also provide positive attitudes and behaviours towards the business and increase the level of satisfaction of the stakeholders (Ladd & Marshall, 2004 pp.646-662). Participation in Decisions Scale (4 variables) (Mohr & Speakman,1994; Monczka at al., 1998; Medina-Munoz, Garcia-Falcon, 2002).

4.3. Employee Behaviours

The business managements that are not aware of the importance of competitive advantages, see the effect of the performance of employees on the success of the business and start to assess the employees as a strategic resource. The employees who work for the business are also the stakeholders with a significant impact on business performance (Marta Fossas Olalla, 1999, p.84-92.). At the same time, the employees' positive or negative attitudes and behaviours towards the stakeholders of the business will have an effect on the perspective of the stakeholder groups towards the business. It should not be forgotten that the employees are

also the customers and consumers (Cindy McCauley & Michael Wakefield, 2006, p.4.). The questions designed to test the customer loyalty of the employees were prepared carefully after the literature study on customer satisfaction and brand loyalty: Thomas S. Bateman and J. Michael Crant's "Behavioral Trends' Scale, Yoon and Donthu's "Brand Value" scale, and Aaker's "Brand Loyalty" scale has been used.

4.4. Social Perspective

Social aspects of the relationships with stakeholders are also very important for the continuity of the business. Social perspective assessment has been discussed in terms of public and media. The individuals living in developed countries adopt the principle of 'being good corporate citizen' and contribute effectively to their organization (Mana Kalathil & Rudolf, 1995). Governments implement public policies by legislations and regulations and they are generally carried out to ensure the equable work conditions and activities for the employees. Therefore, from public perspective, the companies are regarded as one of the he most important agents of change that effects public actions (Qu, 2007). In terms of the effect of stakeholder behaviours, the employees' behaviours towards the business as a result of the development in public and media have been extensively examined in the literature (Yang & Rivers, 2009).

The good management of public relations is the another important issue for the success of the businesses. If the corporate social responsibilities are not managed well in terms of public relations, the companies may even face financial damages. Specially, the media has significant impact on the position of the company and increase public awareness (Azmat & Samaratunga, 2009). Therefore, the companies cannot ignore the communication channels related to their employees and the public (Tixier, 2003). These events usually well published in the media and which may cause the business to lose their credibility or they can even be wiped out from the market, regardless of their national or international status. Therefore, it is very important know the level of media consciousness of the employees. The questions asked to the employees in telecommunications industry was prepared and evaluated by the 'Qu, Byung Il Park, Agnieszka Chidlow, Jiyul Choi, 2014'.

5. METHODOLOGY

In this survey we aim to identify the effect of Competitive Strategies on the relationship Stakeholders Relationship Management and Stakeholder Behaviour Effect. This study, a field survey using questionnaires from telecommunications industry was conducted.

5.1. Sample and Data Collection

The scale was analysed in terms of factor, reliability and validity by 493 questionnaires and then data was reduced to the company level as the research requirement. In other words, the average of the responses obtained from multiple participants from each of the companies were reduced to a single answer for this company. The correlation and regression analyses carried out on the 493 questionnaires. SPSS 21.00 Statistical Software Program has been used for the evaluation of data. The descriptive analysis method has been used to define the demographic characteristics in questions with ordinal scales such as education and with nominal scales such as gender. The factor analysis has been used in the questions with Likert-type ordinal scales. Cronbach's Alpha has been used to measure the reliability of the factors. The relationship between variables and correlation analysis have been examined on one-to-one basis; and research hypotheses have been tested by regression analysis. Our questionnaires were completed by 493 employees in various departments of 16 companies, appropriate to the criteria. The survey responded by 363 male and 130 female white-collar employees. 29.6% of the respondents were in 17-27 age group; 58.8% were in the 28-40 age group. The percentage of managers over the age of 41 was 11.5%. 7.3% of the survey participants were graduated from high schools, 11.7% from vocational colleges. Also, 64.9% of the respondents have bachelor degree, 16.2% have master degree, 0.2% have doctorate degree. 95 of the white-collar employees (19.2%) were working at the Marketing Department, 59 of them (11.9%) were at IT (Information Technology) Department; 27 (5.4%) at the Accounting Department, 40 white-collar workers (8.1%) at the Human Resources Department; 46 white-collar workers (9.3%) at the Operations Department; 38 white-collar workers (7.7%) at the Production Department; 27 white-collar workers (5.4%) at the Technical Department; 21 white-collar workers (4.2%) at the Public Relations Department; 44 white-collar workers (8.9%) at the Purchasing Department; 15 white-collar

workers (3%) at the R & D Department; 18 white-collar workers (3.6%) at the Finance department; 9 white-collar workers (1.8%) in management. The number of managers at other departments were 54 (10.9%).

5.2. Analyses and Results

Factor Analysis, In our study, 56-item questionnaire with 5 Likert scale ('strongly agree', 'not strongly agree') was used to measure the variables. SPSS 21.00 statistical software package was used for factor analysis. The independent variables (stakeholder relationship management) and dependent variables (stakeholder behaviour impact and competitive strategies) were analysed separately. As a results of the factor analysis, 14 questions did not show the factor distribution or fall into other factors and therefore were removed from the scale as they reduce the scale reliability. Our variables that were subjected to factor analysis and the scales which were used to measure the variables are presented at the table below together with the load factors.

Table 1: Rotated Component Matrix[a]

	Component					
	1	2	3	4	5	6
E65- The organisations we work for provide all the importation we need when we offer services.	0,766					
E71- When we have a conflict with the organisations we work for, the conflict usually solved in the favour of the organisations.	0,729					
E61- The communication with the organisations we work for performed in timely manner.	0,722					
E67- The organisations we work for give us the necessary information in advance	0,721					
E66- The organisations we work for do not sometimes give enough attention to inform us about the issues which may affect our work.	0,719					
E63 – The communication we have established with the organisations we work for is not sufficient enough.	0,700					
E62- We establish correct communication with the organisations we work for.	0,683					
E72- In the case of conflict with the organizations we work for, we prefer to ignore the conflict and step back and give some time for resolution.	0,653					
E70- To solve the conflict with the organizations we work for, we do not get the source of the conflict but prefer to find more agreed areas and leave the conflict to calm down.	0,586					
E68- When we have a conflict with the organisations we work for, we try to come together and make mutual decision to solve the problem.	0,579					
G83-We make the future plans and predictions together with the organisations we work for.		0,860				
G84- We work together with the organization to create mutual purposes related to work		0,801				
G82- The organisations we work for consider our views when they make important decisions.		0,757				
P506- When we compared Turkey with other countries, the media gives more importance to the social role of the organisations.			0,865			

P502- The local government has effective arrangements to encourage firms to improve the quality of their products and services.		0,853		
P503- There are laws and regulations to ensure fair competition.		0,828		
P505- Mass media has powerful force in shaping corporate image and reputation in the local market.		0,714		
P504-Media plays an important role in improving and sustaining the public relations between organisations and consumers in the local market.		0,659		
P501-There are strict regulations of the local government to protect the consumers.		0,636		
K104- If you cannot find the product of the company, would you search other stores just to find this company's products?			0,764	
K105-As a consumer, when buying products, would you become a loyal customer of the organisation's products?			0,755	
K101- If the product of the organisation was sold at the same price with their competitors, would you prefer it other brands?			0,737	
K103-If you were satisfied with the organization's product, would you tell this to the people around you (spouse, friends, family)			0,673	
T814- To expand our production line as it can produce different products.				0,764
T813- To respond to customer needs in different markets.				0,741
T812- To benefit from new business and new market opportunities.				0,713
T811- To improve and enhance our existing products on the market continuously.				0,657
T808- To have differentiated products of our company in the market.				0,645
T809-Todevelop additional models and sizes of our existing products.				0,604
T810- To reduce the time of developing and presenting new products to the market .				0,579
T806- To establish strong coordination between R & D, product development and marketing functions.				0,546
T803-To offer better quality products compared to our competitors				0,522
T804- To offer more differentiated products compared to our competitors.				0,512

S703- To keep our activities under strict cost control.				0,713
S701- To produce with lower operating costs compared to our competitors.				0,688
S706- To minimize the idle production capacity				0,655
S702- To modernize our production processes with new technologies to increase productivity.				0,644
S707- To minimize the waste and other maintenance costs.				0,634

S711- To emphasis on efficiency.						0,608
S712- To redesign our products to reduce costs.						0,590
S710 To invest in technologies that reduce costs.						0,562
S713- To keep all costs as low as possible tin order to offer lower prices .						0,544

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.[a]

a. Rotation converged in 6 iterations.

E: Corporate Information Sharing G: Participation in Decisions P: Social Aspects, F: The evaluation of the company by the employees as the customers T: Differentiation Strategy Q: Cost Leadership Strategy

5.3. Reliability Analysis

Reliability is defined as the internal consistency of the measurement of the average relationship of the questions related to a variable. The measurement of Cronbach's alpha coefficient of 0.70 and over is considered adequate for the social sciences in the literature. As seen on the table below, our alpha values is higher than 0,70, which shows the reliability of our scales and internal consistency of our variables.

In this study, Stakeholder Relations Management was measured by a total of 14 questions, including, Inter-business information sharing 10 (Cronbach's α value of 0.894) and participation in decisions 4 (Cronbach α value of 0.828). 3 questions were removed from the scale due to the distribution to different factors, and 1 question was removed due to the lack of factor distribution and as they reduced the reliability of the scale.

As a result of the factor analysis, the Stakeholder Behaviour Effect was measured with the evaluation of the company by the employees as the customers 4(Cronbach α value of 0.746) and the evaluation of the company from social aspects point 6 (Cronbach α value of 0.888). 1 question did not show factor distribution and reduced the reliability of scale and therefore removed from the scale.

The factor analysis was conducted using SPSS 21.0 Statistical Software Program, and the cost leadership dimension of competitive strategies scaled with 9 questions (α = 0.850), and differentiation leadership scaled with 10 questions (α = 0.863). 5 questions for the cost leadership dimension and 4 questions for the differentiation strategies (total of 9 questions) did not show factor distribution and reduced the reliability of the scale, and therefore they were removed from the scale. Therefore, competitive strategies were measured by a total of 19 questions with high scale reliability.

6. CORRELATION ANALYSIS

Correlation analysis was conducted in two stages. In the first stage, inter-business information sharing dimension and participation in decisions dimension of stakeholders relationship management; the employee perspective as a customer dimension and social aspect dimension of stakeholder behaviours affect; the cost leadership and differentiation dimensions of competitive strategies were studied considering the one to one relationships. The findings are reported in the table. As we mentioned earlier, the analysis we made so far (factor analysis, reliability analysis, descriptive analysis) was conducted on the 493 questionnaires obtained from 16 companies. Before moving to the regression analysis, the data was reduced the firm level. Regression analysis was conducted to study the effects of competitive strategies, stakeholder relationship management and stakeholders behaviours. The table presents the average of the variables, standard deviation values and correlation coefficients. The correlation coefficient of the variable measurements were shown at the upper diagonal of the matrix. The correlation coefficients for variables at the firm level were shown at the lower diagonal of the matrix.

Table 2: Descriptive Statistics

	Mean	Std. Deviation	N
INTER-BUSINESS INFORMATION	3,8692	,59182	893
PARTICIPATION IN DECISIONS	3,7301	,67720	893
EMPLOYEE PERFECTIVE AS A CUSTOMER	3,7346	,60532	892
FROM SOCIAL ASPECT	3,5845	,70426	893
COST LEADERSHIP	3,9751	,54625	892
DIFFERENTIATION	3,6402	,56506	893

Table 3: Average, Standard Deviation Values and Correlation Coefficients of the Variables

	INTER-AGANECY INFORMATION	PARTICIPATION IN DECISSIONS	EMPLOYEE PERSPECTİVE AS A CUSTOMER	FROM SOCILA ASPECTS	COST LEADERSHIP	DIFFEREBTİATION
INTER-BUSINESS INFORMATION	1	,431**	,724**	,397**	,741**	,916**
		,000	,000	,000	,000	0,000
	893	893	892	893	892	893
PARTICIPATION IN DECISIONS	,441**	1	,515**	,283**	,336**	,342**
	,000		,000	,000	,000	,000
	893	893	892	893	892	893
EMPLOYEE PESTECTIVE AS A CUSTOMER	,714**	,545**	1	,328**	,537**	,720**
	,000	,000		,000	,000	,000
	892	892	892	892	892	892
SOCIAL ASPECT	,337**	,283**	,338**	1	,248**	,389**
	,000	,000	,000		,000	,000
	893	893	892	893	892	893
COST LEADERSHIP	,641**	,426**	,537**	,338**	1	,566**
	,000	,000	,000	,000		,000
	892	892	892	892	892	892
DIFFERENTIATION	,806**	,472**	,730**	,329**	,586**	1

0,000	,000	,000	,000	,000	
893	893	892	893	892	893

The correlation coefficient of the bottom of the diagonal were obtained from the factors at firm level; the ones at the top were obtained from the measurement of variables.

 *: P <0.05 level Pearson Correlation is significant   ** p <0.01 level Pearson Correlation is significant

At Table 3, Interagency information sharing and participation in decisions of the stakeholder relations management have a significant relationship with all of the variables at p <0.01 level. The evaluation of the company by the employees as the customers variable and social aspects variable of the effect of stakeholder behaviours have significant relationships with all of the variables at p<0.01 level. The cost leadership strategy and differentiation strategy of the competitive strategies have significant relationships at the p <0.01 level with all with all the variables.

7. RESEARCH MODEL

In our research model, the white-collar workers in the telecommunications industry, considering the situation their institutions and competitors in the sector, how competitive strategies impact of stakeholder relations management and stakeholder behaviour were investigated. In particular, competition strategy of cost leadership and differentiation strategies; "Inter-Business Information Sharing" and "Participation in Decisions" in the management of stakeholder relations and stakeholders behavior under the influence "The evaluation of the company by the employees as the customers" and "Social Aspects" established the effects of the dimensions, hypothesis was studied and tested.
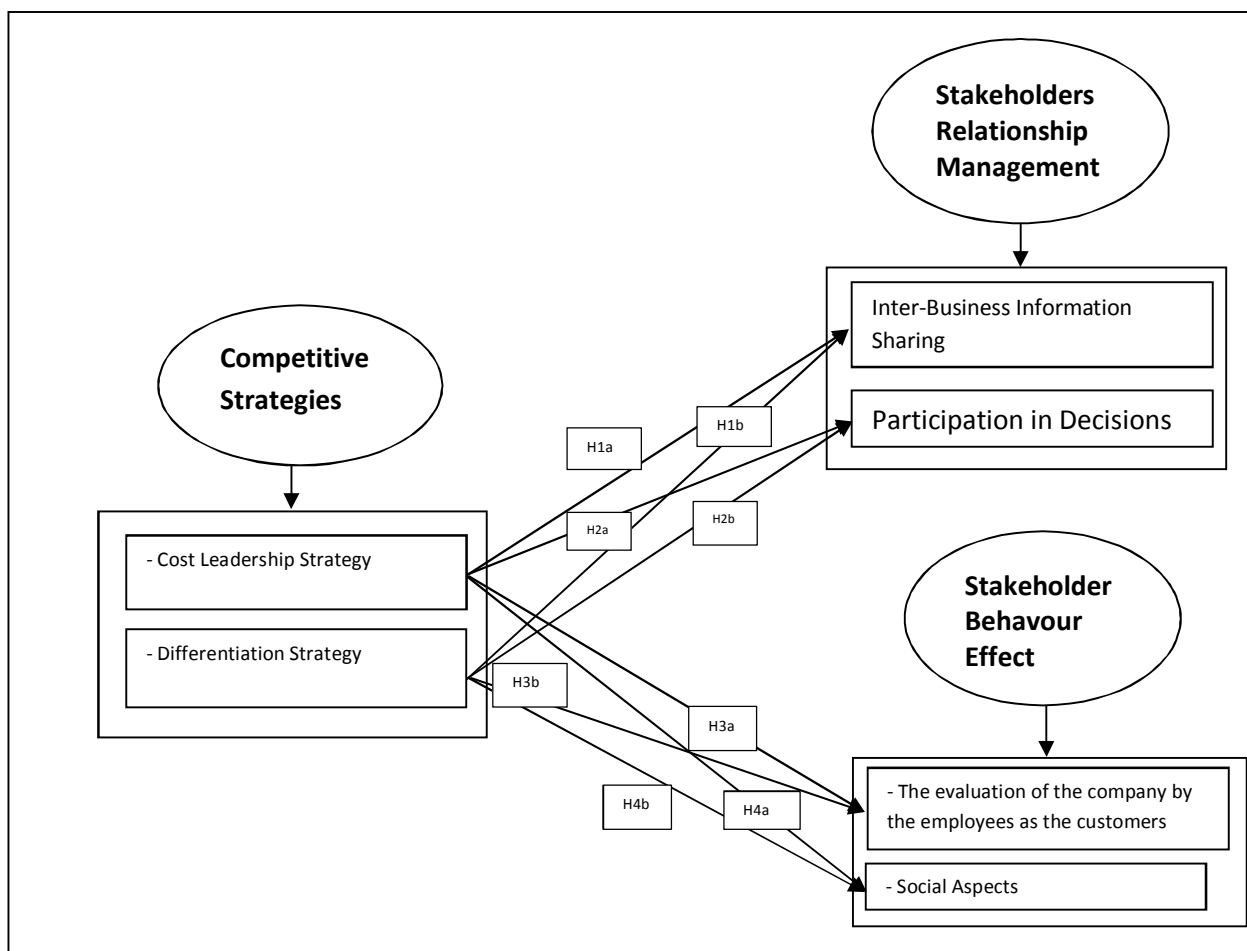
7.1. Supported or Unsupported Hypotheses According to the Regression Analysis Results

The regression analysis was used to test research hypotheses and the 8 supported hypotheses are shown in Table below.

8. HYPOTHESİS TESTİNG AND ANALYSİS OF RESULTS

Table 4: Competitive Strategies and Stakeholders Relationship Management Regression Analysis Results

Independent Variables	Dependent Variables	Standard β	Sig.	Revised R2	F Value
Cost Leadership	Inter-Business Information Sharing	,660***	,000	,435	379,310
Differentiation		,895***	,000	,800	1975,760
Cost Leadership	Participation in Decisions	,274***	,000	,073	39,966
Differentiation		,246***	,000	,059	31,697

*: p≤ 0.05   **:p≤ 0.01   ***:p≤ 0.001

Table 5: Competitive Strategies and Stakeholder Behaviour Effect Regression Analysis Results

Independent Variables	Dependent Variables	Standard β	Sig.	Revised R2	F Value
Cost Leadership	The evaluation of the company by the employees as the customers	,533***	,000	,282	194,587
Differentiation		,766***	,000	,586	698,718
Cost Leadership	Social Aspects	,178***	,000	,030	15,982
Differentiation		,229***	,000	,050	27,186

*: p≤ 0.05   **:p≤ 0.01   ***:p≤ 0.001

Table 6. Acceptance / Rejection Status of Research Hypothesis

Hypothesis	Acceptance/ Rejection	Level of Significance (Sig.)
H1a: The cost leadership strategy of the competitive strategies affects the inter-business information sharing in stakeholders relations management in positive	*ACCEPTED*	*P≤0.001*

direction		
H1b: Differentiation strategy of competitive strategies affects the inter-business information sharing in stakeholders relations management in positive direction.	***ACCEPTED***	***P≤0.001***
H2a: The cost leadership strategy of competitive strategies affects the decision participation in stakeholder relations management in positive direction	***ACCEPTED***	***P≤0.001***
H2b: The differentiation strategy of competitive strategies affect the decision participation in stakeholder relations management in positive direction.	***ACCEPTED***	***P≤0.001***

According to the regression analysis results, the cost leadership dimension of competitive strategies affects the inter-business information sharing assessment (β=,660; p≤0.001) and the participation in decisions (β=,274; p≤0.001) in stakeholder relations management in positive direction. The differentiation strategy dimension of the competitive strategies affects the inter-business information sharing assessment (β=,895; p≤0.001) and the decision participation (β=,246; p≤0.001) in stakeholder relations management in positive direction. Therefore H1a (The cost leadership strategy of the competitive strategies affects the inter-business information sharing in stakeholders relations management in positive direction) H1b (Differentiation strategy of competitive strategies affects the inter-business information sharing in stakeholders relations management in positive direction.) and H2a (The cost leadership strategy of competitive strategies affects the decision participation in stakeholder relations management in positive direction), H2b (The differentiation strategy of competitive strategies affect the decision participation in stakeholder relations management in positive direction) has been accepted.

Table 7: Acceptance / Rejection Status of Research Hypothesis

Hypothesis	**Acceptance/ Rejection**	**Level of Significance (Sig.)**
H3a:The cost leadership strategy of the competitive strategies affects the evaluation of the company by the employees as the customers in management of stakeholder relations management in positive direction	***ACCEPTED***	***P≤0.001***
H3b: The differentiation strategy of the competitive strategies affects the evaluation of the company by the employees as the customer in stakeholder relations management in positive direction.	***ACCEPTED***	***P≤0.001***
H4a: The cost leadership strategy of the competitive strategies affects the social aspects in stakeholder relations management in positive direction.	***ACCEPTED***	***P≤0.001***
H4b: The differentiation strategy of the competitive strategies affects the evaluation of the company by the employees as the customers in stakeholder relations management in positive direction.	***ACCEPTED***	***P≤0.001***

According to the regression analysis results, the cost leadership dimension of competitive strategies, affects the evaluation of the company by the he employees as the customer (β=,533; p≤0.001) and the social aspect of the stakeholder behaviours (β=,178; p≤0.001) in positive direction. The differentiation strategy dimension of competitive strategies affects the evaluation of the company by the employees as the customers (β=,766;

p≤0.001)   and social aspect dimension (β=,229; p≤0.001) in positive direction. Therefore, H3a (The cost leadership strategy of the competitive strategies affects the evaluation of the company by the employees as the customers in management of stakeholder relations management in positive direction) and H3b (The differentiation strategy of the competitive strategies affects the evaluation of the company by the employees as the customer in stakeholder relations management in positive direction.) and H4a (The cost leadership strategy of the competitive strategies affects the social aspects in stakeholder relations management in positive direction.) and H4b (The differentiation strategy of the competitive strategies affects the evaluation of the company by the employees as the customers in stakeholder relations management in positive direction) have been accepted.

8. CONCLUSION

It is emphasised that it is important to analyze the primary stakeholder groups thoroughly and make right strategic decisions accordingly to ensure the continuity of the business. The studies especially stated that the businesses should classify the stakeholders according to their priority and decide on which stakeholder should be given more importance and how their demands and expectations should be met. In our study, we have examined how the employees (as primary stakeholders) evaluated the businesses they work for, what they think and how they were affected by competitive strategies. The stakeholder theory tries to describe the relationship between the company and stakeholders and how the relationship, its positive or negative outputs effect the parties. In this way, , the stakeholder theory explains how the managers should behave towards stakeholders and how they should strategically work with stakeholders in this constantly changing and evolving world. The strategic decisions affect the employee motivation and increase business performance and have significant importance for the business executives. It has been revealed that, in particular, the promises made by the managers to the employees may affect employees in focusing on their work in a competitive environment. This situation may lead to superiority of the company over its competitors and gain competitive leadership and therefore may result in mutual interests. It has been specifically stated that the continuation of this relationship is depend on the mutual trust and solid foundation.

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SYSTEM ANALYSIS OF AIRPORT CAPACITY AND SLOT COORDINATION AT ATATURK AIRPORT

Savas S. Ates[1], Mevlut Uzulmez[2]
[1] Anadolu University. ssates@anadolu.edu.tr
[2] Anadolu University. mr_mevlut@hotmail.com

ABSTRACT

Airline service is a huge and complicated process that needs to be handled, basically in a routine operation an airline has to have numbers of services in different level such as ground handling, passenger/cargo terminal service, airport navigation service, customs service, security service etc. In aviation sector, on time and adequate service is priority for airlines. Airline operation must be handled with great timing effort because producing and consuming take place at the same time. Therefore, to arrange each task in a proper way, airport capacity should be planned, monitored and managed in advance by assigning time, park position and boarding/unloading process. Airport capacity is detected with the assessment of construction of facilities and other factors affecting the capacity. After release of capacity this acquired capacity is allocated to the demanders according to specific conditions and privileges. This paper has three stages in general: In the first stage of this paper, the theoretical research of airport slot coordination system has been examined empirically. In the second part, with the data acquired by study in practice airport coordination, slot, slot types, slot allocation and slot allocation types has been stated with tables. In the final part of the study, the categorization of slot allocation was discussed and evaluated by employees working at both airport and airline business by means of in-depth interview. With analyzing the obtained results, the slot coordination system used in Atatürk Airport has been identified and on the purpose of improvement of system some recommendations have been made.

Keywords: Airport, airport slots, factors affecting airport capacity, airport slot coordination system, slot allocation
JEL Classification: L93, R41, L98.

1. INTRODUCTION

In transportation people highly attach importance to speed and comfort. Regarding to technologic and social development, this importance has been growing day by day. This affects the demand increase to air transportation. Air transportation has been growing up not only around the world, but also in Turkey. Aircraft fleets of airlines have been also growing thanks to great raise in demand. One of the most important mission of airport management has become efficient and productive capacity use because of the growing airlines. The growth in airway traffic brings congestion with it. Airport congestion is one of the most challenging reason for delays. Delays cause decreased profit and disruption in schedule structure. Instead of construction of a new facility, it would be a better approach that management of current capacity for both environmental and economic reasons. Without making any concession, managing efficient capacity is one of the most important goal of airline business. For that reason, airports are using a system which is called "slot coordination systems". Slot coordination system is planning the departure and arrival time under control of airport capacity. The main purpose of the system is using the airport capacity in the most efficient way and disregarding the priority of the airline which cannot use it as planned.

One of the most important thing in slot allocation is using capacity most efficiently under certain condition. Airports may both care about their country's own good or airport's economic interests. Each airport has their own approach to slot allocation according to their potential and current situation. There are several studies which interest in slot allocation approach and they brought out mainly two approach: first one is administrative approaches and the second one is economic approaches. Under the fact that airports are one of the most

critical points for government, especially crowded airports are tend to use "historic right rules" which gives their flag carriers a great deal of advantage.

This study firstly gives information about factors causing delay and reducing the capacity and flight cancellation/delay problem related with congestion. Secondly environment, methods and principles of coordination of airport slot. The reason why environment comes first is that environmental reasons can change the methods and principles. After analyzing environmental stage, authority makes a decision about slot allocation then sets some methods and principles in the light of their reason. Finally, to compare and check the slot allocation approaches in practice in-depth interview has been made with both airport authority officer and airline manager which allows freedom for both the interviewer and the interviewee to explore additional points. Conclusions and recommendations have been made as a result of this interview.

2. LITERATURE REVIEW

Airport Capacity is the throughput rater i.e. the maximum number of operations that can take place in an hour. Delay is the difference in time between a constrained and an unconstrained aircraft operation. These definitions take into account that delays occur because of simultaneous demands on the facility. The - acceptable level of delay will vary from airport to Airport (FAA, 2016). The throughput method for calculating airport capacity and average delay per aircraft is derived from computer models used by the Federal Aviation Administration (FAA) to analyze airport capacity and reduce aircraft delay. Calculations of hourly capacity are needed to determine average delay. Since airport and airport component hourly capacities vary throughout the day due to variations in runway use, aircraft mix, ATC rules, etc., a number of calculations may be needed (FAA, 2016).

Runway capacity of an airport is not the same all the time. Capacity may vary depending on physical and functional factors such as airport, airspace geometry, air traffic inspection rules, meteorological conditions and aircraft. (Wells & Young, 2004)

The factors causing delay and reducing the capacity can be gathered together under 4 main title (Kıyıldı, 2005) :

- Airside terminal capacity
- Air area capacity
- Ground transportation capacity
- Passenger terminal capacity.

Airside facilities are runway, taxiway, apron and gates (Wells & Young, 2004). Because of any action in any airside facility affects the other component of capacity, general airside capacity will be specified with the most restricted part (Horonjeff, McKelvey, Sproule, & Young, 2010). Growing demand on air transportation has caused creation of new low cost carriers and enlarging the fleet, so that air way capacity had to face with congestion. Inadequate capacity of airspace is one of the main reason of congestion in airways (Kıyıldı, 2005). Airports are one of the most crowded places which have both passenger and cargo traffic. Airport connection ways face serious capacity problems. Type, size and function of terminal building affect annual passenger capacity (Wells & Young, 2004).

To allocate the airport capacity, a coordination action whose environment, methods and principles are set is needed. Coordinator can be an individual as well as company. There is a Center Committee to inspect and improve the coordination center and functions (Cengiz, 2012). Airport coordination has to keep the capacity under control regarded to WSG(Worldwide Slot Guidelines). Coordination aim to provide operation which is adequate the limited capacity to both airlines and other aircraft operators. It also tries to maximize the efficient use of airport infrastructure. Coordination should be regarded as a temporary solution till a new permanent method is improved to avoid the congestion (IATA, 2015).

Slot is given allocation of time period from the capacity (such as runway, park position, terminal area) to airlines. In another saying, to optimize the use of busy airport, sharing traffic to each day of week and each hour of a day as fair as they can (Özkoçak, 2015). Goal of European frame is to provide the maximum and most efficient capacity use in very competitive airports (EEC, 2015). Airport slot is a limited or complete facility

permission to take-off or land given by coordinator in level 3 airports to aircraft operators (IATA, 2015). Aircraft operator should not be operating out of given slot time. Slot time should match with both passenger ticket and calculated take-off time. Operators should act according to slot time precisely. The permission approved from ATC cannot exceed the period of airport slots. Airport slot is defined and calculated not take-off/landing time but on/off clock time (Airport Coordination Limited, 2013). If the airport's slot demand exceeds the supply, this airport is considered as a "capacity-limited airport", in this point, slot allocation takes over the coordination. This congestion (time that demand exceeds supply) may be a specific time period of a day or specific day of a week or even seasons of a year (ICAO, 2013). Technically, slot allocation – especially in the congested airports-refers to a permission that is taken from administration in advance to make use of infrastructural facilities of an airport. This term is legally based on Chicago Convention. Regulation of European Union number 793/2004 and different 95/93 regulation are directly related with airport slot allocation. Under the frame of regulation of EU, the latest regulation number 1459/2006 and slot allocation rules into temporary exception has been dispatched. In regulation "slot allocation" subject is specified under the slot application instruction in head of DHMİ. After an airport slot has been allocation to aircraft operator, they can operate national and international flight rights based on regulations (Cengiz, 2012).

Nowadays, one of the most challenging problems which air committees face is regulation the slot allocation to avoid the congestion at huge airports. For that reason, academically and technically lots of model has been suggested. Successful airport slot allocation system has to achieve two things at the same time: increasing capacity to vanish the effect of problem and provide the highest quality for all users of airport (Cohen & Odini, 1985).

Slot allocation approaches under two titles:

Administrative Approaches

Historically-based (or "current-use-based") allocation: The coordinator sets up initial assignments, based upon carrier schedules and prescribed quota, prior to the meeting. Guidance is provided by a list of priorities, the highest of which is historical precedence: a carrier has rights to a time slot in all years subsequent to receiving it, unless it is not used. Remaining priorities deal with the financial consequences to carriers not receiving the slots they have requested: the carrier which, it is deemed, would be most financially disadvantaged by not winning a contested slot is awarded the slot. Carriers exchange tentative timetables just before the scheduling meeting, and the meeting is then used to "horsetrade" and resolve conflicts. Tentative timetables are collected twice daily, during this period, and made available to all carriers. Once issued, a slot cannot be taken back by a coordinator and bartering for slots is done primarily by carriers in informal meetings (Cohen & Odini, 1985).Allocation on the basis of optimization: Some attempts have been made to develop optimum allocations on the basis of maximizing some type of social-welfare function, subject to a number of constraints. Linear programming and other techniques of mathematical modeling are used in this case. Given a table of airline slot requests, this model produces a solution which claims to maximize overall profits for the airlines involved. Profit maximization is performed subject to a series of constraints, and the model can be used to allocate time-slots on a daily or an hourly basis. The objective function is based upon average profit per operation and can be expressed in terms of profit per flight hour or profit per mile. In either case, it consists of passenger revenue less operating costs (Cohen & Odini, 1985).

Allocation by lottery: A lottery would award a slot (or slots) by random selection among participant airlines holding lots or "chances". In order to use a lottery to award slots, certain issues would have to be settled first. Among them are; eligibility for participation, the assignment of probabilities to each given carrier for winning a given slot, what type of operation would actually be awarded by the lottery (e.g., arrival/departure pairs, specific time-slots, any slot within a given time interval, etc.), by what method the chances would be allocated among airlines. The principal merit of a lottery system seems to be that it seemingly absolves the system's administrator from the responsibility of making the final allocation decisions. This does not actually avoid arbitrary decisions, however, because it becomes necessary to allocate "chances" to each slot requestor, in some way. One of the main drawbacks of lottery allocation is that the element of uncertainty means there will be no assurance of efficient use of runway capacity or that the most competitive airline will win a slot. In fact,

allocation by lottery is probably an inferior approach to other administrative allocation methods (Cohen & Odini, 1985).

Scheduling committees: Two systems for allocating airport capacity by means of airline scheduling committees are currently in existence. One is used internationally and is run by IATA, another was developed in the United States to allocate slots at O'Hare, Kennedy, Washington National, and LaGuardia Airports. In the U.S., the committees at these airports have been operating under anti-trust immunity for fifteen years. However, ever since the Airline Deregulation Act came into existence, the Justice Department has unambiguously expressed the desire to allow market mechanisms to play a stronger role in slot allocation. The future of such anti-trust immunity, is, therefore, uncertain. Of all the administrative procedures for allocation of space at congested airports, however, committees represent the only procedure which has a long history of use and, it must be added, with some demonstrated success (Cohen & Odini, 1985).

Slot allocation approaches under two titles:

Administrative Approaches

- o Historically-based (or "current-use-based") allocation: The coordinator sets up initial assignments, based upon carrier schedules and prescribed quota, prior to the meeting. Guidance is provided by a list of priorities, the highest of which is historical precedence: a carrier has rights to a time slot in all years subsequent to receiving it, unless it is not used.   Remaining priorities deal with the financial consequences to carriers not receiving the slots they have requested: the carrier which, it is deemed, would be most financially disadvantaged by not winning a contested slot is awarded the slot. Carriers exchange tentative timetables just before the scheduling meeting, and the meeting is then used to "horsetrade" and resolve conflicts. Tentative timetables are collected twice daily, during this period, and made available to all carriers. Once issued, a slot cannot be taken back by a coordinator and bartering for slots is done primarily by carriers in informal meetings (Cohen & Odini, 1985).
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Economic Approaches

o Time-dependent user charges: The four main reasons for imposing peak-hour surcharges are to reduce peak-hour airport usage, to discourage lower-valued users in favor of higher-valued ones, to postpone the need for additional facilities, and to provide information on the value of new capacity in order to determine when new facilities should be built. Three approaches have been suggested for calculating surcharges. These are setting them at equilibrium marginal delay costs, determining target levels of airport usage, and setting surcharges to bring traffic to this level, setting charges arbitrarily, at relatively-low levels. The first approach would require calculating the marginal delay costs, which are the total congestion costs that one additional runway operation imposes on subsequent users. Each additional user causes added delay to all subsequent users which is equal to the service time of that additional operation. (Cohen & Odini, 1985)

o Auctions: Slot auctions have become one of the most attractive method of slot allocation by FAA and CAB among lots of other methods. The main principle behind allocation is if demand exceeds the current capacity, slot goes to one who pays the highest fee for it. Authority also shows the demand in order to explain market mechanism in the slot allocation. That is why, auction system is being used in a wide-range (Cohen & Odini, 1985). Regulations based on marketing which prizing for congestion slots includes paying high amount of money at pick hours of airport. Reason of congestion pricing is decreasing the demand of airline and avoiding delays. Auctions aim to allocate the airline, which gives the high value for the slot, and manage demand efficiently (Smith, 2004). Demand and supply change very fast depending on several reasons. Therefore, it is nonsense that setting a fixed price for a slot. Price of slot that rarely demanded should be determined up-to-date (Czerny, Forsyth, Gillen, & Niemier, 2008).

3. DATA AND METHODOLOGY

Main objective of this study is to evaluate the importance of slot coordination for both airlines and airports. As a result of this study, it is hoped that this study may help a way as a solution for the situation which causes potential capacity problems. At the theory part, national and international manuals, previously written doctoral and master's thesis and number of essay related to topic have been examined. In addition to that, "IATA-Worldwide Slot Guidelines" which is used for both airport and airlines as a resource to create their manual and "SHT-Slot Tahsis Talimatı" which is published by SHGM have been examined. This study has been implemented at İstanbul Atatürk Airport and one airline because of the time and cost limits. The names of airline and people have been coded because of the fact that they do not want to share. Implementation has been made by in-depth interview. In the light of answers, we have got, new questions have been added and some of them have been changed.

4. FINDINGS AND DISCUSSIONS

Demographic structure of attendants

Employee who is working for airport slot coordination has been coded as H1. H1 is 55 years old and working for this job for 31 years.

Employee who is working for Airline Company has been coded as H2. H2 is 45 years old and working in airline sector for 23 years.

Identification of daily, weekly and seasonal capacity in Atatürk Airport

According to H1, there is no annual and monthly capacity. Slot capacities are seasonal and each one has been calculated individually. Moreover, VFR flights are out of slot coordination system. After the capacity has been declared, slot allocation will take place. According to H1, slot capacity is measured by three criteria.

- Number of slot based take-off and landing,

- Hourly terminal capacity, (generally measured by B737 [150 passengers average])
- Park place criteria

Results related to function of slot coordination are:

- Finding bottleneck after the combination of three criteria above.
- This value identifies the hourly capacity.
- After capacity is pointed out every unit will be informed.
- Capacity will be allocated from scheduled airlines to charter.

If there is any gap in capacity, rest of slot will be allocated to unscheduled and charter airlines.

Table 1: Assessment of Slot Allocation Approaches from the Point of Airport Authority

Subject	Findings	Part
Equity and authority attitude in slot allocation	IATA rules are in use in slot allocation. Airport slot is under control of government as soon as it is taken. After they arranged bilateral agreements, civil aviation authority allocates available slots to airlines in particular to flag carriers. Especially flag carriers have privilege because of grandfather rights they had.	H1
Loser and winner of current system	Winning or losing are rather related to the rules. In valid system, the winner is the one who once got the slot and uses it every season at the higher limit of specified which is 80%. If an airline cannot use its slot more than 20%, the slot directly goes to the slot-pool and airline loses its privilege for the next season.	H1
Auction approach in slot allocation	In current system Atatürk Airport does not have this approach. There are some difficulties to let this approach take place in this airport. Auction approach is based on completely economic thought. Especially if there is few or only one airport available, this may lead monopolism.	H1

As it is seen in table 1, preferred purpose of slot allocation is servicing. Commercial interests should be at second place otherwise there will be deviation from real purpose. Just because airports are highly strategic points and have potentially huge amount of income, giving more share than necessary to other countries or airlines may not be wise choice at all.

Factors affecting slot coordination system

Sorting in slot coordination is set as "slot – permi – plan ". After getting a slot from airport, permi needs to be taken by bilateral agreements. After these two are done, flight plan should be sent to necessary units. This flight plan goes directly to the EUROCONTROL. EUROCONTROL takes all of these plans and put in an order according to CTOT (calculated take off time). If there is no problem with matching CTOT and airport slots, plan will be set as scheduled.

Table 2: Slot Coordination and Monitoring According to Airport Operator

Subject	Findings	Part
Factors affecting coordination office	Aerodrome NOTAM's Meteorological conditions Information from ATC	H1

	SNOWTAM	
	Accident/incident	
	VIP flights	
Slot monitoring	After airport has got flight data process, information will be sent to the slot office. FIC(Flight information center) matches the capacity and flight plans. In case of any discrepancy, offer new plan or change. If there is no problem, all information will be shared with ATC, en-route control etc.	H1
Slot monitoring and development of coordination system	To improve monitoring and coordination, international effect which is nature of sector should be decreased into minimum levels. Because of high level of crowd, possible dangers which may affect safety should be calculated and decreased. To improve slot coordination in order to meet the need of demanders, safety should be taken into consideration first.	H1

As it can be understood from table 2, to monitor slot coordination, lots of information technology systems are integrated. Two important subjects in slot coordination are:

- Safety
- Flow management

A safe coordination system which meets airline needs should grow continually. It is quite fair to reach the conclusion that economic interest is the second priority in Atatürk Airport.

Slot coordination activities with regard to airlines

According to H2, slot coordination system is one of the most important thing in survival of an airline. Each airline wants to create a pick hour according to their schedule. If it is the one which uses hub-and-spoke system, they want to adapt different flight wave to hub and spoke their passengers. If an airline cannot reach this achievement, it can lose their passengers.

Table 3: Slot Demand from the Point of Airline Companies

Subject	Findings	Part
Getting a slot from the point of airline	Airlines have to find necessary slot related to their schedule in order to follow their politics and grow their company. Capacity of airport may not allow airline to get accurate slot every time as they planned.	H2
Alternative slots	If airline has undesirable slot for desirable destination, demand should be analyzed again and if demand is still high the slot should be utilized. If the demand is low profitability of slot should be checked and related policies should be carried out. These policies are 1) accepting the lack of frequency increase or 2) giving up profit for a while till they get enough demand again.	H2
Effect of Marketing structure of airline to alternative slot	If airline is monopoly in chosen destination, in other words, there is no other airline flying to that point, demand will not be affected.	H2

As it can be seen from table 3 above, getting accurate slot for airlines is quite challenging because of the occupancy rate. If an airline cannot find desirable slot for their destinations, those questions should be asked:

- Slot at different hours will reach my targeted occupancy rate?

- Are we monopoly in destination that we ask slot for?

Effect of slot coordination to airlines' preferences

Slot coordination affects airlines especially for choosing route and its sustainability. Because of limited slot, we learnt that it should be used as sufficient as they can with choosing adequate aircraft and capacity research. While cancellation and delay in slot, airlines should draw attention to those they do not want to lose.

Table 4: Importance of Slots for Airlines and Decision of Slot Cancellation and Delays

Subject	Findings	Part
Most desired slots	Firstly, the most profitable route should be decided. Especially when a slot is economically profitable, there are lots of competitors trying to get it. That is why, after controlling the slot with your scheduled, airlines demand the slot to maximize their profits.	H2
Slots which is not used as demanded as it is	If an airline uses the taken slot more than 80%, it gets privilege to take it for the next season. If they cannot meet this limit, airlines both get punishment for delay in actual operation and lose privilege to get the slot.	H2
Effect of slot on delay and cancel	Some slots –just because they have precious strategic opportunity- are more important than others. Airlines try not to cancel and lose these slots. In a situation such as meteorological, slot congestion etc. airlines cannot extend their web. However airline can decide which slot should be on-time or delayed.	H2
Slot preference in cargo flights	Cargo flights is used to transport different kind of goods. They are dispatched in of-pick hours. Despite the fact that cargo flights can wait, some cargo flights are connected as well as passenger flights. For that reason, they can also be operated in rush hours.	H2
Effect of scheduled and charter flights on slot demand	There is a close relationship between slot demands and customer profile. If passenger wants to be the place he wanted to fly on time, airline should manage this need. This situation directly affects the slot request. After calculation the cost and requesting an off-pick slot is for charter operators. Just as their way service, charter flight costumers also vary depending on cost.	H2

5. CONCLUSION

Slot coordination is generally one of the most important point for airlines. It is quite fair to look the slot coordination on behalf of both airlines and airport.

In terms of airport, an attitude which is based upon equality principle needs should be in force. In a current system in Atatürk Airport there is no auction approach. Getting this approach into a current system may cause some problems because this approach requires a complete economic way of thinking. Especially in such places like airport, in the light of there is few or sometimes only airport around the territory, this approach may cause monopolistic system.

According to aircraft operator, getting adequate slot in Atatürk Airport, alternative slots and effect of marketing on slots are determined as important factors. It is quite obvious that effect of slot coordination on airlines –especially in congested routes- affects their preferences. Slots which are not used as it is wished affect

operational decisions in airlines. If the airline is permitted to cancel or delay the flight, they can decide depending on slots. Apart from this, in some non-scheduled and charter airlines, slot allocation is run in a different way.

There may be some bottleneck at Atatürk Airport occasionally because of negative weather etc. In this kind of situations, capacity of airport decreases so that airlines have to cancel some of their slots. These cancellation decisions should be discussed not only in each airline but also between them to find controlled and economic way out and avoid bottleneck without having more displeasing situations.

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THE DISCLOSURE BEHAVIOR AND PERFORMANCE OF RUSSIAN FIRMS: PUBLIC DISCLOSURE INDEX AND DEA APPLICATION

Eyup Kahveci[1], Rashad Taliyev[2]

[1] Ankara University. Eyupkahveci@gmail.com
[2] Ankara University. Rtaliyev@yahoo.com

ABSTRACT

This paper aims, to measure the levels of public disclosure of 92 manufacturing firms listed on Russian Stock Exchange and empirically investigates the link between the level of disclosure and firm performance proxies as of December 2009. To carry out this study, annual financial reports of the firms were accepted as a proxy for the level of disclosure released on firms' web-sites and the reports used to construct a disclosure index as a yardstick to measure the level of a firm's disclosure. A disclosure index was constructed as a yardstick to measure the level of firm's disclosure by using the firms' annual reports. CCR - DEA model and BCC – DEA model used to obtain efficiency scores. PDI and TA used as inputs, MV, MV/BV and Tobin's q used as outputs. Average score of PDI is 0,69. The highest PDI was 0.81 and the lowest one was 0.45. Only 7 firms have scale efficiency and the technical efficiency at the same time. Other 84 firms don't have total efficiency, technical efficiency or scale efficiency.

Keywords: Public Disclosure Index, firm performance, corporate governance , annual reports, voluntary disclosure.
JEL Classification: G30, L25, M10

1. INTRODUCTION

The concept of corporate governance in recent years has become the key phenomenon for the development of the transparency of countries, markets and companies. Corporate governance is not a new concept but its popularity has increased in the last few decades due to various crises such as the East Asian crisis of the late 1990s and a number of fraudulent activities in the corporate world. Now every country recognizes that the good corporate governance is essential for the efficiency and growth of their economy. Several reasons lie at the root of this.

First of all, economic growth requires new investments. New investments can be financed both from internal and external sources. While internal finance is often insufficient for economic growth, external investment is required for diversification of the economy and the development of all sectors. However, external investment, in turn, can come only in a good investment environment. Thus, improving the quality of corporate governance is essential for global investors. As was mentioned in the Global Investor Opinion Survey (McKinsey and Company, 2002), corporate governance is a significant investment criterion.

Secondly, one of the most important reasons behind the crises in international financial markets in recent years has been the lack of corporate governance policies of countries and companies. Globalization has increased the volume as well as the complexity of business trade adding to the difficulties associated with external control and making the concept of corporate governance more popular and useful.

Technological advances and globalization have increased the diversity of financial instruments available to emerging markets, which are themselves restructuring and widening their international access as a result of increasing competition. This new structure has exposed developing markets and companies that operate in

them to scrutiny from, international fund managers who gauge their investment decisions, in part, on financial performance and quality of corporate governance.

One of the principles of corporate governance is "public disclosure and transparency". In accordance with this principle, companies inform all interested parties about their financial situation, performance, ownership structure and other conditions in a timely and accurate manner.

In terms of the effective functioning of the capital market, in which providers of funds make decisions on the distribution of funds, "information" has a special significance. The problem of asymmetric information also raised issues such as moral hazard and adverse selection. Herein, the principle of "disclosure and transparency" acquires a special importance for capital markets. However, the disclosure of only operating results is not enough for shareholders and other interested parties to manage their control and decision making processes.

The present perspective approaches transparency as a dynamic process and this new concept of transparency requires more active behavior and imposes new responsibilities on companies. The OECD Principles describe corporate governance in terms of the relationship between management of a company, its shareholders, its board and other stakeholders. It is a system which is used for the purpose of controlling and directing the companies. That is why the OECD Principles of Corporate Governance (OECD, 2004) demand accurate and timely disclosures not only of operational and financial results, but also of a company`s mission, ownership structure, board members and top executives, the financial rights provided to them, related party transactions, and the management and internal control structure. To provide the desired level of transparency, disclosure about related parties and corporate social purposes are among the elements that are needed. The regulatory authorities of countries in this process impose the rules related to transparency as the number one priority of corporate governance reforms.

The main questions of this paper are: 1. How can we measure the level of voluntary disclosure? 2. If it was used as an input, Public Disclosure Index (PDI), what would be performance efficiency of firms? Some previous papers have linked firm performance to a number of corporate governance aspects, such as board of directors and ownership structure and some other disclosure indexes. Nevertheless, in this study, we are associating PDI to firm performance by deploying DEA.

The paper is organized as follows. Following the introduction, in section 2, we explain the theoretical framework and disclosure index. In section 3, we examine PDI, Tobin's q and firms size's impact on the firm value. We deploy a disclosure rating form (DRF) to obtain a PDI that measures the level of a firm's disclosure using the annual reports of 92 manufacturing firms listed on the Russian Stock Exchange. We use Tobin's q, market value and market value/book value ratio as a performance proxies. Then the efficiency scores are obtained by data envelopment analysis (DEA). In section 4, we discuss findings. Section 5 concludes the paper.

2. THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1. Disclosure and Firm Value

According to signaling theory (Spence, 1973), the primary objective of corporate disclosure is to inform analysts and investors about the firm's quality and value. This suggests that voluntary disclosure decisions lead to the reporting of relevant information about firm performance. Based on these theoretical suggestions, prior studies have attempted to empirically examine the relevance of voluntary corporate disclosure. The first research about public disclosures and its applications began with studies demonstrating market failures between 1930 and 1970. Berle and Means (1932), Jensen and Meckling (1976), and Akerlof (1970) are examples of these studies.

Academic works on this theme examined the public disclosure and transparency practices of enterprises, and their relations with the capital markets. Sengupta (1998), Botosan (1997) and Ashbaugh et al. (2004) tested the relationship between the public disclosure and the cost of debt and capital based on the idea that, detailed, timely and correct disclosure of information would reduce the risk of the company, so the cost of debt and capital will be lower.

Botosan (1997) examined the association between disclosure level and the cost of equity capital by regressing firm-specific estimates of cost of equity capital on market beta, firm size and a self-constructed measure of disclosure level. Her measure of disclosure level is based on the amount of voluntary disclosure provided in the 1990 annual reports of 122 manufacturing firms. She found a positive relationship between high levels of disclosure and the low cost of capital.

Sengupta (1998) tried to prove that disclosure reduces the cost of debt in his study. He used the data of total disclosure score for 311 different companies obtained from 1987-1991 annual volumes of FAF reports. According to his results, firms that disclosure timely, detailed and clear information are rewarded with a lower cost of borrowing.

Silva and Alves (2004) tested relationships between firm value and public disclosure level of 150 Brazilian, Argentinean and Mexican firms in their study. The firm value measured by the Tobin's q. As a result, they found that the size and industry brunch of firms had the most impact on Tobin's q. They found positive relationship between disclosure level and firm value.

Fan et al., (2003) tested the relationship between disclosure level and the competitive and strategic characteristics of 144 Chinese companies. As a dependent value, they used disclosure of information about competitive characteristics of a company. They found that variables related to industry competitiveness have a significant effect on the level of voluntary disclosure. Corporate governance factors and company earnings have no effect on the level of voluntary disclosure.

The work by Liu and Eddie (2007) showed that Chinese companies are more willing to adopt the public disclosure if they have foreign investment. Their study also confirmed the hypothesis that bigger companies disclose more information. They also found negative relationship between company revenue and disclosure level.

Firth (1979) in his study found that bigger companies have more willingness to disclose more information. Chow and Wong-Boren, (1987) tested the relationship between their level of voluntary disclosure and size in 52 Mexican companies. As a result, they found a positive relationship.

Huafang and Jianguo (2007) examined 559 Chinese companies' disclosure level in their study. They found a positive relationship between the number of independent managers and disclosure level, and a negative relationship between CEO duality and disclosure level.

Bollen et al. (2006) examined the websites of 270 companies in Austria, Belgium, France, the Netherlands, South Africa and the United Kingdom. They found a positive relationship between company size, the level of multi-nationality, the percentage of shares open to individual investors, environmental factors and the disclosure information on the Internet. They found that multinational companies are using the Internet more than other companies as a tool to inform their investors. Also they found a positive relationship between environmental factors and the disclosure level.

Cormier et al. (2009) examined the websites of 189 companies in Canada for information on productivity, as well as social and financial activities. They found a positive relationship between disclosureabout social and financial activities on the web site and firm value.

Gandia (2008) examined the websites of 92 Spanish listed companies. He found that disclosure levels depend on the degree to which firms are followed by analysts, their listing age, their "visibility" and whether they belong to the communications and information services industry. He did not find any relationship between the level of disclosure and the company auditing or variables related to corporate management. Also, he found a positive relationship between the number of analysts following the firm and the disclosure level.

Black (2002) examined 21 Russian companies and tested the hypothesis that good corporate governance impacts the company's market value. According to his estimations, it is possible to increase the market value of a company to 700 – fold with good corporate governance.

Black et al. (2006) used the data of Russian companies from 1999 to 2006 and tested the relationship between corporate governance and firm values. They found a strong correlation.

Judge et al. (2003) examined the management of Russian companies and the impact of management on firm value. They found that CEO - duality impact firm value negatively. Overall, their findings suggest that effective corporate governance may be essential to firm performance in Russia.

2.2. Disclosure Index

The main difficulty when analyzing the corporate governance disclosure of a company is to determine an objective measure to quantify the non-numeric data. In terms of measuring the effect of transparency on firm value, one of the important points is how to measure the degree of transparency. To quantify the non-numeric data, researchers have usually developed the disclosure index by studying and analyzing the content and scope of the company's annual reports. The main assumption is that the annual report is the most relevant means of diffusing information regarding the status of the business. It is also assumed that the more information the annual report contains the higher the degree of company's transparency (Meek et al., 1995; Botosan, 1997).

Lui and Eddie (2007) examined Chinese companies on the basis 147 criteria for a disclosure index. If there is information in annual reports matching each criterion they gave one point, if not 0. They collected all these scores to form the the total disclosure score of the company. The score was then divided by the possible maximum score. The result was the disclosure index for the company.

Huafang and Jianguo (2007) examined the relationship between ownership structure, board of directors and voluntary disclosure in Chinese companies. They divided the index into four parts. They used 30 criteria. The four parts are: introductory information, information about productivity, financial information and non – financial information. They used a similar system to Lui and Eddie (2007) for calculating the disclosure index, but they used a total score, instead of an index.

Cormier et al. (2009) used 111 criteria in their research. They divided these criteria in nine parts. These are: robustness of Internet page, financial results, management information systems, corporate governance, the value of the consumer, human resources and intellectual capital, production efficiency, growth and development, and social responsibility. All indicators are calculated on a scale of 1 to 3.

Bollen et al. (2006) reviewed the quality of companies' Internet pages to look for how web sites are used to develop relations with investors. Their index is determined by six criteria: disclosure of annual and quarterly reports on the websites, press releases and other information, easy access to information on websites, opportunity to communicate directly via e-mail or subscription, video and audio record and opportunity to participate in meetings online.

Gandia (2008) examined the disclosure of Spanish companies about corporate governance through the information on their websites. The author used 32 criteria, divided into 4 parts: disclosure of information about board of directors, annual general assembly of shareholders, ownership structure and other information related to the management.

3. DATA AND METHODOLOGY

DEA is an operations research technique to measure relative efficiency of firms (also called decision making units — DMUs) that use multiple inputs to produce multiple outputs. DEA identifies DMUs that produce the largest amount of output by consuming the least amount of input. These DMUs are classified as efficient (Cooper et al., 2006). Thus, in order to evaluate 92 companies registered on the Russian Stock Exchange (MICEX), financial data were collected from the companies' balance sheet and income statements whereas the PDI were calculated for each firm through examination of annual reports. Assumption here is if the companies' annual reports have transparent enough and give meaningful information to investors next year financial performance will be better. Thus, PDI scores obtained from 2008 annual reports and financial data got from December 2009 balance sheet and income statements. Based on the DEA, the current study develops tools and provides means for characterizing and improving the performance of Russian Stock Exchange companies. The calculated PDI and the Total Assets (TA) of the firm were used as inputs, whereas market value (Ulucan, 2000 and 2002; Perçin and Ustasüleyman, 2007; Zhu, 2000; Kahveci, 2011; Kahveci et al. 2013) and market value/book value ratio and Tobin's q were used as outputs. The aim is to evaluate the disclosure capability of

firm to turn into its performance. Efficiency score results show us which company is best in terms of its performance to produce annual report as a means of disclosure tool and transparency measure. If some companies are not efficient by transforming PDIs into its performance (market value, market value/book value and Tobin's q), that means that they are not able to produce good annual reports that affects positively their performance. The model is shown below in Figure 1.

Figure 1: DEA Analysis Model for DEA
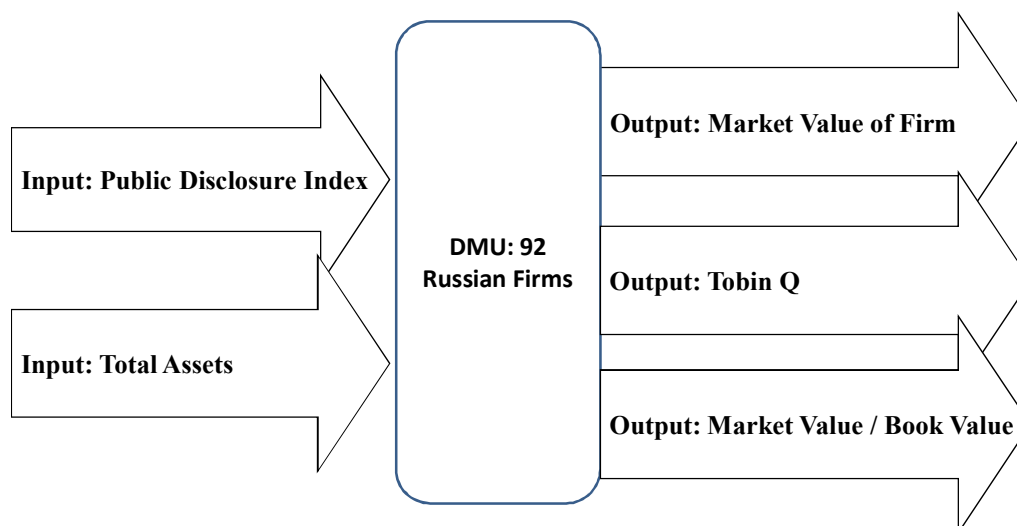
3.1. Public Disclosure Index

In many studies, to calculate information from annual reports,researchers generate information by using rating forms. The number of items used in rating forms vary in different studies. In this study, the disclosure rating form (DRF), in parallel with previous studies (Lui and Eddie (2007), Huafang and Jianguo (2007), Cormier et al. (2009) Bollen et al. (2006) and Gandia (2008)) is based on the information that firms provide in their annual reports. We generate a DRF composed of 109 items for the purpose of this study. Botosan (1997),and Standard &Poor's (2007) used a similar DRF in their studies.

To calculate PDI we generate a DRF for converting information from annual reports to quantitative values. In this context, the DRF consists of six chapters under three main parts. For disclosed information, each company earns a score of 1, and for undisclosed information it takes 0. The chapters and the main parts of the DRF are given below.

- Ownership Structure and Investor Rights
    - o Ownership Structure
    - o Investor Rights
- Financial and Non – Financial Information
    - o Financial Information
    - o Non – Financial Information
- The Board of Directors, Management
    - o Information About The Board of Directors and Management
    - o Compensation of the Board of Directors and Management

Formula used for calculating PDI is below:

PDI = Total Score / Maximum Score(109)

Based on the explanation above, PDI scores are obtained by using annual reports in 2008. Average score of PDI for 92 Russian companies in 2008 year is 0,69. The score of company with the highest PDI was 0.81 and the lowest one was 0.45.

3.2. Tobin's Q Ratio

Tobin's q was developed by James Tobin (Tobin, 1969) as the ratio between the market value of a company and replacement value of its physical assets.

Tobin's q = (Equity Market Value + Liabilities Market Value) / (Equity Book Value + Liabilities Book Value)

If the market value of firms reflected solely the recorded assets of a company, Tobin's q would be 1.0. If Tobin's q is greater than 1.0, then the market value of the company's recorded assets. This suggests that the market value reflects some unmeasured or unrecorded assets of the company. High Tobin's q values encourage companies to invest more in capital because they are "worth" more than the price paid. On the other hand, if Tobin's q is less than 1, the market value is less than the recorded value of the assets of the company. This suggests that the market might be undervaluing the company. In many studies, researchers used Tobin's q as an indicator of the firm value. Griffith (1999), Kuznetsov and Muravyev (2004) studied the relationship between firm performance and ownership structure of firm, independent managers and CEO – duality. They found a positive relationship between these variables. Also, Klapper and Love (2004) and Black et al., (2002), examined corporate governance quality and firm performance. They also find a positive relationship between corporate governance and firms' Tobin's q.

It is very hard to calculate the replacement value of the physical assets for use in this ratio. In this study we use a simple approximation formula of a q value which was developed by Chung and Pruitt (1994) as defined below:

Approximate q = (MVE+PS+DEBT)/TA

MVE – The Product of a firm's share price and the number of common stock shares outstanding.

PS – The liquidation value of the firm's outstanding preferred stock.

DEBT – The value of the firm's short –term liabilities net of its short – term assets, plus the book value of the firm's long – term debt.

TA – The book value of the total assets of the firm.

It has been calculated all companies' Tobin's q. Average Tobin's q is 1,35 which means the Russian companies average market value is greater than the recorded value of their assets. It can be seen by looking at the average MV/BV ratio, it is 2,41 which means the market value is greater than the book value.

3.3. Size of the Firm

The other most common indicator for disclosure is the size of the firms. There some reasons for big companies to disclose more information than medium or small size companies:

- They are more recognized and monitored by public and investors.
- It will be easier to find funds at a lower cost if you disclose more information.
- There are more opportunities and more infrastructure tools in big companies for more disclosure.

In some studies, authors found a positive relationship between the size of companies and their disclosure (Meek et al., 1995, Wallace et al., 1994). In this study as measurement for size we used total assets.

4. FINDINGS AND DISCUSSIONS

It should also be noted that the traditional DEA models can be analyzed in two ways, an input orientation or an output orientation. The objective of an input oriented model is to minimize inputs while producing at least the given output levels, on the other hand, the objective of an output oriented model is to maximize outputs while using no more than the observed amount of any input. (Cooper et al., 2000). In terms of this study, we believe

that it is appropriate to adopt an output maximization assumption since it is widely accepted in strategy research that the main aim of the firm is to maximize market value. Thus, the firm using given inputs should be able to maximize market value and so market price.

While CCR models are used to measure total efficiency, BCC models, on the other hand, are used for technical efficiency. If a technically efficient Decision Making Unit (DMU) has an inefficiency coming from a scale inefficiency, it cannot be totally efficient. The relationship between total efficiency and technical efficiency is shown by the equation below (Cooper et al, 2006: p.141; Ulucan, 2002; Kahveci, 2011).

Total efficiency score = Technical efficiency score X Scale efficiency

This equation can be used to decide if firms have scale inefficiency. First, using a CCR - DEA model, total efficiency scores are obtained. Then, using a BCC – DEA model, technical efficiency scores are obtained. Finally, scale efficiency scores are calculated.

According to the results, 7 firms have scale efficiency and technical efficiency at the same time. Thus only 7 firms can be said to have total efficiency. The remaining 84 firms don't have total efficiency, technical efficiency or scale efficiency. It means that 84 firms could be more efficient by increasing or decreasing their scale. They could not reach desired performance levels by current PDIs and TAs.

**Table 1: Efficient Firms DEA Scores, Inputs and Outputs**

Firms	TA	PDI (2008)	MV/BV	Tobin's Q	MV (billion)	BCC Score	CCR Score	Scale Efficiency	Times as a benchmark for another DMU (CCR)	Times as a benchmark for another DMU (BCC)
7	8,83	0,62	0,76	0,50	5,56	1,00	0,07	0,07	0	0
38	207,10	0,67	0,78	0,90	131,24	0,20	0,20	1,00	0	0
9	21,90	0,45	32,42	9,54	187,51	1,00	1,00	1,00	79	83
15	6950,74	0,72	0,80	0,66	4332,96	1,00	1,00	1,00	0	2
16	193,17	0,74	4,95	3,16	775,01	1,00	1,00	1,00	61	63
53	2,95	0,72	1,07	7,29	5,84	1,00	1,00	1,00	12	9
54	2696,72	0,81	1,64	1,33	2418,65	1,00	1,00	1,00	25	36
80	1,42	0,72	53,88	0,24	73,42	1,00	1,00	1,00	6	4
Average	1260,35	0,68	12,04	2,95	991,27	0,90	0,78	0,88	-	-

Table 1 shows the efficient firms inputs, outputs and DEA scores. Firm 7 has total efficiency and firm 38 has scale efficiency but neither of them have technical efficiency. The other 6 firms have total and scale efficiency at the same time.

Technical efficiency requires a firm to produce the maximum output given the level of inputs employed. Scale efficiency means the firm has the right scale in accordance with its output. As shown in Figure 2, only 6 firms are efficient in term of technical and scale efficiency and then total efficiency. Although firm 9 has the lowest PDI score, the biggest Tobin's q, and the second big MV/BV ratio it is one of the most efficient firms in both efficiency score. On the other hand, although firm 15 and firm 80 rank a little above the average PDI score, the former has the biggest MV and the latter has the biggest Tobin's q and both of them are efficient in terms of technical and scale efficiency. Thus, this shows that it does not necessarily to have the highest PDI score to be efficient.

Relatively efficient firms appear in the reference set of relatively inefficient firms. In this regard, in terms of CCR scores, firm 9 has been observed on the reference set 79 times, firm 16, 61 times, firm 53 12 times, firm 54 25 times and firm 80 only 6 times. On the other hand, in terms of BCC scores, firm 9 has been observed on the reference set 83 times, firm 16, 63 times, firm 53 9 times, firm 54 36 times and firm 80 only 4 times. Only firm 38 has scale efficiency without having have technical or total efficiency. It can be said that, it has the right scale.

Figure 2: DEA Efficiency Scores
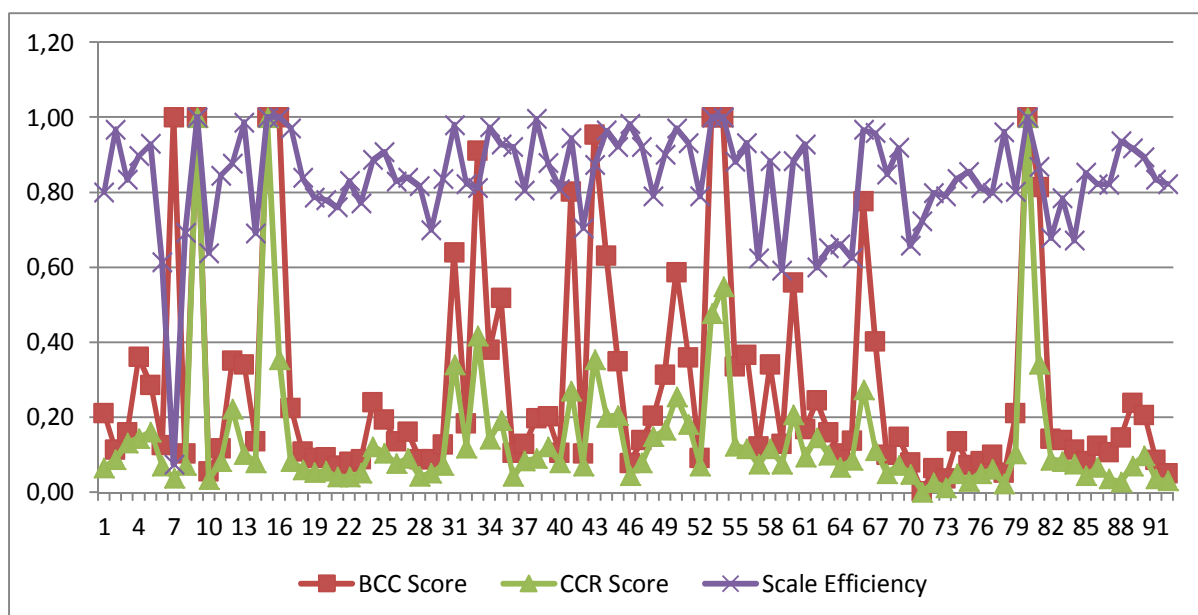
5. CONCLUSION

The purpose of this study was first to calculate PDI scores of 92 Russian companies that listed on MICEX by using 109 items defined under 6 main parts on the basis of annual reports. Then by using these PDI scores as an input with total assets, to estimate the characteristics of technical and scale efficiency of those companies in terms of their performance.

The results of this study can be summarized as follows:

- The average PDI score for the 92 Russian companies, in 2008 was 0.69. The company with the highest PDI scored 0.81 and the lowest 0.45.
- Only 7 firms have technical and scale efficiency, accordingly total efficiency score. The rest of the firms do not have efficiency at all. Average total efficiency is 0.25 showing the necessity to increase performance for almost all companies.
- The average scale efficiency is 0.84 which is relatively very good compared to total efficiency. Most of the companies have close to the right scale.

The study also aimed to measure the levels of public disclosure of the 92 firms listed on the Russian Stock Exchange. Annual financial reports of the firms were accepted as a proxy for the level of disclosure released on firms' web-sites and the reports used to construct a disclosure index as a yardstick to measure the level of a firm's disclosure.

Economic growth requires new investment. New investments can be financed both from internal and external resources. In Russia, as a developing country, internal finance is not enough for the economy. External investment is required for diversification of the economy and development of all sectors. Foreign investment, in turn, can come only in a good investment environment. And this is not possible without improving the quality of corporate governance. By informing all interested parties about their financial situation, performance, ownership structure and other conditions in a timely and accurate manner, companies can attract more investors.

According to results, companies listed on MICEX has average 0,69 PDI scores and average MV/BV ratio of 2,41 and average Tobin's q of 1,35. Bigger than 1 MV/BV and Tobin's q ratio shows there is much interest for those companies, in other words, investors are choosing those companies for their investments and they are willing

to pay more than the firms' actual value. Overall, it can be said that, firms that has been analyzed have good PDI scores, which means they disclose necessary information to investors in their annual reports and they have also relatively good scale efficiency scores compared to the total efficiency scores which means they are relatively efficient by scale. This study showed that the level of public disclosure level is good in Russia. For new investments Russian companies might improve the disclosure level and by doing so they can attract new investors and they can get the funds they need easily. It is necessary to arrange disclosure level to the scale and to the market value of the company. By increasing and decreasing the disclosure level (PDI scores) companies can affect their performance, in this study it means market value, Tobin's q and MV/BV ratio.

For further researches;

- Similar studies can be conducted to see how PDI scores change over the years.
- Various PDI scores obtained from different set of variables might be compared to see the effectiveness of those PDI scores.
- Various companies' PDI scores from various sectors can be compared to see how the disclosure behavior of companies changes from one sector to another.
- Comparison of PDI scores among different countries can be done to see the differences among countries and the effects on the firm performances.

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