

DOKUZ EYLÜL UNIVERSITY
GRADUATE SCHOOL OF SOCIAL SCIENCES
DEPARTMENT OF BUSINESS ADMINISTRATION
BUSINESS ADMINISTRATION PROGRAM
DOCTORAL THESIS
Doctor of Philosophy (Ph.D.)

**THE EFFECT OF THE SUPPLY CHAIN
MANAGEMENT IN MUNICIPALITIES ON CITY
SUSTAINABILITY AND A STUDY ON İZMİR
METROPOLITAN MUNICIPALITY**

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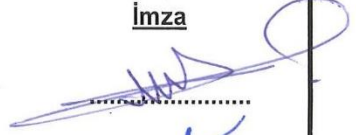
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İZMİR-2019

DOKTORA
TEZ ONAY SAYFASI

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Öğrenci No : 2012800737
Tez Başlığı : The Effect of Supply Chain Management in Municipalities on City Sustainability and A Study on İzmir Metropolitan Municipality
Savunma Tarihi : 26/11/2019
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Ladin YILDIRAN GÜN

ABSTRACT

Doctoral Thesis

Doctor of Philosophy (Ph.D.)

**The Effect of Supply Chain Management in Municipalities on City
Sustainability and A Study on Izmir Metropolitan Municipality**

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Dokuz Eylül University

Graduate School of Social Sciences

Department of Business Administration

Business Administration Program

Sustainability has become an increasingly critical phenomenon due to the current state of the world. Sustainability applies to a wide range of areas such as justice, social balance, ethics, job creation, fair trade as well as environmental protection. For this reason, it is discussed from three different perspectives as environmental, social and economic. Since the concept itself is profound and critical, it can be solved not only by individual steps but also by more systematic and comprehensive policies.

Due to both sustainability and its impact on many other issues, the importance of supply chain management has become the most important issue for almost all companies. When it comes to competition, supply chains have come to mind first. Supply chain management is essentially based on the balance of supply and demand. While the supply-demand balance is maintained, the expectations of the target group are considered as the most important point. In today's conditions, the need for supply chain management has increased further due to the rapid change in the expectations of the target group and the increase in product/service diversity and competition. This awareness has increased in the private sector and especially in the field of production. However, the necessity to implement all the components of supply chain management is still not understood in public sector.

Izmir, where the research was conducted, is the third in terms of socio-economic development and the first in terms of quality of life. İzmir

Metropolitan Municipality is one of the most important actors of the city that offers services and invests in many areas to its citizens from cradle to grave. Izmir Metropolitan Municipality is an institution that attaches importance to sustainability and makes various relevant investments, is a party to the Covenant of Mayor, prepares and implements the city sustainability action plan and takes important concrete steps. For this reason, it was chosen as an implementation agency and the reflection of supply chain management on the activities it offers for the city and its impact on city sustainability were investigated in the case of implementation.

In parallel with this purpose, first of all, the pilot implementation was started with face-to-face interviews with five of the internal stakeholders. Subsequently, in-depth interviews were conducted with 32 participants, 17 of which are internal stakeholders and 15 are external stakeholders who are thought to contribute to city sustainability.

Interviews were subjected to separate content analysis under the titles of “city sustainability” and “supply chain management” and two separate codes were obtained as a result of the analysis. At the end of the analyzes, it was found that the comments made on city sustainability from the municipal perspective are gathered into 14 different subcategories under the categories of “Green Strategies”, “Social Equity” and “Management”. The second content analysis results, which are repeated under the title of supply chain management, are grouped into 13 subcategories under the categories of “Citizen Relationship Management (CRM)”, “Internal Supply Chain Management Processes (ISCM)” and “Supplier Relationship Management (SRM)”, which already exist in literature. In addition, there are points that differ according to stakeholder groups in the answers given. Besides these two content analyzes, the results were examined to reveal different points from the perspective of stakeholder groups.

Subsequent to two separate content analyzes, the intersecting points were examined, and it was found that 58% of the respondents' answers related to city sustainability were within the scope of supply chain management. Thus, it is determined that it will have a positive impact on city sustainability if the

municipality considers and applies supply chain management especially in internal supply chain processes.

Keywords: Municipal Supply Chain Management, City Sustainability, Sustainability Perception of Municipal Stakeholders



ÖZET

Doktora Tezi

Belediyelerde Tedarik Zinciri Yönetiminin Kentsel Sürdürülebilirliğe Etkisi ve İzmir Büyükşehir Belediyesi Çalışması

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Sürdürülebilirlik dünyanın mevcut durumu nedeniyle her geçen gün daha da kritik seviyede önemli hale gelen bir olgu olmuştur. Sürdürülebilirlik çevrenin korunmasının yanı sıra adalet, sosyal denge, etik, istihdam yaratma, adil ticaret gibi çok geniş alanlar için söz konusudur. Bu nedenle çevresel, sosyal ve ekonomik olarak üç alanda ele alınmaktadır. Kavramın genişliği ve kritikliği nedeniyle yalnız bireysel adımlarla değil daha sistematik ve geniş kapsamlı politikalarla çözüm bulunabilecek bir konudur.

Hem sürdürülebilirlik hem de diğer birçok konuya etkisi nedeniyle tedarik zinciri yönetiminin önemi neredeyse tüm şirketler tarafından en çok önemsenen konu haline gelmiştir. Rekabet denildiği zaman tedarik zincirleri en başta akla gelmeye başlamıştır. Tedarik zinciri yönetimi özünde arz ve talebin dengesine dayanmakta, bu arz talep dengesi sağlanırken hedef kitlenin beklentileri en önemli noktada yer almaktadır. Günümüz koşullarında her alanda hedef kitlenin beklentilerinin hızla değişmesi ve ürün/hizmet çeşitliliği ve rekabetinin artması nedeniyle tedarik zinciri yönetimine ihtiyaç daha da artmıştır. Bu farkındalık özel sektörde ve özellikle üretim alanında artmıştır. Fakat tedarik zinciri yönetiminin tüm bileşenleri ile birlikte uygulanması gerekliliği kamuda hala anlaşılamamıştır.

Araştırmanın yapıldığı il olan İzmir, sosyo- ekonomik gelişmişlikte üçüncü, yaşam kalitesi yönünden ilk sıradadır. İzmir Büyükşehir Belediyesi ise beşikten mezara kentlilere birçok alanda hizmet üreten ve yatırımlar yapan kentin en önemli aktörlerindendir. İzmir Büyükşehir Belediyesi

sürdürülebilirlik konusuna önem veren, konu ile ilişkili çeşitli yatırımlar yapan, Başkanlar Sözleşmesi (Covenant of Mayor) ne taraf olan, kentsel sürdürülebilirlik eylem planını hazırlayıp uygulayan ve önemli somut adımlar atan bir kurumdur. Bu nedenle uygulama kurumu olarak seçilmiş, tedarik zinciri yönetiminin kurumda uygulanması durumunda kent için ürettiği faaliyetlere yansması ve kentsel sürdürülebilirlik üzerinde etkisi olup olmayacağı araştırılmıştır.

Bu amaçla öncelikle pilot uygulamaların iç paydaşlardan beşiyle yüzyüze mülakatın gerçekleştirilmesi ile başlamıştır. Sonrasında ise kentsel sürdürülebilirlik konusuna katkı sağlayacağı düşünülen 17 iç paydaşla ve 15 dış paydaşla derinlemesine mülakatlar gerçekleştirilerek toplamda 32 katılımcı ile araştırma konusu incelenmiştir.

Mülakatlar “kentsel sürdürülebilirlik” ve “tedarik zinciri yönetimi” başlıkları altında ayrı ayrı içerik analizine tabi tutulmuş ve analiz sonucunda iki ayrı kodlama yapılmıştır. Yapılan analizler sonucunda kentsel sürdürülebilirliğe belediye bakış açısı ile yapılan yorumların “yeşil stratejiler”, “sosyal adalet” ve “yönetim” şeklinde üç kategori altında, 14 ayrı alt kategoride toplandığı tespit edilmiştir. Tedarik zinciri yönetimi başlığı altında tekrar edilen içerik analizi sonuçları, literatürdeki “Vatandaş İlişkileri Yönetimi (CRM)”, “İç Tedarik Zinciri Yönetimi Süreçleri (ISCM)” ve “Tedarikçi İlişkileri Yönetimi (SRM)” kategorileri altında bulunan 13 alt kategoride toplanmıştır. Bu iki içerik analizinin yanı sıra sonuçlar, paydaş gruplarına göre farklılık gösteren noktaları ortaya çıkarmak için incelenmiştir.

Ayrı ayrı yapılan iki içerik analizi sonrasında birbiri ile kesişen noktalar incelenmiş ve katılımcıların kentsel sürdürülebilirlik ile ilişkili verdiği cevapların %58’inin tedarik zinciri yönetimi kapsamına girdiği tespit edilmiştir. Böylece belediyenin tedarik zinciri yönetimini özellikle de iç tedarik zinciri süreçlerinde dikkate alması ve uygulaması durumunda kentsel sürdürülebilirlik açısından olumlu etkisi olacağı tespit edilmiştir.

Anahtar Kelimeler: Belediyelerde Tedarik Zinciri Yönetimi, Kentsel Sürdürülebilirlik, Belediye Paydaşlarının Sürdürülebilirlik Algısı

**THE EFFECT OF THE SUPPLY CHAIN MANAGEMENT IN
MUNICIPALITIES ON CITY SUSTAINABILITY AND A STUDY ON IZMIR
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ABBREVIATIONS

CRM	Customer Relationship Management
DSS	Decision Support System
EX	External Stakeholder
HIM	Citizenship Contact Service
IZBB	Izmir Metropolitan Municipality
IN	Internal Stakeholder
ISCM	Internal Supply Chain Management
IT	Information Technologies
JIT	(Just In Time / JIT),
NGOs	Non Government Organizations
RFID	Radio Frequency Identification
R&D	Research and Development
SCM	Supply Chain Management
SRM	Supplier Relationship Management
TOC	Theory of Constraints
TQM	Total Quality Management
UN	United Nations
UNDP	United Nations Development Programme
3PL	Third Party Logistics
4PL	Fourth Party Logistics

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INTRODUCTION

The increase in population and consumption all over the world as well as the expectation of new products by consumers, has led to an increase in production and trade. Due to this rapid consumption and fast production, resources are also rapidly depleted and polluted. The damage we cause to nature and resources manifests itself mostly in climate change. Sustainability is a concept that is often associated with environmental issues. There are many steps to be taken in this area. Especially, the fact that every place in the world is connected to each other by the same ecological system brings the necessity of taking steps in this field at macro scale. However, sustainability is a much broader concept. It encompasses the economy and social areas as well as the environment. It also covers the areas where all three concepts intersect with each other.

When all points are considered together all these taken into consideration as a whole, it becomes clear that sustainability is an important and difficult challenging concept to manage concept due to certain issues such as energy efficiency, justice, environmental issues, ethics, community awareness, equal opportunity, economic growth and development.

Sustainability is a phenomenon issue that needs to be addressed in a transnational manner and therefore, continuous improvements are required through strict policies there are required. In addition, every company, whether in production or in the services sector, and every consumer in the world, owes should be aware of sustainability for the sake of future generations to be aware of sustainability. If the population and consumption develop in the same way, the future will not be livable. Therefore, it has become a necessity to take steps on sustainability at the social level. For all these reasons, sensitivity on sustainability awareness has increased raised in recent years.

Sustainability has the same importance for cities. Day by day, the concept of sustainable city has become much heard and even sustainability has become a competitive element among cities. Here, as well as the expectations of the people living in the city, the governors of the city play a decisive role

Despite the increasing number of studies in the literature related to sustainable cities, there are not enough studies related to the impact of municipalities, which have a significant share in this field on city sustainability.

The supply chain, which aims to realize market expectations under the best conditions for both customers and the company, is a management philosophy that affects many areas such as sustainability. In the simplest way, finalizing consumer expectations starting from raw materials means managing processes. Today's competitive conditions and globalization have become very complex considering the production of a single product. The same complex structure also exists in the management of cities. It is a process that requires to provide services for all citizens of different socio-economic structures in different fields at the same time. Service and investment sizes are also reflected in the budget sizes. It has a structure that affects the trade of the city through its expenditures and acquisitions. Considering all these conditions, it is obvious that municipalities will have a great impact on the sustainability of the city. With the investments made and decision taken, municipalities lead the cities and even serve as a model for other municipalities as well. Despite these conditions, it has been found that supply chain management in municipalities is not deservedly discussed in the literature.

In this study, the impact of municipalities on supply chain management and city sustainability was examined from the perspective of stakeholders. This review was conducted through in-depth interviews with municipal stakeholders. The research question was examined by two different content analysis carried out after interviews. For this purpose, firstly, sustainability and supply chain management literature review are given, then the framework and methods of the study is explained. In the next part of the study, the results of the implementation are given separately for sustainability and supply chain management. After these two analyzes, the points where the content analyzes intersect with each other is determined by cross analysis. In the last part of the study, results of content analysis and cross analysis is explained. In addition, in order to increase the practical use of the study, strategies and recommendations by which Izmir Metropolitan Municipality and other municipalities can contribute to city sustainability is given.

CHAPTER ONE

SUPPLY CHAIN MANAGEMENT AND SUSTAINABLE SUPPLY CHAIN

1.1 THE CONCEPT OF SUPPLY CHAIN AND SUPPLY CHAIN MANAGEMENT

Supply chain management (SCM) has become a topical issue in management. Supply chain concept refers to product images or resources that move from producers to distributors to retailers and customers throughout a chain to meet the needs of the customers (Chopra and Meindl, 2016). Supply chain incorporates many activities, functions, and systems with a holistic perspective to produce a product or service; and it is advocated to manage the supply chain as a single entity or system rather than sub-systems or individual parts as a strategy. It is required to integrate activities, functions, and systems throughout a supply chain. A holistic supply chain strategy admits that a holistic business process creates value for the customers and cross-border processes of the company are together with suppliers and customers (Vickery et al. 2003).

Today, it is not easy for organizations to exist on their own, their ultimate success bases on their skills to manage their integration, coordination with other members and all chain as a member of a supply chain (Min and Zhou, 2002). Many businesses in the supply chain have to work together to get the raw material, turn them into the end product and distribute them to the retailers (Gonga et al. 2008). As expressed as an integrated system, the supply chain can be defined as the integration of key business functions that extend to the basic suppliers that add value to customers and other stakeholders and provide product, service, and information from the end user. The synergy from the internal and external integration and coordination of the company is the enabler of operation and change. Such integration is not equal to merger or ownership of the organizations. Successful supply chain system depends on a full-time and accurate attainment and share of the information by all members (Min and Zhou, 2002). For the supply chain to be successful and provide competitiveness to the company, we have to set the supply chain management strategy accurately.

1.1.1. Supply Chain Concept

The supply chain includes a product, service and information flow of all these components from the source to the consumer in the chain (Verma and Seth, 2010). As an another definition, the supply chain is an integrated process to be created by many businesses such as supplier, producer, distributor, and retailer to turn the raw materials into the end products and distribute them to the end users (Mula et al. 2010).

Supply chain involves the keeping the balance in supply and demand, the supply of raw materials, production assembly, warehousing, inventory management, order management and delivery of products to customers and so on and includes information systems required for all of these activities will be maintained (Verma and Seth, 2011). In other words, the supply chain involves all the phases from the supply of goods and services to their production and reaching to the end user. In terms of business processes, supply chain encompasses many areas such as sales process, manufacturing, inventory management, procurement, distribution, procurement, sales forecasting and customer services (Nobel et al. 2013).

Fundamentals of supply chain concept base on the physical distribution concept that represents the external logistic activities of the company and aiming to reach the end product, of which production has been completed, to the end user in a cost-effective manner. The purpose of the concept of physical distribution is to keep the balance between the costs such as stock availability, handling, warehousing, and transportation costs by selecting the suitable transport method according to the structure of the product. The coordination of internal and external activities came up with the spread of external transportation and removal of restricting regulations with transport in 1980's. The company has an opportunity to minimize the disadvantages of variable supply periods due to the international transportation by handling the external logistic activities that connect the manufacturer and end user to each other and internal logistics that handles transportation of end product from raw material source to the manufacturer. Besides, the companies provided more effective and productive services through such coordination and saved money on transportation costs and improved the customer satisfaction (Langley et al. 2008).

Through developing technology and spreading information share after 1990's, the integrated logistics, a coordination of internal and external logistics is replaced with a more comprehensive concept, supply chain. The concept of the supply chain has become a deeper phenomenon with the development of the information technologies today, and it has become an indispensable element for the challenging market.

Supply chain is a group of organization that takes out a product from its raw material and prepares it for a production and produces the semi-finished products and transforms into the product to present to the consumer and adds value to it at every moment and is a system that connects such organizations with product, information and pecuniary resource flow. As all of such organizations can be managed by a single company, they can also be managed by companies which produce product, semi-finished products or raw material, Third Party Logistics (3PL) or Fourth Party Logistics (4PL) logistics providers, retailer and customers who carry out their activities through a partnership, established by several agreements (Shapiro, 2006; Stadtler and Kilger, 2002).

In a classic supply chain, raw materials and substances are manufactured in one or more than one facility and then transported to the warehouses and then transferred to retailer or recipients. Therefore, we have to take the interactions within the supply chain into account to lower the costs and improve the service level. Lummes and Vokurk (1999) defines supply chain as the activities such as the supply of raw material, production and assembly, warehousing, stock control, order management, distribution and transferring the product to the customer and as the information systems required to monitor such activities.

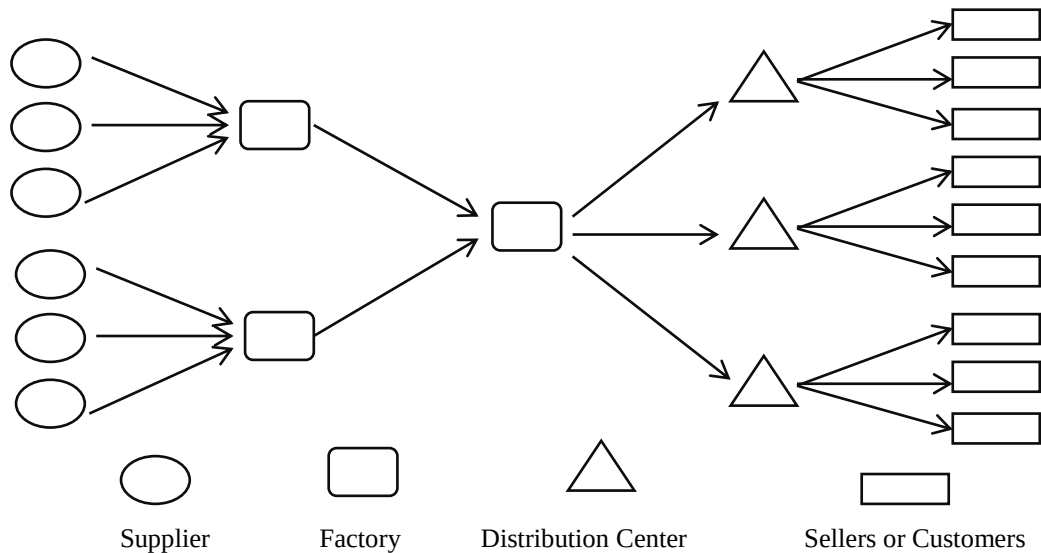
A company's function within the supply chain depends on the perspective of its own location. While a company is a customer while supplying a product, it turns into a supplier while selling its products. For example, bread factory is an underflow element of the supply chain from wheat farmer to the flour plant i.e, from the distributor to retailer and it is an upper flow element to the customer i.e., as a supply chain element that spreads it as a supplier. Moreover, a company can be a part of more than one supply chain at the same time. For example, While AT & T finds Motorola as a customer in a supply chain; it finds Motorola as a partner in another supply chain and a supplier in another supply chain and as a competitor in another

supply chain. Retail market chain as Wal-Mart can be a part of an existing supply chain for chocolate, dry legumes, household and many products (Mentzer et al. 2001).

Supply chain is a concept to ensure communication, manage all projects in a common area, cover the needs of the customers in an effective and productive manner, use the resources effectively, improve the productivity, create a planned, fast and rapid supply, production and distribution chain among the suppliers, manufacturers, retailers and customers. To Özdemir (2004), the supply chain is a "network, created by manufacturers and distributors that provide raw materials, turns them into intermediate goods and distribute the end products to the customers" Following is a simple supply chain table.

Supply chain is also a material and information network, involving businesses and sections that operate throughout the product life that encompasses the service provision of supply for material, production, assembly, transport of the semi-finished or finished products, the use of the product and disposal of the worn-out products (Tek and Özgül, 2005).

Figure 1: Supply Chain



Resource: Taşkın, E. ve Durmaz, Y. (2012). Lojistik Faaliyetler, Ankara: Detay Yayıncılık

The supply chain is a structure that provides the raw materials, turns them into semi-finished and end products and delivers them to the customers through a distribution system.

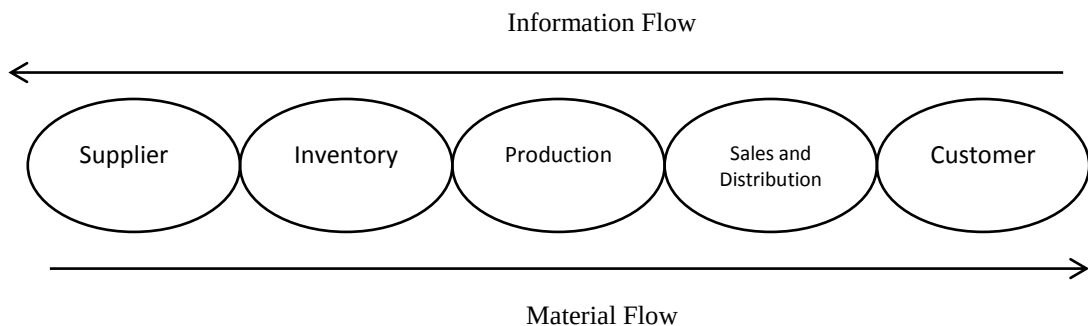
The scope of the supply chain differs to the businesses, and it is available at every business that produces and serve. Throughout the supply chain, there is a flow of money and information as well as the product. Beamon (1998) defines supply chain as "an integrated process, involving the supply of raw materials, turning them into end products and delivering them to the retailers by working in coordination with several businesses such as supplier, manufacturer, distributor, and retailer."

The supply chain involves all processes that add value to the product during delivering the entire product, service and information flow in a cost-effective manner in a chain that leads to the customer (Demirdöğen ve Küçük, 2007).

Traditional supply chain concept is an order of flow that follows each other. Each chain member in the specified order acts like a channel that adds value to product/services while delivering the product to the end user. (Fisher 1997)

It is a network of supply of materials, turning them into intermediate and end products and alternatives of distribution and facilities that distributes the end products to the customers. While supply chain is complicated and changes to the businesses and industrial areas, it is available in both service and production organizations (Tek and Özgül, 2005).

Figure 2: Traditional Supply Chain



Resource: Adapted from Fisher, 1997.

The structure of real life supply chain is more complicated than the model in the figure due to the fact that it is not linear or involves more supply chain member. In addition, some companies may belong to multiple supply chains. For instance, companies that related with chemical goods, provide component substances for different products, manufactured by different companies. Another missing aspect is that there is a one-way information flow and the information regarding the request may reach from retailers who are in direct communication with the customers, to wholesalers, then to manufacturers and suppliers. In this case, it takes a long time for a change on a request to reach the supplier and the information loses its accuracy. Therefore, two-way and simultaneous information flow is ensured through the help of developing technology for companies to cover the rapidly changing customer expectations and not to experience problems due to the over or low stock and not to waste resources in the developed supply chain structure of the companies. In addition, the product flow, shown as one-way here turns into two-way with the recycling of the defective or waste products in the developed supply chains. Furthermore, another element, not shown in this figure is the flow of financial resources. It is considerably important for successfully managing the supply chain to ensure three important elements such as the flow of product, information and financial resource in a two-way and continued manner within the supply chain (Langley et al. 2008; Lau et al. 2003).

The supply chain is a developed version of the multi-stage inventory concept in another perspective. In addition to the multi-stage stock concept, the phases that products have gone through before joining in the stock system have been considered. In this context, the supply chain is a network of facilities that delivers the end products to the customers through a distribution system involving the stock system. In addition to the activities such as provision, production, and distribution, there are stock management activities that provide the products at an intended time and amount to the customers within the supply chain. Adopting an integrated supply chain management by taking all such activities together has become an important factor for organizations to be successful in today's world (Hillier and Lieberman, 2001).

Many organizations contribute to the delivery of products or services to the end users. Therefore, supply chain competition has changed for each supply chain member to adopt a competition strategy to pursue the general supply chain objectives by getting together for a single objective by requiring more than pursuing competition strategy on their own to get a competition advantage. It is crystal clear that there should be a win-win situation in the long-term to exist within the supply chain even if not in the short term.

A supply chain of a typical product starts with the raw material and continues with delivering it to manufacturer and production and ends with delivery of end product to the customers. The product cost does not only involve factory costs that are incurred during transformation of raw material into the end product and include the costs of labour and activities for transportation, storing, packing and selling of products to the final point for the customers. For that reason, the companies have to plan and handle all activities within the supply chain as a whole to minimize their costs (Chen, 2004). The companies aim to raise the value of the products during the flow of the products as a chain and deliver them to the customers in a specific geographical area in a timely manner and right amounts and with accurate and reasonable price within a well-structured supply chain (Shapiro, 2006).

Ensuring a close cooperation between the supply chain elements enables supply chain to act as a single organization and to meet the demands in an effective manner and improve the profitability of the general supply chain (Simatupang and Sridharan, 2002). It is very important for chain elements to accurately understand and manage the concept of supply chain that enables end products or services to deliver to the consumers in terms that result in customer satisfaction to have a competition advantage. This is only achievable if chain elements could understand and adopt the objectives and aims of the supply chain accurately. The concept of supply chain can be defined as those organizations which are gathered around a single objective to turn raw materials into products and then deliver it to the end user and contribute to such process by being in contact with each other with the support of the information technologies.

1.1.2. Structure of Supply Chain

Supply chain management starts with the raw material to be purchased from the supplier, prepares its product and processes it in the factory and delivers it to the end customers through intermediate warehouses and sales centers. The supply chain is also a chain of elements. There is a continuously updated relation between the elements as required by the structure of the supply chain.

The structure of the supply chain can manifest itself in different ways. While the number of the supplier is lower in some enterprises, they may be more customers. The number of customers or suppliers is a factor to change the structure of the supply chain. In addition to this, outsourcing for the logistic, production, marketing or product development decision can be expressed as the decision to change the structure of the supply chain (Genç, 2012).

When we consider the supply chain of a physical product, there are two different supply chain structures. The first of these is convergence model supply chain that involves the transporting of raw materials and semi-finished end products from the suppliers to finalize it. The supply chain of car production is a sample of convergence model supply chain for it requires the collection of many raw materials and spare parts to create a car. The second model supply chain is the structure of supply chain that handles the total opposite activities. Here, the main product is the raw material or semi-finished products for other products. For example, raw oil within a supply chain in the oil industry is in circulation within the supply chain to be transformed into other oils with different qualities or several chemicals.

In a typical supply chain, raw materials are supplied, the products are produced in one or more factories are sent to the warehouse for temporary storage and then sent to the customer. Traditionally, marketing, distribution, planning, production and purchasing organization operate independently within the supply chain. Goals of these organizations often conflict with each other. Many production operations are designated to maximize the outlet and decrease the costs with a small cost for impacts on the inventory levels and distribution skills. As it is clear that a mechanism is required for other functions to be integrated. The supply chain is a strategy to reach such integration (Görçün, 2013). There are three types of flow in a manufacturing organization. These are;

- i. Flow from obtaining the product to consuming,
- ii. Information flows from suppliers to business environment and then to the customers,
- iii. Financial flow from customers that provide funds for purchase to the business environment.

Supply chain functions represent the flow of product in the business environment. Supply chain should make sure that right materials, services, and technology are purchased from the right source at the right time and at a suitable quality in a business enterprise. The supply chain is a network of tools and distribution options that fulfill the provision of the materials, transformation of them to the intermediate and finished products and distribution of finished products to the customers. Even if the complexity of the supply chain changes depending on the industry or business organization, it is available in both service and production facilities (Gümüş, 2012).

There are two main processes, consisting of materials management (inbound logistics) and physical distribution (outbound logistics) in a typical supply chain. While physical distribution involves all outbound logistics activities that provide customer service, including lifetime support and processing of returning product, sale incentives, pricing, consolidation, outbound transportation, storing and processing, inventory layout, taking orders, materials management is related to the provision and storing of the raw materials, pieces and economic goods that support the an entire cycle that extends to planning and control of the works within the process from purchasing to internal check to ensure warehousing, loading and distribution of the produced products.

The supply chain with the combination of the materials management and physical distribution does not account for a linear chain where there is a personal relation. There may be a pattern throughout a supply chain where many suppliers, producers, distributors, third party logistics provider, retailer and customers and where many stakeholders, multiple business networks, and relations are available. The concept of the customer-oriented supply chain has evolved around a common vision (Min and Zhou, 2002). For corporate functions to be effective, they need to work in an integrated manner. Many functions have to be worked out in coordination with the

business organization to make sure rapid and qualified responses to the supply chain related events. Understanding the structural sizes of the supply chain is a prerequisite to analyzing and modelling the rings of the supply chain. In general, we can mention two dimensions including vertical and horizontal structure. Horizontal structure expresses the number of the existing phases throughout the supply chain. As supply chain can be long and involve many steps, it may be short, involving few steps. The vertical structure refers to the number of the suppliers and customers, shown in each phase.

Cooper et al. (1997) present the operations to be integrated beyond the logistics activities in the supply chain as; customer relations management, customer services management, claim management, order management, production management, supplier relations management, product management and return management. Such processes have a cross-related structure, and their integration depends on the management to fulfill the relation management (Veronneau and Roy, 2009). In his study, Lee (2005) states that the environment where such interactions happen is an important factor to identify the description of the interactions as well as the importance of the dual interactions.

Bowersox et al. (2002) present requirements to identify the formation of the supply chain as; customer-centrism, operational excellence, integrated management, real-time reactivity, supporting the network and collaboration and defines supply chain as a discipline of which limits are expanding and organization is still continuing.

1.1.3. Basic Elements of Supply Chain

The supply chain is a chain of elements. There is a constantly updated and close relationship between the elements required by the structure of the supply chain. Followings are the elements of a supply chain (Kağnıcıoğlu, 2007:29):

- i. Suppliers (sub-industry, contractors, key industry manufacturing workshops)
- ii. Key industries (producing the end product) distributors (general distributors, wholesalers), dealers (retailers)
- iii. Customer (consumer)

We can add suppliers of the suppliers, customers of the customers; logistics service providers such as warehousing, distribution, and transportation, financial institutions, independent marketing institutions, communication and information services providers to such basic actors of the supply chain with a more general approach (Görcün, 2013). In the supply chain management, every organization in the steps of the supply chain of a product works together with the same objectives and the most effective ways are selected for creating the product (cost, time, benefit, etc.) (Akman ve Alkan, 2006). We can categorize the elements of the supply chain as the manufacturers, distributors, retailers, customers and logistic service providers.

Manufacturers;

Manufacturers are the members of the supply chain that process the materials found in nature and brings them as semi-finished products or end products. To assess a member of a supply chain as a manufacturer, it has to take part within the cycle of raw material-semi-finished products /end product or semi-finished products/end products. Manufacturers base their manufacture targets on the claims for the finished products on a traditional basis and stock up to compensate for the forecast mistakes. Most manufacturers strengthen their capability to respond to the market signals by accelerating the transformation of raw materials into a finished product by squeezing the lead times in the supply chain throughout the supply chain (Görçün, 2013).

Distributors;

Distributors are the members of the supply chain that undertake the activities such as transport, storing and inventory, etc. in the course of delivering the end product or semi-finished product from the door of the factory to the customer. In general, distributors organize the activities until pre-sale process. The effectiveness of the distribution is determined by proportioning the distribution costs to the product prices (Ayers, 2006). An effective distribution activity is a factor that directly influences the supply chain.

Distribution is a critical element for supply chains because it is affects overall profitability and customer satisfaction directly. Distribution mean linkage between supplier and customer in supply chain (Cooper et.al, 1997).

Retailers;

Retailers are members of the supply chain, offering consumers high volume products by separating them into small pieces after they receive them from the wholesalers and distributors (Görçün, 2013). Retailers interested in selling their products and services to consumers. They set the manufacturers in motion to provide the necessary products. They outsource some specific functions such as access to expert logistics service and warehousing (Ferne and Sparks, 2009).

Customers;

The customers as consumers are usually at the very last place of the supply chain. The end products and semi-finished products are manufactured depending on the customer request and expectations. Therefore, customers play an important role in decisions to be taken at the supply chain structure (Mentzer et al. 2001). The most important thing in the supply chain is customer expectation. For the demand, which is the starting point of the entire chain, shapes according to the customer expectation, the other conditions shape accordingly.

Logistics service providers;

Logistics service providers are the members of the supply chain that provide services to the members of the supply chain. Especially with the increasing competition, the number of supply chains using third party companies has increased. these offer companies' solutions to their needs and activities that affect the performance of the entire supply chain (Sheikh and Rana, 2014). Third party companies provide added value increase especially in companies that do not carry high amounts of products, their needs are relatively uncertain, and they produce original products (Chopra and Meindl, 2010).

1.1.4. Evaluation of Supply Chain

When we compare the events that occurred at the business in the past with the strategies that are designed for managing the actions such as engineering, marketing, manufacture, sales, and finance that are realized within the business organization, they have the secondary importance at all times. Today, the capability of the company to consider its external environment is revealed as the measurement of the

success to access to physical resources and market value, and there are five basic developments that pave the way for supply chain (Ross, 2000).

First of all, the business organizations use computer-based techniques and management methods such as corporate resource planning, total quality management and *Business Process Reengineering* in their internal functions to optimize their organization within the past twenty year period, and apply agile, lean manufacturing and distribution functions to provide high level and quality service. Today, they started to apply the best operations, management and technology paradigms to the customers and suppliers with which they are in interaction. The main objective here is to eliminate all types of actions in all areas such as logistics, inventory, procurement, customer management, product development and financial functions.

The second one is that the business organizations started to seal off from the non-profitable functions or that they are weak at competition and enter into a close cooperation to develop cross-channel functions such as discovery of open areas for product development, forecasting, stock management and logistics, competition advantages with the suppliers and customers of the market leader companies.

The third reason is that global trade boom enables to access to the new markets and new business models that are not possible a couple of years ago on a visual basis and eliminate the limitations of doing business by the companies thanks to the revolutions in the international logistics and today's interactive internet technology.

The fourth reason is that today's market conditions compel companies to cooperate with the customers and suppliers to cover the needs of the customers in a shorter time.

Finally, companies can access to the many new markets, which were once seen inaccessible through the development of the electronic trade.

In order to meet their needs, companies review their supply chain activities. They set their attitude to cover their needs by assessing concepts such as centralization, diversity, speculation, postponing. The centralization relates with the acquisition of economies of scale in production and proximity of the upwards and downwards manufacture area. In diversity, companies aim to own cheaper inputs and decrease the production cost. The manufacturing activities are dispersed, and

production logistics are increased. In recent years, the international division of labor has become a significant adjustment in the supply chain. Speculation keeps the changes in a form and wants their costs in the supply chain at the minimum level by aiming the products to move to the inventory at the earliest time possible. Postponing is the differentiation of some uncertain costs at logistics and production operations (Chia et al. 2002).

The companies have realized the unproductive parts and noted that they would develop their capabilities by learning to supply their unproductive functions from the capabilities of the sector and reach cost effective structure. Recent developments require a supply network model that realizes the following changes (Lummus and Vokurk, 1999);

- i. More information sharing,
- ii. Replacement of vertical departmental functions with the vertical business processes,
- iii. Transition from mass production to customized production,
- iv. Incrementally placing importance on the organizational and procession flexibility,
- v. Coordination in all areas of the process,
- vi. Strengthening the employees and the availability of real-time decision support systems,
- vii. Competitive pressures to put the new products on the market in a more quickly manner.

The emphasis of global tendencies on time and quality competition and their uncertainty on the environment compel companies to coordinate the material flow in and out of the company in a more effective way. If prompted, a qualified product can be considered as a requirement to be in the market rather than as an advantage. The key to the coordination is the orientation of providing close relations. Rapidly developing technology and global orientation combined with the economic conditions and competition based on the increased performance create uncertainty. This uncertainty requires more flexibility in company and supply chain, thus supply chain relations (Mentzer et al. 2001).

Revolutionary concept changes from Taylor's scientific management to JIT (*Just In Time / JIT*), Total quality Management (*Total Quality Management / TQM*), Material Requirements Planning (*Material Requirements Planning, MRP II*), Manufacturing Resource Planning (*Manufacturing Resources Planning, MRP II*), Enterprise Resource Planning (*Enterprise Resource Planning / ERP*), Customer relations management (*Customer Relationship Management CRM*) and the Supply Chain Management (*Supply Chain Management, SCM*) can be explained by fundamental changes in the production sector itself. This includes the shortening of the product life cycle and balance of the product-related areas beyond the globalization of the market economy (Gonga et al. 2008).

Supply chain concept presents a new management opinion by placing emphasis on the customer service. Common solutions do not create resolutions for administrative matters. Therefore, expanding of the traditional analytic tools may ignore the critical supply chain topics. Under these observations, some new methods should be needed for the supply chain in future like, cross-functional integration, management models that improve of multiple purpose supply, production and inventory planning decisions, containing preference between the total costs, customer service and lead time; simulation models to measure the dynamic resolution rules to manage the related supply chain processes management; new methodologies to simplify the complexity of the supply chain such as Theory of Constraints (TOC), mathematical models that provide to predicting future and etc. (Min and Zhou, 2002).

An effective supply chain management may help decrease of production and distribution costs between the business partners and their suppliers and supply chain performance may affect the customer satisfaction. In addition, supply chain management can be seen as a source of leverage for competitive advantage and profit margins. The main purpose of the supply chain can be considered in this context as follows (Shavaz et al. 2009).

- i. Harmonization of demand with the production and decreasing of stock costs are compatible with just in time stock management concept.

- ii. The increasing of information circulation between the business partners and synchronization of product circulation and decrease of total production costs,
- iii. provision of flexibility as a result of cooperation between the distributor and sellers and developing the customer satisfaction as a result of increased distribution speed,
- iv. Ensuring a high degree of customer service,
- v. To save on transportation costs,
- vi. Decreasing stock amounts to the zero stock, if possible,
- vii. Ensuring flexibility and speed of distribution,
- viii. Reducing labor costs.

When we consider the basic principles of the supply chain for businesses, we have to take many concepts into account. They set their attitude to cover their needs by assessing concepts such as centralization, diversity, speculation, postponing. The centralization relates with the acquisition of economies of scale in production and proximity of the upwards and downwards manufacture area. In diversity, companies aim to own cheaper inputs and decrease the production cost. The manufacturing activities are dispersed, and production logistics are increased. In recent years, the international division of labor has become a significant adjustment in the supply chain. Speculation keeps the changes in a form and wants their costs in the supply chain at the minimum level by aiming the products to move to the inventory at the earliest time possible. Postponing is the differentiation of some uncertain costs at logistics and production operations (Chia et al. 2002).

Information sharing, coordination of logistics activities is important for trust between the partners. The information shared with integration has regained importance and made available for use by all stakeholders (customer, retailer, wholesaler, distributor, and supplier). The absolute balance between the supply and demand, customer satisfaction and company performance may be provided through a suitable integration. Market focus can be assessed as an organizational culture required to show the best performance and created the best value to ensure customer loyalty. The market is analyzed through three relations: Customer tendency, competitor tendency, and coordination between the functions. (Agan, 2011).

Market focus harbors the relation between the companies, creating of atmosphere, providing courage for the development of the company, establishing and maintaining close relations with other companies, learning organizational matters from the other companies, building norms such as loyalty, trust, and cooperation. It is said that companies with a robust relation with their customers have more integrated strategies. Market-driven supply chains focus on the coordination and integration that are the duties and activities of the supply chain rather than supplying and delivering simply the product (Faisal et al. 2008).

The inefficiencies of traditional supply chain methods can be redesigned by using information technologies, and complicated flow of information between the companies may be arranged in this way. Integrated supply chains operate information based not inventory-driven and place importance to responding, commenting instantly to the prompt requests. Virtual integration has the plans to access to the officials of the companies and information through the internet and share them with their supply chain partners. Thanks to technology, information can be shared online in real time, and problems are promptly solved.

The most important way to build a successful and efficient supply chain is to bring together the several members of the supply chain and make sure that they work together. Supply chain integration can be explained by the level of coordination. Information technology is considerably important to process such plan accurately, and we require to work in four fields to achieve it: to ensure information shared among the supply chain members to improve the performance of the supply chain, collaborative planning (shared information), coordination of business flow (supply chain partners to work together) and system adaptation of the new model technologies (the works done by the supply chain elements to develop and redesign the supply chain performance). Collaborative planning, forecasting, and replenishment is a process of manufacturing product to the liking of the customer and synchronizing the personal requests of two or more companies and customer demand. In this process, it is sharing of supportive information such as party written comments, sales trends, information on sales, inventory, product information, and promotions arranged on the calendar and forecasts (Whitley, 2013).

Traditionally, planning, procurement, manufacturing, marketing, and distribution are independent of each other in the supply chain. Each department deals with the part of their responsibility. However, all of these usually make it complicated. For example, efforts of marketing department for customer service and maximizing the sales are in conflict with the production and distribution targets. Most of the production operations aim to realize the inventory levels and distribution with the lowest cost. These complications make bringing the supply chain together in a network important. Coordination of communication between the functional organizations within in this chain is the most important element of the balanced supply chain network (Whitley, 2013).

The purpose of the supply chain is to provide excellent communication and interaction with all the circles from start to finish. In successful supply chain management; we can set reduction of production costs, profitability levels, increasing the level of competition and competitiveness, to increase the businesses' value and best integration to market, increasing the market share, increasing the customer services and performance as the basic targets.

1.1.5. Supply Chain Management

All businesses, aiming to create customer value from the source of raw material to the end user, are in coordination. The management of such chain, consisting of numerous businesses depends on several factors. Some of these factors are such as; products not to be complicated, available number of supplier and raw material availability. The length of the supply chain and the number of customers and suppliers in each layer are also important issues to be considered. Most of the businesses do not only take part in a single supply chain. Therefore, company management has to consider how each supply chain, the customers, and suppliers in such supply chain and how such chain is positioned by the company. The company management has to choose the type of relation that is suitable for each special supply chain relation. At the same time, all connections within a supply chain may not be strictly coordinated and integrated. In that case, the most suitable relation type is that which is the most suitable relation for some cases of the chain. Which connections in

the supply chain require a particular importance depends on the business facilities and their importance for the business (Genç, 2012).

Today, customer expectations have increased so that now emerged the necessity of giving them the appropriate service with custom made products. Many trading companies have formed a network of appropriate services for their products by understanding this fact. However, most of the supply chain designed with traditional approach usually fall behind the performance, targeted by the manufacturer or seller and thus affecting the customer satisfaction in a negative way (Min and Zhou, 2002). Customer satisfaction, service quality, and improving the competition are among the features of the supply chain. Supply chain decreases the costs and resources as it increases the productivity and efficiency. At the same time, supply chain management has the perspective of cutting the costs and level of inventory as well as developing the cooperation by increasing the profit. As can be seen, supply chain management is considerably important for improving the customer satisfaction, service quality, efficiency and effectiveness, and decreasing the costs and resources of the company. The supply chain management also substantially contribute to the strengthening the information flow, cutting the costs, increasing the profit and developing the cooperation.

1.1.6. The Concept of Supply Chain Management

Although supply chain management is a subject that is being studied more and more every day, there are still different opinions about what the concept is and its definition. Some experts define supply chain management as an operational process involving the circulation of products and materials, while others define it as a management philosophy or an application of a management philosophy (Shavazi et al. 2009). Supply chain management is a method of strategic thinking that enables optimum results for the business and deals with the formation of suitable information flow lines and material in a flexible but integrated manner (Ross, 2000).

Supply chain management professionals define supply chain management as a planning and management process that organizes the coordination and associations between the chain partners such as suppliers, manufacturers, wholesalers, retailers, 3PL service providers and involving the activities such as supply, procurement,

conversation, all logistics management activities. The supply and demand balances between the supply chain management and supply chain elements are organized (Crandall et al. 2010).

Supply chain management may be defined as a consecutive organization or a transmission line that enables taking out of products, services, knowledge and financial assets from the raw materials and go through some middle-level organizations/companies and reached to end customers in an effective and productive manner (Langley et al. 2008). Until the late 1990s, supply chain management was defined as the organization of logistics activities between the companies and their suppliers and customer; this concept is turned into integration and management of all critical business processes within all supply chain. Thus, logistics management is defined as a part of supply chain management, and supply chain management has proven to be a more comprehensive concept. (Lambert and Cooper, 2000).

To Lee and Billington (1992), supply chain management is the management of activities that enable the product to move on the chain in a cost effective manner and in no time. In addition, supply chain management is closely associated with the coordination of production, logistics, material, distribution and transportation functions in an organization and focuses on how companies may use their supply chains processes and technologies to provide superiority on competition.

Barutcu (2007) assesses supply chain management as a system that enables effective management of materials, products, information and financial flows between the suppliers, manufacturers, intermediary organizations and customers throughout the production of goods and services from the raw materials and materials to be used and reaching them to the end customers. In order definition, which describes supply chain management as a system; it is defined as a basic management system that handles all internal resources as a whole for the management of the external company supply and their effective operation (Güleş et al. 2009). The objective of the system is to set the production planning of the business in motion, improve the sensitivity toward the customers that give orders and move forward the relations between the consumer and suppliers. In addition, this system substantially contributes to the improvement of the productivity and

profitability of the businesses on the supply chain and maintaining their activities in a safer manner (Barutçu, 2007).

Supply chain management is a system to supply the raw material from the source and carry out the product, services, finance and information flow to the end user as a product and service (Ballou, 2006) and improve quality, productivity and efficiency (Akmüt et al. 2003). Supply chain management is a management system, involving the share of information such as sales forecast, sale dates, promotions between the members of all chain and coordination of flow of material, information and finance within a network, consisting of consumers, suppliers, distributors and manufacturers (Reid and Sanders, 2002) in a process starting from the obtaining the raw materials and turning them into the end products and delivering them to the customers through wholesalers and retailers (Beamon, 1998).

In parallel definition of Mentzer et al (2001) and Murphy and Donald (2004), supply chain management is defined as the systematic and strategic coordination of tactics, required for each company within all such processes and the business functions between the companies in the supply chain with a view to developing long-term performances of the all individual companies within the supply chain.

Fourie (2005) resembles supply chain management to an umbrella and defines it as a management of interdependent and integrated processes in every phase from the supply of the raw material to delivery of products to the end customers. While some experts argue that supply chain management provides competitive advantage to the business in the market environment, and lists the characteristics features of management philosophy as follows (Görçün, 2013);

- i. A systems approach used to manage the flow of goods from supplier to end customer,
- ii. A strategic guide with an effort for cooperation to make the internal and inter-business operational and strategic skills as a whole,
- iii. A customer focus, aiming to provide customer satisfaction by creating a special value.

According to another definition, supply chain management is defined as the coordination of flow of material, information and finance and integration of business

units throughout the chain by developing the entire supply chain to cover the needs of the end customer request (Stadtler and Kilger, 2002).

The objective of the supply chain management, defined as making sure of effective operation of internal resources of the business by integrating with the external resources is to improve the production capacity, developing sensitivity toward the market, developing the competitiveness of the business through improvement of relations between the customer and suppliers. (Paksoy, 2005). In other words; it may be considered as a structure to enable coordination and combination of synergy between the internal functionality and internal organization and managing the internal and external connections of an organization, showing customer focused development (Min and Zhou, 2002).

Supply chain management is the integration of all activities regarding the flow and transformation of information and goods from nature and raw material phase to delivering to the final user under the developed supply chain relations with a view to owning important competition advantages. The material and information flow upward and downward throughout all chain (Handfield and Nichols, 1999). The supply and demand movement information, moving forward and backward between the customer, distributor and manufacturer are controlled with the flow of product.

Supply chain management is not a vertical combination. In the vertical merger, upper flow elements purchase the underflow elements or vice versa and the companies are held by a single owner. The supply chain management focuses on the individual success of each element and may be defined as the provision of a service or raw material to its best function or product to another element (Christopher, 1994).

In accordance with the definitions made in the literature, supply chain management, is a strategy to combine the several organizational aims with a view to improving the effectiveness of the supply chain within the business (Balsmeier and Voisin, 1996) and at the same time, it is used to benefit from the competition advantage in their supply activities within the business (Kanji and Wong, 1999) and has an important role in improving the flexibility by establishing an effective communication between the businesses and creating competitive awareness and increasing the level of service and decreasing the costs of businesses in the supply

chain and perceived as a basic competitive advantage in the customer driven market (Zank and Vokurka, 2003; Lancaster et al. 2006).

The viability of a company in the market depends on its obtaining profit, financial income, etc. in return for a service it gives. This is a universal rule for all businesses from oldest ones to the newest one, from the smallest ones to the biggest ones. Means and tools to abide by such rule depend on the features of the market of the company, type of the service or product and their strategies. While some companies focus on product development and customer satisfaction to meet the ever-changing customer demands, some companies focus on decreasing the operational costs and lead times to provide competition advantage in the market by saving on costs. However, regardless of the strategies being followed to achieve this goal, each company is required to organize the flow of the products, information, and resources and carry out smooth flow. The objective of forming an effective supply chain is to generate income from the value chain. Such income flows back towards between the chain elements and forms the return for element's contribution (Crandall et al. 2010).

The purpose of supply chain management is to identify the supply chain management strategy under a common target for the chain with a view to meeting a pre-defined and fixed customer demand and accordingly minimize the total supply chain costs and prevent waste of resources and make sure customer satisfaction. The total supply chain costs include raw materials, internal transportation, facilities investment, direct and indirect manufacturing and distribution, labor, packaging, handling, stockpile, on-site transportation (Shapiro, 2006). Mentzer et al. (2001) categorize the supply chain management under three main topics such as a management philosophy, application of a management philosophy and a set of management processes. In their studies where researchers define supply chain management as a group activity, developed to apply a management philosophy, they argue that following activities have to be included for supply chain management philosophy to be successful;

- i. Integrated attitude,
- ii. Common knowledge sharing,
- iii. Common risk and reward sharing,
- iv. Collaboration,

- v. Common objective and adopt the same goal while at the service to customers,
- vi. The integration of processes,
- vii. Acquiring partners to provide and maintain long term relations.

To have a successful supply chain management, we have to develop a common attitude among the supply chain elements. In this way, we can prevent companies to act only for their own advantages. Otherwise, the conflicting targets of the businesses, focusing on the local profitability may negatively affect the quality, cost, lead time of the end product. The supply chain integration is work to improve the profitability of the total supply chain together with the entire supply chain elements. Each element has to consider the effect of its decisions on the other elements in the supply chain integration. This results in customer satisfaction for the end product and thus increasing the success of the supply chain (Chopra and Meindl, 2010). In their research, La Londe and Masters stated that to achieve success in a supply chain, all supply chain elements have the common objective and pursue the same goals while serving the customers (Mentzer et al. 2001).

To develop an integrated attitude in supply chain management paves the way for developing daily communication between the suppliers, manufacturers, distributors, and retailers. For example, a great amount of stock will be prevented through providing adequate information through consumption. Once this daily system includes promotional and seasonal information available in the database of the retailers, the warehouse will have permanent empty space and requirement to keep safety stock will be minimum. This will prevent the demand fluctuations, known as bullwhip effect in supply chain and protect the supply chain from its negative effects (Poirier and Reiter, 1996).

Proportional distribution of risk to each element within the supply chain and reward sharing contributes to the development of long-term partnership between the supply chains. Putting redundant risk on a weak business or single business within the chain and damaging the business accordingly will affect the whole supply chain (Stock and Lambert, 2001).

In their research, Tummam et al. (2006) prove that the most important goals of the companies by applying the supply chain management strategies are to decrease the operation costs and lead times, improve the customer satisfaction and flexibility,

have an effective stock management, enhance communication between the duties and increase the competitiveness.

Today, supply chain elements carry out their activities on a common information system through using Enterprise Resource planning developed for supply chain management and make sure simultaneous and correct information flow which is a source of life for the supply chain management. Through this system, the manufacturer can control the stocks of the distribution warehouse, which is a different business organization and make product delivery, if required. In addition, thanks to the use of barcodes and RFID (radio frequency identification) tag, the records of the inbound and outbound products of the warehouse may be done simultaneously, and such information may be reflected in the manufacturers' systems. With the help of the development and spread of such technologies, the costs are cut, customer satisfaction is increased, and a waste of resources is prevented in supply chain management.

1.1.7. The Concepts Affecting the Supply Chain Management

Today's businesses operate by providing low-cost balance and high-quality service. The new attribution in many products and markets is to accept that customer demand is everything and act accordingly. This means that customer products get ready by packing with a high service network without being expensive. The service will increase quickly by taking the pack, option, and speed and cost options into account. These expectations are encouraged to customer experience in several closed areas and are revitalized. The products in such areas are better, cheaper and in rapid distribution network.

Today, supply chain management applications, providing significant benefits to the businesses with their wide scope and powerful tools, appear as commercial communities similar to the electronic marketplaces. Supply chains, spread over a wider space in conceptual and structural manner, have undergone a process of change in parallel to the developments, experienced recently in the electronic business areas. It is hard to say that there are certain lines to separate the supply chains from the electronic marketplace in today's electronic business perspective. We can say that supply chain management applications may maintain their importance as

one of the applications to create competitive advantage in the future. Managers are aware that the success of the business partly depends on the power of the weakest link in the supply chain. Success is no longer measured in a single operation and the entire supply chain, a network of hybrid-businesses in competition with other businesses for many times should be addressed as a whole and assessed that way (Spekman et al. 1998).

Supply chain management includes the management of material, information and money flow in a network, consisting of suppliers, manufacturers, distributors, and customers. The coordination of such flows within the businesses and their own integration are the main factor to affect the success of the supply chain management. Followings are the factors that affect the supply chain management.

1.1.7.1. Globalization

Globalization is a widely discussed concept with a wide spectrum of its effects and sizes. In general, Globalization is a modern term used for changes in the societies and world economy as a result of increasing international trade volume and cultural changes (Galațeanu, 2012). As specified before, another factor in diversifying the definition of the globalization is the reflection of attitude towards globalization on the definitions. It is possible to categorize the attitude toward globalization as positive and negative. The opinions of such two categories can exactly reflect on the definitions. For example according to Gawor (2008), globalization is the sacrifice of public interests, especially in ecological sense, subordination of national economies by the transnational companies and financial institutions, increase in poverty and structural unemployment and unjust distribution of produced goods, dictation of profits for the sake of destruction of cultural diversity and popping out of headquarters, taking decisions all across the world as a result. There is a negative attitude toward the globalization in this definition. According to neo-liberal perspective, globalization is a good thing on a large scale. Neo-liberalists say that almost all countries have a comparative superiority one way or another within the global economy. Even though there are further worsening groups, benefits of globalization outnumber all in all (Held et al. 1999).

According to Robertson (1999), the concept of globalization is defined as a shrinking of the world and creation of a one world consciousness. Robertson also discusses "glocalization" concept. This concept emphasizes the heterogeneous aspect of globalization. According to him, this process is a result of the intertwining of the local with the global. In this context, globalization is realized as a compression of the world as a whole and connected to each other with locality. This also bears the discovery of the locality. Discovery of locality is carried out through global processes. Globalization is not only organized and accompanied by simple mechanical homogenization but also carries them to the global ones by nurturing from the several localities. As a result of the merger of the global operation with local forms, glocalization arises.

Giddens (1994) argues that globalization is about the transformation of time and space. With the widespread use of mechanical clock in the 18th century, the time was no longer specific to some regions and is globalized. Social life has been reorganized within the global system after basing on the global time. Global maps led to the perception of space in global dimensions. Independence of time from the space is a modernizing process. According to Giddens, a prerequisite of globalization is the independence of time from the space. Thus, social relations were no longer dependent on the space and entered into interaction with the distant places.

By rapidly developments on the technology, the world is greatly under our command. However, Giddens (2000) expresses that rather than the world is under our command; it transforms into a world that gets out of our hands. Now, we face risks that are not faced by the people in the past. Regardless of the location, we live, whether we have or not, most of the new risks and uncertainties affect all of us. These issues are closely related to globalization. While globalization brings stability to our life thanks to its technology and advantages, it also gets out of our control. When we idealize the concept in such way, the globalization is presented as a process that encompasses all states and nations across the world, and all of them are equal. Thus, it emphasizes that all the people in the world share a common destiny and political, economic and cultural relations would create a single world state. While many theorists consider globalization and modernity as one and the same (Giddens,

1994), some argue that global era comes after the modernity, and it is clearly different from the modern era (Robertson, 1999).

Although definitions are very different from each other, it is clear that globalization has evolved as a process. According to Sthol (2005), almost all of the globalization theories involve dynamic and interdependent six globalization process. These are;

- i. The rapid increase in worldwide economic interdependence,
- ii. Intensification and deepening of commercial, political and cultural exchange,
- iii. Fast and global spread of opinions and information through new information technologies,
- iv. Reducing the spatial and time wise restrictions for access,
- v. Formation of institutions and organization that enable restructuring the social interactions on spatial and time wise level,
- vi. It is the increase in global awareness that is created through cause-effect relations.

Entrepreneurship capability that considers the world as a market and raw material source and aims to realize it and the especially multinational company entrepreneurship within such capability among the factors that determine the development of the globalization process as the main factor. When we consider in multinational or global companies' shoes, there are important environmental factors that promote globalization. These are (Barnet and Cavanagh, 1995);

- i. Similarity of demands between the countries and regions,
- ii. The increase in Research and Development (R & D) costs,
- iii. Increased economies of scale and cost pressure,
- iv. Direction of government policies,
- v. Changes in cost factors in the world,
- vi. The emergence of new distribution channels,
- vii. Decrease in transportation, communication and warehouse costs.

Therefore; global companies are the leading factors that profit from, shape and be shaped by the globalization in a cultural, social and economic manner in a

globalized world. Being the cheapest and shortest communication tool in the globalized world, the internet paved the way for business organizations to create new strategies in the new markets, formed by the technology. Such new markets are the most important indicator of the globalization along with the developing economic powers and ever increasing human population. The businesses need to improve the product quality to compete in this global environment and improve their services for the customers.

The waves of globalization all around the world have affected the supply chains, as well. Cheaper and popular information technologies have accelerated the flow of information and changed the time, space and distance perceptions and laid the groundwork for the creation of global values by gaining momentum to the acculturation process and that case is reflected on the supply chain, as well. Manufacture areas are now shifting to other locations from the head offices of the businesses and different parts that create the product come from other locations. Therefore, the supply chain turns into a comprehensive and complex structure. The world that has been changed and transformed into a single market after information, raw material, goods, and services have entered into the international circulation and share, makes the change of supply chain elements inevitable (Görçün, 2013).

1.1.7.2. Changes in Consumer Behaviour

It is the customers who decide what's a business. The customer, willing to purchase a product or service and the customer alone turns financial resources into capital goods and raw materials and materials into the usable goods. Considering what to manufacture is not substantially important for the success and future of the company. The most important thing is what the customer would purchase and what carries value, and it is the opinion and demands of the customer that define which products will be manufactured and whether the company would survive or not (Kotler, 2006).

Customer losses generally arise from the dissatisfaction or customer loss may arise for not fully understanding the needs and wants of the customers. The best way to understand is the surveys and visits. As the cost of retaining the existing customers will be lesser and more profitable. If you really satisfy the customers, or they

perceive their suppliers in a positive way, they would like to enhance their business relations (Sutherland and Sylvester, 2003). Today, demands and needs of the customers are changing along with the globalization. Customer-oriented culture means to address the products or services, post-production, and service activities; promotional advertisements, production technologies, work conditions, career paths for the employees, the importance of the community values from the perspective of customer demand and needs. Businesses have the mindset of "I should produce/offer what is demanded" rather than "I sell what I manufacture" and rearrange their activities accordingly (Newell, 2004). Therefore, they should focus on the fact that goods or services offered should be more than the expectation of the customer and thus satisfying the customer. It is the indication of the company, which renders service according to the demands of the customers and differentiates them, does this work on purpose. The company, which serves in this way, does not let its customers rush out. Because, if the company renders enough service, the customer is satisfied with it and is not interested in other companies.

1.1.7.3. Changes in Information Technology

An important factor, influencing the development of the supply chain management is the rapid developments that have occurred in technology in recent years. The companies can share information easily with the advancement of the technology. Technological developments enable customers to buy any products from anywhere in the world. Now, the customer can get the related information about the product with online catalogs, and colorful images use their credit cards or send money through electronic transfers and purchase the product online. The businesses have now more supplier alternatives. As a result of progress in information technology, businesses can access to the market information much faster. Due to these developments, it is difficult for these companies to operate on their own and supply chain management is becoming more important (Güleş et al. 2009).

Internet sales and customer service are improving, the communication is strengthening and getting cheaper with the advanced telecommunication, developed decision-making systems enable all type of decision optimizations and supply chain software improve all operations and activities (Şen, 2007). The flexibility and durability are increased with the developments in the production technologies, thus

decreasing the costs, increasing the customer satisfaction. Even though developments in handling technologies (loading, storing, unloading) are not as fast as information technology, it provides time, space and cost advantages by using information technologies. Especially, it attracts attention with the usability of the bubble technology (Lambert et al. 1998).

There are many opinions and approaches in the studies regarding the future of the supply chain in the literature. It is clear that there is an emphasis on the conditions brought by the globalization together with the technological developments in the views and approaches (taking the raw material from the cheapest source, manufacturing in the cheapest country). In this context, we can say that there are main topics to have been assessed for the future of the supply chain management in the studies such as cross-business cooperation, changing role of the supply and purchase for achieving strategy and partnership, source strategies (outsourcing etc.) internet based applications, electronic supply, processes and cross businesses synchronization (Zheng et al. 2007). Anderson and Lee (2002), put emphasis on the concurrency in the supply chain management by drawing attention to the internet based applications and information share. Considering the fact that internet based applications have technology in their nature, technology has a particular importance for providing concurrency in the process.

Information and information share are a prerequisite for creating a relation based on the cooperation between the supply chain partners. The effectiveness of real-time communication is an organizational compatibility that creates mutual trust and technical compatibility that creates the electronic connection between the companies (Min and Zhou, 2002).

The developments are continuous when supply chain team learned to work on integration. The reason for leading the supply chain where a great number of process combines with a single integrated process in the future is the development of the computer technology, communication technology that is to say information technologies revolution. Information technology enables receiving more information, more accurate and more often from more sources. Information technology enables analyzing, modeling and influencing the information more than ever. The developments in the communication and decision support systems enable coping

with increasing complexity of the supply chain, combining more factors with more people and get the results more quickly (Metz, 1998).

Information technology has a very important place in the development of supply chain management (Lambert et al. 1998). Information technology gives way to changes in the basic foundations of continuation and success required to exist in the competition and also at the internal way of working of the businesses such as business conducts, organization types of the businesses, production modes and distribution. For acceptable customer integration capabilities, a business is required to communicate with its business partners openly, solve the problems as a team, change the data electronically, dynamically schedule the planning and distribution processes. When we apply information technologies to the supply chain management concept, it provides information integration between all stakeholders of the supply chain, lower operation costs, and higher customer added value; therefore, businesses consider information sharing as an indispensable part of competitive strategies.

Information is the most critical and remarkable application among the strategic supply chain applications within all resources, managed by the business organization (Fawcett et al, 2007). Information is an adhesive between the integrated and coordinated supply chain working together for the purpose of creation of other supply chain group. Therefore, it is a very important supply chain performance factor. It should have some properties for taking supply chain decisions in a successful way (Chopra and Meindl, 2010);

- i. Information must be accurate and certain.
- ii. Information should be available when needed. Information obtained after required may become invalid.
- iii. Information needs to be in the needed form. Information that is useless or unnecessary for parties should be eliminated.
- iv. The information cost must be in the acceptable level.

The information should be related to the business targets and processes and should be accessed accurately if required (Chandra and Kamrani, 2003). Information management should support the supply chain management with all targets.

Information management should enable storing, replacing and using information in a safe, rapid and cost-effective way (Schnetzler and Schönsleb, 2007).

It is clear that information management plays an important role in the supply chain, which is an intense activity. Information is considered to be the source of competitive advantage. Because information enables sharing of the business data in a controlled way and obtaining an integrated and coordinated supply chain. Information is the cornerstone of the administrative decision (Pereira, 2009). Information sharing is important, but the impact on supply chain performance in which that information is shared depends on when and how it is shared and with whom it shared (Li and Lin, 2006).

The companies plan and coordinate the transportation management processes in an effective way thanks to the use of information technologies. Transportation applications with transportation management systems (automate and optimize the transport company related-processes, involved as decision center for transportation charge, mode and offer), transport planning (transportation network design, simulation analysis, fleet, parcel management, identification of opportunities for improvement) , execution of the transport (Managing all mobile processes of the equipment from route planning to loading, confirmation process, freight audit and monitoring of the payment), observability and reporting (access to the status of real-time transport information, cost analysis, analysis after transport, implementation of the follow-up process) could be implemented more effectively (Ross, 2008). These systems are observed to create value added application areas that provide customer services, decrease the costs especially in medium-sized and large enterprises, intermediary companies, and state-owned enterprises. Information integration gains importance in tracking systems that are applicable for vehicles, container, and palette (Margherita, 2005).

When partners and service providers connect to the logistic network web in real time, the companies can get the transporters, duration, costs, delivery information in a realistic way. In order to benefit from the transport management system in real terms, this software should be integrated with the business processes of the organization and supply chain management systems (Görçün, 2013).

Even though IT systems have been used by the enterprises through internet as of 1970's, many companies did not show enough interest in their technological complexity and costs (Archer and Yuam, 2000) and most of the enterprises did not make use of the cross business trade in early stages of the internet and e-trade (Segal, 2000). The Internet plays a strategic role in spreading of cross-business e-trade thanks to its global access capability, requiring no special rules, lower cost than the value added networks, open for public use. Today, it is clearly observed that certain technologies, which bases on more realistic foundations and needs, and matured in time within the e-trade world, yield benefit and make money for the businesses and reached to the intended productivity levels. At the beginning of these technologies, e-procurement applications, aiming automation of supply chain processes, stand out. Especially the recent economic changes and technological developments, experienced in the last twenty years have brought the supply chain management applications that is, e-procurement concept into the practices of the businesses (Genç, 2012).

E-procurement is a technology solution that facilitates the purchase by using the internet. It is a power for transforming the procurement process for it involves all steps (Presutti, 2003). Barua et al. (2001) interpret the e-procurement as the most important element of operational superiority in e-business for large enterprises and define e-procurement technology as all type of technology designed to facilitate the acquisition of goods by commercial or governmental enterprises over the internet. E-procurement technology involves decreasing of administrative costs, shortening cycle times for meeting the demands, minimizing the prices and stocks, increasing the planning and technological cooperation with the business partners (Croom et al. 2000).

E-procurement, an internet technologies application, takes place in every phase of the procurement process. The real-time information exchange in e-procurement applications is considerably important for improving the competition advantages, coming from the shortening of the product provision to the market and decreasing of the product life cycle. E-design facilitates the real-time cooperation between the all internal members of the functional purchasing teams of the business organizations as it is in the prevention of insufficient product and supply and

competitive challenging that arise in the traditional sequential process in supply management. E-procurement has an important influence on the assets of the business. Stock levels can be reduced significantly. This application depends on the flexibility of development capabilities of suppliers (Presutti, 2003).

The applications in computer and communication technologies influence and change the operation activities in cost, time, quality and services. The developments in network technologies lead to drastic changes in the commercial activities and present new methods for business to widen their markets, offer their products and services, and improve the process productivity, customer gaining and retaining (Görçün, 2013). In this respect, e-commerce (e-commerce) is another application, which gets increasingly important and accepted. E-commerce is a cross-organization information system designed to facilitate the electronic communication, information exchange and process between the businesses through added value networks or public networks (the internet, etc.) E-commerce may influence the competition in the market thanks to its facilities for developing businesses processes, structuring the buyer-supplier relations, accessing to new segment and markets (McLvor et al.) 2000).

The biggest impact of IT developments in the supply chain management is the supply chain management software. The basic strategy is that the entire supply chain should focus on the customer. Supply chain management is guided by customers. Today, there is much software for making connection management easier in the supply chain. This software are not a strategy by themselves; they are for implementation of the company strategies. Installing and using such software are not the main objective of the company, and it is to develop and improve the supply chain management. Information technology is the technology that enables managers to have the more accurate and timely information for them to do their job better. There are different software packs for each connection within the supply chain. Computer and communication technology tools and equipment have become cheaper and reached a more advanced level of technical competence (Fredendall, 2001).

We can monitor the activities with the information technologies, integrated into the supply chain and customer can receive instant information about the activities and other commercial partners can get the information in the information

network structure. We can reach information and inventory at any time and any place thanks to observability in the supply chain and by these way planners can interfere with the problems and activities at any point in the supply chain (Ross, 2008).

The benefits of information technologies are as such; monitoring by providing real-time information about the inventory levels in supply chain, open orders, production and activities, informing by providing early decision making by notifying the exceptional and variable situations in real time to the planners in the supply chain, simulation through tools that provide easy, rapid supply and suitable action, controlling by giving assistance to change the previous decision or situation in an easy and rapid way, measuring by making sure having realistic expectations for performance in the future by defining the measurement and performance tools required to evaluate the performance of the existing relations (Ross, 2008).

Information management along with the supply chain management secures the information and knowledge shared among the supply chain members. While knowledge only defines the requirement of any member within the supply chain, the information determines how to deliver the product in the best way (Maqsood et al. 2007).

The information shared throughout the supply chain in today's global economy is a substantial factor for the performance of the supply chain (Cantor and Macdonald, 2009). The information has become the most important factor to improve the performance of the supply chain by matching the supply with the demand in a better way (Fu and Zhu, 2010). Information share has been used as an important integration factor for optimizing the performance throughout the supply chain (Titus and Bröchner, 2005).

Information integration typically includes the appropriate sharing of information and knowledge among members of the supply chain. For example, it may include the sharing of data regarding the production and design between the suppliers, manufacturers, and customers. It may also contain the share of data regarding the lead time and forecasting between the supply chain members. Information integration makes the customer requests, stocks, production visible throughout the chain. This is the basis for collaborative planning and forecasting.

Thus, supply chain members face with lesser uncertainty, lesser stock and better customer service (Mouritsen et al. 2003).

Information share is a key component for the administration of any supply chain. Information management, which is a key to the uninterrupted supply chain to some researcher, makes the accurate and recent market data accessible at all points of the supply chain (Li and Lin, 2006). Increasing the integration and information sharing among the supply chain members has become a necessity to increase the productivity of the supply chain. Because effective supply chain management requires effective information management (Sambasiv et al. 2009).

Sharing the required information between the members is very necessary and important to cope with the distances and cultural differences between the supply chain members (Singh, 1996). A Central management system that does not have the information sharing component required for sharing the information throughout the entire supply chain could not live up to the ever changing customer needs (Al-Mutawah et al. 2009). In order to have an end to end perspective in the supply chains, information and knowledge have to be transparent and shared among the supply chain members. To obtain an integrated supply chain in this way, the processes should be integrated into the businesses. This refers to a partnership, associated with long-term cooperation and mutual benefit (Schetzler and Schönsleb, 2007).

It is necessary to share the data, knowledge, and information between the supply chain members for the success of supply chain (Halley and Beaulieu, 2005). The key to success in the supply chain is to know which decision is more effective on the entire performance. This can be provided with the appropriate information sharing. In this context, information management is used as an effective approach which enables decision synchronization and information share in the supply chain (Wadhwa and Saxena, 2007).

Information sharing is an important part of the collaboration in supply chain management (Chandra and Kamrani, 2003). Information sharing reduces stock costs and improves coordination between the supply chain processes for material flow. Information share paves the way for supply chain integration that enables promotion of products on the market in a faster manner and secure delivery by the organizations. Quality information sharing positively contributes to the customer

satisfaction and collaboration quality. Information sharing influences the performance of the supply chain on total costs and level of service. Information sharing on high level decreases the total costs and provides higher order delivery rates and shortens the delivery times (Li and Lin, 2006).

Information management systems in the supply chain should include a dictionary to make sure that information is accurately understood by the entire chain. Each member of the supply chain should define, format and openly express its own information. Supply chain should share and use the existing or future information resources in different applications in different ways (Desouza et al. 2003). Otherwise, errors in supply chain management negatively affect the information flow and share.

1.1.7.4. Competition

The competition concept refers to contest between the competitors to have a large market share (Thurber, 1998). In this respect, the concept of competition is based on the concept of increasing market share to establish dominance in a particular sector. In other words, the competitive behavior appears when two or more companies compete with each other to have an advantageous market position (Hitt et al. 1999). However, the competition includes a framework beyond the competitors of the company. The effects of customers, suppliers, potential entrepreneurs and substitute products are within this framework. The comprehensive competition concept that covers such five forces defines the structure of the sector and shapes the nature of the competition interaction within the sector (Porter, 2010).

However, the concept of competition can be explained in comparison with the supracompetition concept. While competition is a required phenomenon to protect its existence and survive, supracompetition is for the success. To clarify, the concept of competition defines itself as a phenomenon based on the comparison with the others in the literature. However, supracompetition refers to producing better values. It is stated that the value is the driving force of being supracompetition. The business organization tries to go beyond the values it created and compete with itself with the concept of supra competition (OECD, 2013).

No business organization can sell its products more than any other companies as a result of the conditions of a perfect competition market (environment). However, customers prefer to purchase the products from the companies which sell cheaper than other ones. Therefore, this competition environment led all companies to sell the products at the same price (Ruff and Gregory, 2001). Every buyer and seller, carrying on business in the perfect competition markets rather than imperfect ones accept the prices in the market (Hall and Lieberman, 2003). In other words, we can say that the critical factor of the perfect competition environment is that companies in the market do not have the power to influence the market.

Today, the companies have to get the competitive advantage to maintain their activities in the long run. This requirement is supported by the modernist vision of strategic management. To that view, the business organizations, which lose their productivity for their competitors improve their superiority and productivity in a continuous manner and not having a competition advantage will withdraw from the market (Ülgen and Mirze, 2004).

One of the influential factors in supply chain management is the competition that increases in the national and international level. Depending on the conditions of competition, the business organizations have to cover the needs of the demands of the customers in a hasty manner. Today it is inevitable that the business organizations which do not cover the changing demands of the customers will fail. Thus, the shortening of product life and tailored made production becoming important, the business organization directed to flexible processes (Chandra and Kumar, 2000). This leads to rising customer expectations, thus increasing the competition between the manufacturers. The power shift from supplier to customer paves the way for business organizations to create tailored made value for customers by differentiating themselves. As a result of this, they decrease the number of the suppliers, and the trust between the supplier and company has been more important.

1.1.7.5. Legislative Regulations

A company's compliance with legal regulations refers to the need for compliance with the relevant laws and future expectations. Other factors that led companies to environment-friendly supply chain management are not compelling as

the legal regulations, and they are up to the initiatives of the companies. Criminal sanctions are applicable when companies do not comply with the regulations. Without legislation, companies ignore the natural environment, and pollution would be inevitable. What is important is that a company adopts the environmental values with any legal regulations. Complying with the legal regulations for a company presents advantages such as long-term sustainability and existence, avoiding fines, decreasing the risk and improving employee satisfaction (Bansal and Roth, 2000).

1.1.7.6. Stakeholders

The overall objective of the company constitutes the starting point in identifying the strategic objective of the supply chain, as well. Operations manager should consider the general strategy in defining the objectives and what to measure (Neely et al. 2000). The main purpose of the management of the supply chain must not differ from the company's overall objective that is to maximize stakeholder value (Rappaport, 1987). Supply chain strategy should include defining the process configuration in the selected target market to maximize the stakeholder value and selection of appropriate supplier company to have a great competition advantage (Lummus et al. 1998). This process starts with the consumer and covers supply chain management activities with the creation of a combination of commercial partners that will provide the best services for the target market.

At this stage, the operations manager should determine their position on competitors and competitor analysis covering the interactions in their own sector. They should try to understand how alternative production strategies would influence the competitiveness and value of the company. The analysis should be guiding in identifying the strategies to realize the best objective of the company that enhances the stakeholder value. Final strategic plan and mission definition of the company should control and steer the tactical plans to be applicable in managing the daily operations (Stock and Lambert, 2001).

1.1.8. Importance of Supply Chain Management

As it is in the transformation of the business management systems, supply management development requires handling the issue with a strategic importance to

determine the powers in the existing market and creating value. Worldwide large enterprises focus on to organize the processes and information flow of the networks, creating the added value to live up to the rising expectations in the market. It is understood from the studies conducted by the innovative managers across the world that success is measured by cost, pace, innovation and customer satisfaction. The secret to great changes and progress is expertise sharing throughout the added value network. Now, those who work to fulfill the order are asked to participate in the customer satisfaction process in design, partner, risk-sharing and more productivity dimensions. Such value added network integration that has been conducted for customer value and competitive advantage is defined as the supply chain management (Speakman et al. 1998).

Marketing, operational management, management science, purchasing, logistics and behavioral sciences covering the different perspectives of the supply chain management have been the subject of many studies (Ketchum and Giunipero, 2004). Supply chain management is becoming an important application for enterprises due to taking place at the intersection of different fields. Supply chain management concept, which has been substantially referred to in the literature of strategic management, strategic partnerships, logistics and marketing paves the way for business organizations to act as a single body in cooperation with all resources and units and improve their performances by going beyond the scope of the supplier limits and distribution services with a view to creating customer value (Puigjan and Lainez, 2008).

Effective operation of supply chain management system has not been as important as it is today in the historical development of this system. When we compare with the basic operation functions such as marketing, sales, and finance, which were considered more critical in the business management in the past, information generation and sharing between the business units were considered in the second degree (Ross, 1998). Therefore, the importance and effect of the supply chain management have not been fully understood by the businesses. This deficit results from not fully knowing the supply chain management and perceiving it as more cost, commitment, effort and time.

Today, the business organization faces pressures such as training the workforce against the challenges that may arise during the production, decreasing the production costs, developing the process flexibility that responses to the changing customer needs quickly and producing more qualified products constantly. For these reasons, business functions that had secondary importance before are now among primary functions (Say, 2010). As a result of this change, top managers of the business organizations increasingly grasp the importance of the supply chain management, realize the competition advantages of supply chain management and apply it and progress in having it accepted by their employees (Görçün, 2013).

Now, the customers in the market have more demand and they request their demands to be met quickly. Researchers define this new type of customer as "never satisfied customer". Supply chain management can determine the demands of this new entourage in the most appropriate way. The business organizations seek for suppliers offering these new skills, expertise, capacities rather than internal employees that help meeting the demands of the customers and make an effort to create a partnership with such suppliers to cover these new demands (Genç, 2012).

In addition, businesses today compete in time and quality axis. Customers expect that their products should be delivered more quickly, on time and in perfect condition. Therefore, it is required to establish more close relations based on the information exchange between the business organization, suppliers, and distributors. The uncertainty in the market rises along with the increasing competition based on the performance due to the global developments, changing technologies and economic conditions. This uncertainty also requires greater levels of flexibility in the supply chain (Mentzer et al. 2001). Therefore, we can say that supply chain management, required for the supply chains to operate more flexibly, is an important and remarkable concept for providing competition.

To give an example for the importance of the supply chain management, when we consider that raw material and part cost account for 70% of the total manufacture cost in many industrial branches, we can understand how important the supply chain management is (Ghodsyopor and O'Brien, 1998). At the same time, it is important for manufacturers to develop, evaluate, select and cooperate and

coordinate their suppliers by establishing close relations where customer demand is almost uncertain (Chan, 2003).

The starting point for these reasons is that companies maintain integration in a vertical manner. Businesses seek for suppliers which provide more cost-effective and qualified materials than its own supply resources and specialize in that field. Managing the supply system, optimizing the entire performance has become a substantial objective for business organizations. These businesses realize the success that arises when they work with other companies that fulfill the next step of the supply chain and benefits to be received by both parties (Lummus and Vokurk, 1999).

Another reason for the increase of the importance of supply chain management in recent times is that gradually increase the national and international levels of competition. There are many distribution channels that customer can cover their needs from and therefore it is important for business organizations to reach maximum accessibility with a minimum cost. The business organizations attempt to solve the distribution problems by providing inventories at several places in the supply chain (Lummus and Vokurka, 1999).

Other cause for the increase of the importance of supply chain management is requirement of business organizations to lean on their basic capabilities such as information, skills, and abilities which are not easily copycatted by their competitors, that help them differentiate from other organizations, play role in developing the vision of the business organization, and leave other functions to another expert business organizations. Therefore, effective management of the suppliers has become important and some improvements have been observed in a business organization that applies supply chain management (Koçel, 2010). After 1990's, acceleration of the developments in communication, computer, and transportation technologies, has contributed significantly to the development of ties between the partners. Under such reasons, supply chain management has been frequently referred in the business world journals, advertisements and professional meetings and universities started to lecture on supply chain management (Ungan, 2011).

1.1.9. Buyer and Supplier Relationship in Supply Chain

According to Macbeth and Ferguson (1994), there is no pure form of competitive model and cooperative in the application. If these two models were considered as endpoints, we could accept that the relation between the buyer and supplier is among these two points and defined as more competitive or more collaborative depending on its location.

In buyer-supplier relations based on the cooperation, there are more communication and cooperation between the companies. There is all types of resource and information sharing between the buyer and supplier. For companies are in cooperation, they work together in design and R&D for new products to be more useful and improving the old products. This enables carrying out necessary planning and works together to produce the right product at right quality and time. One of the important issues here is that as the number of the companies in relation increases, it gets hard to control the relations and production combinations. For this reason, buyer companies should keep the number of the suppliers at a minimum level. If necessary, they should not buy a product but a system from the suppliers. Thus, the company can be a flexible and agile structure that keeps the production and quality under control.

In modern supply chain management, companies have to use all of these approaches according to their model. Modern supply chains are now constantly improving themselves. It is aimed to minimize the number of the supplier as much as possible. The main reasons are explained in the following way. When working with a large number of suppliers, it is difficult to establish a relationship with each of them on the desired level. When working with a small number of specific suppliers, supplier sees receiver as a regular customer and supplier puts its trust in the buyer. Mutual trust and cooperation lead to a close cooperation as well as sincere and sharing opinions built between the buyer and supplier.

According to Speakman et al. (1998); it is required to have a commitment to establish a long term and balance power relations between the parties to create a buyer-supplier relation based on the cooperation. As Shapiro (2006) noted, the cooperative relationship depends on establishing a relation based on long term and mutual dependence between the suppliers and buyers that guarantee high quality, fast

and reliable input supply. The businesses that create such relation can realize zero defect manufacturing with a minimum total manufacture cost that is the main objective of the business organizations.

Supplier relations based on cooperation stand out close cooperation, developed quality assurance and flexible distribution principles rather than the price of the purchased input. Sharing all type of information between the supplier and buyer led to companies to work out like a single company and by this way, idle capacity and unproductivity have been prevented by using the resources such as stock, labor force, manufacture area, machinery, energy in a maximum productivity within the production process. The buyer and the supplier, sharing all type of information at any phase may use common resources, if required (work area, workers, subcontractor, supplier, machinery, technology and information etc.) This yields in productivity, flexibility and economy for the parties. As supplier gets more powerful for it has a continuous work, it becomes a more robust and reliable supplier for the buyer. The communication between the supplier and buyer gives way to a coordinated production and thus decreasing the stock costs.

The cooperation is the working partnership that has been generated to realize the objective and interest of the supply chain of the companies. The companies, which are integrated and work in a synchronized manner in coordination within the supply chain, share their knowledge, facilities, and capabilities with each other.

1.2. SUSTAINABILITY

Today, taking its place within the vision of many global companies with its institutional dimension, sustainable development presents an important perspective that identifies with the ecological and social insight of the growth targets of the companies.

1.2.1. The Concept of Sustainability

Sustainable development is to ensure meeting the needs of our generation by providing the social justice without ignoring the needs of the next generations by having environmental integrity and economic prosperity. When we address this

definition in terms of businesses, ensuring the corporate sustainability of a business refers to meeting the needs of the parties directly or indirectly related with the business organization by securing the future needs of the related parties. In this context, the purpose of corporate sustainability is the use of environmental, social and economic resources owned by the business in an effective manner (Dyllick and Hockerts, 2002). Sustainability refers to restriction of today's non-renewable resource use and keeping the negative effects of human on the ecosystem below the carrying capacity of the system for all diversities and non-renewable resources to be transformed to next generations.

Brundtland Report published by the World Commission on Environment and Development in 1987, is the first report that introduces the environmental sustainability content. "Our shared future" report draws attention to two issues. First one is moving the responsibility toward future to an international platform and, secondly and more importantly is that it attempts to question the development approach. Using the "Development" concept with "sustainability" leads to an important conclusion and highlights the fact that it is impossible to move forward with the existing development idea.

In Brundtland report (World Commission on Environment and Development, 1987); sustainable development with the idea of eradicating poverty, to move the natural resources activities to the maximum levels and to take control of the country's population and perhaps more importantly, to extend the use of environmentally friendly technology have been highlighted (Kuşat, 2013). According to the report, sustainable development refers to "the development to cover the needs of today without compromising the ability to meet the needs of the next generations". This definition addresses the needs by not restricting with the economical needs only and pursues intergenerational equality through transferring the natural resources to the next generations by using in a balanced way.

According to UNDP for sustainable urban development; a good land use planning, sustainable urban macro form, appropriate urban densities to ensure the sustainability, taking measures for environmental pollution, sustainable transport and energy planning are required (Leitmann, 1999). Sustainability is a process that brings economic vitality while improving the quality of life, providing social equality,

improve environmental quality by preserving natural resources, preventing disasters and adopting participatory planning (Mega, 2000).

1.2.2. International Developments Affecting the Sustainability

The countries made an effort to increase their wealth and develop more by increasing their level of production and consumption by using natural resources recklessly as a result of the economic development in the process that has started from the industrialization in eighteen centuries to today. The population growth, especially in the second half of the twentieth century, has increased the food products and use of energy resources and total consumption has increased accordingly and has been realized slowly that if we continued at such pace, we could not find any resources to consume. Having realized that it has disrupted the ecological balance due to its actions, the humankind started to feel of changing everything. In addition, rapid economic and technological developments in this century have helped to accelerate these processes.

The most important impact of industrialization on the environment is global warming. Global warming refers to the increase of average world temperature at sections of atmosphere close to the world surface naturally or with human impacts (Foster, 2002). Acid rain and the processing of radioactive waste are also considered among the negative effects of industrialization on the environment.

Besides industrialization; globalization, extinction of species, concern on the complete destruction of the natural environment, urbanization, and population growth have resulted in increasing concerns and interest of individuals, business organizations and institutions toward the environment (Fuller, 1999).

One of the influential factors in the development of the sustainable development process is population growth. Population growth, especially in the second half of the twentieth century led to overuse of natural resources and has negative consequences for the environment. Everyone started to realize the environmental pollution, occurred with the increase of consumption and production along with the increasing population. These developments led to the attention of all nations on the concept of sustainability.

The whole world is connected to the same ecological conditions. Therefore, the world has only one future and people will share this common future together. At this point, environmental problems have gained an international dimension from the national level, their geographical and social impacts are increased and most importantly, it has emerged that environmental issues are of global significance (Ökmen, 2003).

Among the factors that make the environmental problems a threat includes demographic factors, socioeconomic development, inefficient energy use and, above all, unsuitable or poorly oriented urban environmental policies. The issues such as ever-increasing environmental degradation, desertification, deforestation, global warming, and climate change which is quite daunting for humanity have begun to draw attention.

In the second half of the twentieth century, the destruction of the environment conditions which are necessary for the survival of human life and damages of such destruction on human health and social structure have been understood more clearly. Science and rapid developments in technology, particularly the extension of the human lifespan, increasing the level of welfare, expansion of education and improvement of literacy rate, decreasing the number of deaths arising from the diseases have been considered as improving aspects of the life conditions, but existing plans and policies threatened the future of the people (Portney 2005).

Environmental sustainability is constrained by global and local issues. Global cooperation should be developed for the protection of public natural sources such as ocean, sea, space, biodiversity and eliminating the problems such as global warming, greenhouse effect, depleting the ozone layer. The developed countries, which have the larger charge for depletion of the earth resources and the emergence of the global problems, have to support the efforts of the developing countries.

1.2.3. Development and Application of Sustainability

The World has experienced many technological developments as of industrial revolution to today and consequently, population growth has led to the unconscious use of the resources. The consequences such as pollution, increasing environmental problems, global warming, destruction of the ozone layer, reduction of natural

resources is the environmental disaster that people are just beginning to understand. Activities of mankind and their effects challenge the carrying capacity of the world. Therefore, the continuation of activities and use of resources must be carried out within this capacity (Sevr, 2009).

Sustainability creates a delicate balance between the nations and world with the economy, environment, and society. Economic indicators were used to measure the state of the economy in a large part of this century. Social indicators are the phenomenon of the Second World War on the main basis. Environmental indicators are more valid today (Fricker, 1998).

During the implementation of the concept and strategy, we can see that common themes or concerns may arise at certain times. It may be affected by the small changes, key transformations or displacement of the results; political events, technological change, scientific discoveries, disasters or economic experiences and processes. In this respect, green, ecological and environmental labels require considering the building designs, their effects on the natural environment and their relations with it. This concept dates back to the 1970's. The labels such as energy saving, solar and passive that emerged at the same time refer to the approach to decrease the fossil fuel required for a building to serve (Williamson et al. 2003).

There are three important pillars of sustainable development (Munasinghe, 2004; Kettner et al. 2006). These are; social, economic and environmental dimensions of sustainability. The social dimension is mainly focused on the people and issues to empower them. These issues are social mobility, participation, social dependence, strengthening of cultural identity and institutional development. We can simply define economic sustainability as maintaining the capital stock. Economic sustainability focuses more on economic growth, equitable distribution and efficiency issues. On the other hand, environmental sustainability is associated with global events such as carrying capacity, biological diversity, ecosystem integrity and global warming (Kettner et al. 2006). Munasinghe (2004) defines sustainable development as "a process that develops the spectrum of opportunities, that enable people and societies to achieve their demands and potentials in a sustainable time while maintaining the renewability of the economic, social and environmental systems" According to Munasinghe classification; economic sustainability focuses

on improving consumption and welfare, social sustainability, human relations, the achievement of individual and group goals, strengthening the values and institutions and while environmental sustainability is associated with the conservation of the ecological system.

The emergence and development of sustainable development involve a long process. Although it was first published in Brundtland report in 1987, sustainable development report and the developments before and after the sustainable development are quite important. The pressures of environmental problems on human and nature started to be on the agenda in 1960's.

The requirement to develop new policies on a global scale has emerged due to the emergence of modern societies in which the level of wealth was measured by consumption in 1990's and the consequences of environmental and social effects, generated by such societies reached to serious dimensions. The report, which was submitted to the UN Conference on Environmental Development in 1992 at Rio, addresses the changes for covering such needs and applying the sustainable development. Later Agenda 21 has enriched the content and bonds of the sustainability concept as a concrete product of Rio Summit. In addition, Agenda 21 highlighted the importance of the relation of environment-human and "quality of life", one of the main themes to guide its activities, and placed the synergic cooperation between the environment and development on the center of the sustainable consumption (Gökdemir and Veenhoven, 2014).

In 1997, Rio + 5 special session was held in New York. The objective of the meeting was to review the decisions taken and responsibilities for sustainable development up until now. In 2000, the "Thousand Years (Millennium) Summit" was held and a year later, assessments were made at the Istanbul +5 session about the decisions and the latest status in New York (Çamur and Vaizoğlu, 2007).

In 2002, Rio + 10 Summit in Johannesburg was held with the topic "Sustainable Development World Summit". The main purpose of this meeting was the Rio's ten-year evaluation. This Summit is considered to be very important because it brings together basic groups on many issues. Government representatives and interest groups have organized mutual discussions sessions and panels on a variety of themes in this context. Furthermore, there are many events and meetings

for development of "Partnership Initiative", as one of the important targets of the Summit (TÜBİTAK, 2002).

Under the leadership of the UN, there have been sessions for sustainable development. In 2004, II. World Urban Forum (Barcelona) is held. Then in 2005, United Nations World Summit III made and then in 2006 III. World Urban Forum, and in 2008 IV. The World Urban Forum and in 2010, V. World Urban Forum (Rio de Janeiro) are organized. In these meetings, it was emphasized that Sustainable Development should be carried out simultaneously in integration with the environment and environmental values.

The last of the Sustainable Development Conference conducted under the leadership of UN was held in Brazil, Rio De Janeiro as "Rio + 20" in June 2012. As a result of the conference, a final declaration has been issued titled as "The Future We Want". It was committed to implementing the decisions to be taken at the previous conferences. It has been emphasized that in order to achieve sustainable economic development, economic, social and environmental compliance have to be provided and all walks of society have to play an important role by raising their awareness (Republic of Turkey, Ministry of Environment and Urbanization, 2012)

We can say that sustainability basically refers to the development and maintaining the development in the future. Sustainability concerns the companies, carrying out business activities at international level with the elimination of the boundaries in the world, at every place and aspects. The main thing to consider is that companies have to adopt the sustainable development concept as an organization culture on a global scale. These elements are the international standards and values such as obeying the law, making safe, low-cost production, job creation, supporting education and technology cooperation, human rights, ethics, and the environment.

1.2.4 Sanctions on Sustainability

The basic principles to be applicable with global environment perspective have to be approved at least on the paper for many countries. In accordance with these principles, these countries have agreed to act as early as possible by considering the cost-effectiveness rather than waiting for a response for all scientific questions when an important problem arises about the environment in accordance

with the precautionary principle. In the same context, it is agreed that different countries can bring different approaches to environmental problems in accordance with the differentiation of the sanctions principle. Finally, for cleaning the environment brings a substantial cost, an application of the polluter pay principle is attempted to be applied rather than all of the developing countries. However, there is no legal system to apply the polluter pays principle to the states, which could be considered as a sanction in general terms. However, these principles can be applied to individuals or organizations through a domestic law (Görmez, 2007).

Such principles that have emerged in time in relation to the environmental issues in the international law lay the groundwork for the multilateral environmental agreements. However, the structure of the international legal system is limited with the global environment agreements and provides a modest base. According to Sands et al (2012), there are two main problems arising from the structure of the international legal system. First of these problems is keeping the nongovernmental organizations and other non-state actors outside the international law with a few exceptions; thus, only taking the governments into account. The second one is that there is no structure to institutionalize the environmental rights. Non-availability of international executive authority that ensures compliance with the rules, if not respected and in a similar fashion, a necessary judiciary system to resolve to sanction legal entity which commits unjust action or operation or determine non-compliance with the rules and restore them creates significant loopholes in protecting the environment through multiple agreements (Susskind, 1994; Vig, 2005).

In fact, to ensure cooperation in all fields of international relations has been a difficult issue for any occasion at all times. Because cooperation refers to a challenging process to achieve for it requires states with different economic, social and political structure to reconcile on interests and priorities. There are many reasons that prevent the cooperation in terms of international politics such as parties afraid of being deceived, concern on parties that want to benefit by avoiding the costs and burden of the cooperation (free rider), failing to fully understand the intent of other parties, non-availability of a central authority to apply sanction to the transgressor party and maintain the stability of the cooperation, are valid for the international environment policies (Downie, 2005). However, environmental issues specific to

certain conditions make the cooperation in the environmental field more difficult. In general terms, these reasons are such as the tension between the north and south countries, conservatism on sovereignty rights of the states, conflict of interest of states, the uncertainty of benefits of cooperation (Downie, 2005; Susskind, 1994).

On the other hand, states know that the agreements that they ratify have binding results on them. Just as individuals know that they have an obligation to respect the laws as a result of social learning or any other things, states know that they have an obligation to comply with the agreement that they ratify. Even it is irrational for the state, the state respects the compliance for it is legal or required by the law (Chayes and Chayes, 1993). If the states do not comply with the agreements, there are set of sanctions to punish the violating state and deterring the violations and improve the compliance (Jacobson and Weiss, 1998).

Having a limited area of use of sanctions in environment agreements led management on compliance to stand out. Indeed, according to many types of research, capacity building, financial and technical support, training, a transparent information system are quite important for compliance of parties with the environment agreements. Therefore, many environment agreements try to solve the compliance problem through compliance or fund mechanism.

The important thing to consider on that matter is both coercive approach and management approach base on the reporting system for identifying the necessary precautions and determining the incompliance. As is known, multilateral environmental agreements require parties to prepare reports, containing information about their own applications and submit it to the Secretariat. The reports constitute the basis of agreement compliance system. In general, terms, because the reports are the only tool to identify whether the parties fulfill their obligations in multilateral environmental agreements, what type of problems they face while applying the agreement and identifying whether their efforts are enough to apply the agreement. However, the reporting system is not working effectively in many environment agreements. That is because collecting information and preparing reports are a troublesome and time-consuming process. Especially, the developing countries lack this capacity to fulfill this liability (Loibl, 2005).

1.2.5. Sustainable Supply Chain Management

Considering the corporate level application of the sustainable development, we can see that it carries out a substantial progress in the supply chain management, which is considered as the spine of the corporate activities (Burritt et al. 2011). Considering the comprehensive effects of the companies on the society with the settlement of corporate sustainability approach within the supply chain dimension, we can stipulate that it may invite all layers from local to international levels to carry out their functions by adopting the concept of sustainability. When this perspective settles in the global supply chain, which starts on a corporate level, it is expected that every country within the chain meets with such applications on their own level and a supranational common sustainability approach may be adopted.

Sustainable supply chain is the management of environmental, social and economic effects and encouragement of good governance practices, throughout the lifecycles of goods and services (Supply Chain Sustainability A Practical Guide for Continuous Improvement, 2010). Important aim of this concept is being sustainable. This means the developments that create the difference in any supply chains should be long run.

Strengthening the conditions of competition in recent years, globalization, the acceleration of technology developments, increasing the ambiguity of the supply chain network and shortening the product life cycles require businesses to reevaluate their supply chain strategy (Beamon, 1999). As the level of competition of the businesses increases, expectations of the customer increases. In order to ensure it and develop the supply chain, the companies have to manage the supply chain effectively by taking the right and just use of natural resources within the social responsibility perspective.

Beamon (1999) states that environmental quality referred to cleaner air and water and but now what's been referred to environmental quality is that as defined by the Environmental Quality Council " safe drinking water, a healthy ecosystem, safe food, communities without toxic waste, safe waste management and restoration of contaminated areas".

In addition, the public interest is growing toward the natural environment. This is largely because that media provides information to the growing number of

environmentalists and consumer groups. Manufacturing and production processes are considered as the biggest enemies of the protection of the environment. Thus, manufacturing and production processes are considered the reason of the waste, ecosystem degradation and the depletion of natural resources.

Today, customers request not only to get the qualified product but also want their requests on being fast, flexible and providing post-sales services to be fulfilled. Therefore, businesses are required to improve their level of service to cover the expectations of the customers while fulfilling their business processes with the lowest cost. Moreover, businesses with customer groups spread all over the country have to deliver their products on intended time with the best transport methods. Production and distribution planning decisions are of vital importance for institutions which have such a complicated and costly supply chains (Mota et al. 2014).

Reverse supply chain activities such as collection, storage, recycling, remanufacturing, disposing the returning products from the customer with the future supply chain enable raw materials, inventories, end products, and related information to act in both ways, therefore the product gains value continuously in a way not to damage the environment and until it loses its economic value and manufacturers take their first step for the sustainability together with the stakeholders in line with the requests of the customers. Sustainable supply chain takes the social and environmental issues into account as well as main activities of supply chain management such as product design, product manufacturing, packaging, storage, transportation, remanufacturing (Linton-Klassen et al. 2007).

Seuring and Müller (2008) defines sustainable supply chain as "the management of material, information and capital flow between the organizations throughout the supply chain by considering the demands of all stakeholders from suppliers to customers, which aim sustainable growth in economic, environmental and social aspects". This description can be assessed as balancing all activities from strategic level to operation level in economic, environmental and social terms.

Supply chain sustainability is the promotion of management and good governance practices of economic, social and economic impacts throughout the life cycle of products and services. The purpose of the supply chain sustainability is to create long-term environmental, social and economic values for all stakeholders who

involved in the process of delivering the products and services to the market and protect and develop such values. Sustainable supply chain aims to act sensitive in production, distribution, and environmental issues and protect the nature in the process of purchasing, production management, distribution, and marketing (Mahler,2007).

The companies tend toward sustainable supply chain applications because that's what customers want, and laws say. Businesses that adopt sustainable supply chain management strategy see themselves as part of the ecological system and aim to use natural resources in the most effective way and they avoid waste by providing recycling of the products.

When we consider that fifty percent of the carbon footprint of a product emerges during the phases of the supply chain, it is quite clear why companies should adopt sustainable strategies and apply them throughout the entire supply chain. Sustainable supply chain management is a tool to increase profitability and to provide a competitive advantage in the long term for the company. Companies will create long-term value in social and institutional terms with sustainable applications.

Sustainable supply chain management is affected by the fact that the responsibilities of the organizations on their own not only cover their own activities but also the activities of the supply chain. While sustainable supply chain management manages the cooperation of the companies on the chain and flow of material, information, and capital throughout the supply chain, it also sets and realizes economic, environmental and social targets regarding the three different dimensions of the customer expectations and stakeholders of the sustainable development. The environmental and social criteria in sustainable supply chains have to be met by the members to maintain their existence within the supply chain. The competitiveness must be enhanced through combining the economic criteria of sustainability with the customer expectations (Seuring and Müller, 2008). At this stage, companies have to work with suppliers and retailers on using environment-friendly raw material and developing a spare part of such feature and decreasing the waste (Nidumolu et al. 2009).

The focus organization has the most intense pressure by the stakeholders and public for setting and applying sustainability targets in the supply chain. Focus

organization in the supply chain is the organization that is in direct contact with the customer, lays down and manages the rules of the supply chain and design a service or product (Larsen et al. 2007). According to Seuring and Müller (2008), this pressure stems from legal requirements / regulations, customer demands, stakeholders demands, environmental lobbies or NGOs, fear of losing reputation in market and fear of losing competition power.

The conflicting dimensions of sustainability concept create some restrictions for the sustainable supply chain. The goods and services have to be manufactured in a way to cover the expectations and needs of the society for social sustainability. The purpose of supply chain management for economic sustainability will be to optimize their operations and maximize their profits; but in order to provide for the environmental sustainability, it has to use the resources at the minimum level and produce minimum waste while doing these operations (Zhou et al. 2000).

1.2.6. Sustainable Supply Chain Management Applications

Zhu and Sarkis (2004) collect the sustainable supply chain management applications in five categories. In the first category, the strategic value has been expressed by showing the strategic orientation of the business. According to that, businesses have to follow the sustainable strategies in the guidance of Triple Bottom Line before making a decision on a matter. These strategies enable supply chain management policies to be successful. The second category relates to the structure of the supply chain network. These include the activities for establishment of long-term relationships between partners on the supply chain and partner development and finding and choosing the most appropriate partner. The success in the supply chain is continuous when such activities are combined. The third category is the cooperation that connects the business processes and structural image of the business organization to each other. Structural decisions of the business organization are related with technical and logistical information sharing between supply chain partners. The fourth category is risk management that involves management of certificates and application of international standards by the business organization and management, assessment, monitoring of the stakeholder pressures. The last category is the preliminary activities for maintaining the sustainable supply chain.

The use of information obtained from other sources and partners and the determination of product life cycles and production of innovative products are an important preliminary activity for the continuation of sustainable strategies.

Some of the researchers analyzed the sustainability in the supply chain from product design, material procurement, supplier selection, manufacturing, remanufacturing, reverse supply chain, and waste management terms. For example, Zsidisin and Siferd (2001) have attempted to measure the sustainability of the supply chain through purchasing green. Rao and Holt (2005) studied the relationship between environmental supply chain management applications and enterprise performance management and have concluded that there is a positive relationship between the two. Bai and Sarkis (2010) have proposed an approach that takes into account economic, social and environmental factors for the selection of sustainable suppliers. Liu et al (2012) have proposed model that integrates green marketing with sustainable supply chain management under the dimensions of product, promotion, planning, process, society and project. Govindan and others (2013), has developed a fuzzy multi-criteria decision making a model that measures the sustainable performance of the suppliers with the triple bottom approach. Hasan (2013) examined various environmental management activities undertaken by the company in a sustainable supply chain and researched how such activities have affected the environmental and operational performance of the businesses. Implementation of environmental activities in supply chain management affects the operational performance of the business in a positive direction. Wang and Sarkis (2013) examined the relationship between sustainable supply chain applications and financial performances of the Top 500 businesses in the Green Ranking published by the Newsweek Magazine. The study analyses which type of sustainable supply chain applications affect the financial performance and on what level.

The supply chain network design in modern sense or transportation decisions to be taken during its planning have a great importance on the environmental performance of the supply chain. Furthermore, the consequential costs for distributing products to the customers have an effect on the total cost of the supply chain. For these reasons, while reducing carbon emission levels in product distribution design is strategically important for many large enterprises, the

efficiency of the product distribution decisions in assessing the performances is one of the factors for local retailers to be successful (Lopes et al. 2008). Today, businesses with environmental and social responsibility are carrying out some activities to decrease the carbon level in providing the sustainable supply chain. The most important one among these activities is the activities for decreasing the carbon footprint, considered as the measurement of damage on the environment during the manufacturing of the products directly or indirectly used by the individuals and business organizations. According to the United Nations Environment Programme, natural gas, oil and coal use, entertainment and leisure venues, public services and power consumption are among the greatest elements to increase the carbon footprint. The activities to decrease the carbon emission are such as the selection of the right raw material resources, the availability of alternative sources, reducing packaging, giving more importance reverse supply chain activities and redesigning the distribution channels (Alzaman, 2014).

1.2.7. Supply Chain Management and Environmental Relations

Everyone is worried about the rapid consumption of the natural resources and ever increasing environmental issues. It is clear that business organizations have a negative effect on the environment, and this has attracted the attention of all parts. Businesses may carry out environment-friendly activities voluntarily or as required by the laws and by the effects of customers and many stakeholders. Failure to prevent the environmental problems compels businesses to supply, design, and produce and distribute the products that would harm the environment at the minimum level, that is to say, that obligate them to be sensitive to the environment.

We can define environment-friendly supply chain management as a whole of environmental friendly purchasing, environment-friendly marketing, environment-friendly logistics and reverse logistics processes that enable reusing the products until the end of their life cycle. The businesses can lower their costs by adopting environment-friendly supply chain management activities and gain in social and operational aspects.

In his study, Sarkis (2003), he has established relations between interdependence in environmental issues and supply chain and environmentally

effective organizational policies as well as the relations between the performance measures and life cycles of the products and processes. Therefore, environmental decisions affect not only the organizations that have taken the decisions but also the customers and suppliers (Hall, 2001).

Environment-friendly supply chain management is an important organization philosophy to reach the profit and market share targets by decreasing the environmental risks and effects by improving the ecological productivity of the organizations and partners (Zhu et al. 2008). According to another definition, environment-friendly supply chain refers to applications to control the existing or final effects of the products and processes on the environment during the transformation from raw material to final product (Beamon, 2005). Environmental supply chains bases on the strategic importance of the procurement, cooperation, partnership approaches between the customers and suppliers (Hall, 2001).

Traditional and environment-friendly supply chains differ from each other. In general, the traditional supply chain is focused on economic goals and values. The environment-friendly supply chain is committed to the protection of the environment as well as the economic targets and values. Even though traditional supply chain takes the ecological standards into account, their scope is limited. Traditional and environment-friendly supply chains differ from each other for selection of the supplier. In traditional supply chains, the most important standard of supplier selection is the price. In environmental friendly supply chains, environment-friendly suppliers are selected and established long-term relations with them. Environmental friendly supply chain enables energy saving and prevents the spread of hazardous substance to the environment and aims to imprison the waste into the industrial system (Ho et al. 2009).

Supply chain management that includes environmental considerations; contains product design, and selection and research of materials, manufacturing processes, delivery of end product to the consumer and management of the product after use. Environment-friendly supply chain management literature focuses on the importance of environment-friendly supply chain management environment-friendly design and environment-friendly operations (Srivastava,2007).

Due to the nature of supply chain management, collaboration is important for the environment-friendly supply chain. Environmental cooperation in the supply chain contains direct participation with the suppliers and customers of an organization to develop environmental solutions. The competitive advantages created by environmental cooperation have two-ways. First, cooperation harbors the solidarity between the institutions and information integration, adopted as a resource to create competition advantage. For example; businesses that embrace cooperation with their suppliers and customers do not only develop their environmental performances but also their performances such as cost and quality. Secondly, environmental cooperation is associated with the proactive environment management orientation that goes beyond the supply chain management to response to the new environmental problems and regulations (Vachon and Klassen, 2005).

We can address the positive effects of environment-friendly supply chain management on the environmental performance as a reduction of emissions, the reduction of waste water, the reduction of solid waste, reduction of hazardous, harmful and toxic substances, the reduction of environmental accidents and improvement of the environmental image. We can address the positive effects of the environment-friendly supply chain on the economic performance as a reduction in purchasing costs, reducing energy consumption, reducing waste management related costs, the reduction of fines related to environmental accidents. The reduction of inventory levels, the improvement of product quality, and improvement of capacity use are the positive effects of environment-friendly supply chain management on the performance. In addition, environment-friendly supply chain management helps businesses to develop win-win strategies by raising their profit and market targets and decreasing the environmental risks and effects of the companies (Zhu et al. 2007).

The increase of environmental awareness in every sector affected the supply chain management. In order to meet customer expectations and improve the supply chain, companies now have to manage the supply chains effectively by taking into account true and fair use of natural resources by considering the social responsibility. Logistics and supply chain managers must both reduce costs and maintain a good

environmental performance. Environment-friendly supply chain management is an approach that appeared to balance these competing needs (Zhu et al. 2008).

Companies were forced to be environment-friendly due to the quality revolution at the end of the 1980's and supply chain revolution at the end of 1990's. The objectives of the environment-friendly supply chain such as reducing the wastes and protecting the product life quality and natural resources have attracted the attention of the scholars and practitioners. The key terms such as green design, green operations, reverse logistics, waste management and green manufacturing have entered into literature about twenty years ago in relation to the environment-friendly supply chain (Fortes, 2009).

The search for solutions to environmental problems has pushed people to create environment-friendly technologies. A growing number of industrial and service companies are creating new opportunities for environmental education, in determining the measurement and management strategies, in entering into integration with suppliers and customers and reduction of waste, energy efficiency and the reuse of materials and recycling. This transformation will affect the entire industries of the economy especially the manufacturing, food, energy production, construction industry by making use of the scientific progress in computers, materials, biotechnology, genetics, management and modeling and bring a great increase in productivity (Cihangir et al. 2006).

1.2.8 Supply Chain Management and Green Practices

There is much competent authority for healthy social and physical urban development. The duties, responsibilities and authorities of the central and local government institutions which are the competent authorities are stipulated by the laws and regulations. These institutions are working to transform the city into livable environments with applications in different areas. However, the threats such as rapid development of the cities, dense construction pressure, and rent-oriented development tendencies may pave the way for the creation of conflicting results with the ecological sustainability focused development targets. Some of the most important underlying reasons are considerably comprehensive and diverse from the

failure to provide cooperation between some institutions to not maintaining and restrictions (Beamon, 1999).

Green management activities under the environment management and sustainable management are one of the issues of great importance for local governments for social responsibility terms. For such decisions directly influence the people, they have a key role for development and satisfaction of the society.

1.2.8.1 Green transportation

Green transport is the activity that has been carried out with the right timing, infrastructure and low cost of sustainable energy by eliminating the elements that may harm the environment in the transportation activities. Solar systems, electric vehicles, bicycle and pedestrian transportation are the examples of green transportation. Every activity to carry out such activities is within the scope of the green transport. Infrastructure work, maintenance and repair facilities, bicycle paths, pedestrian paths, solar platforms can be cited as an example of those activities (Sutcliffe, 2012).

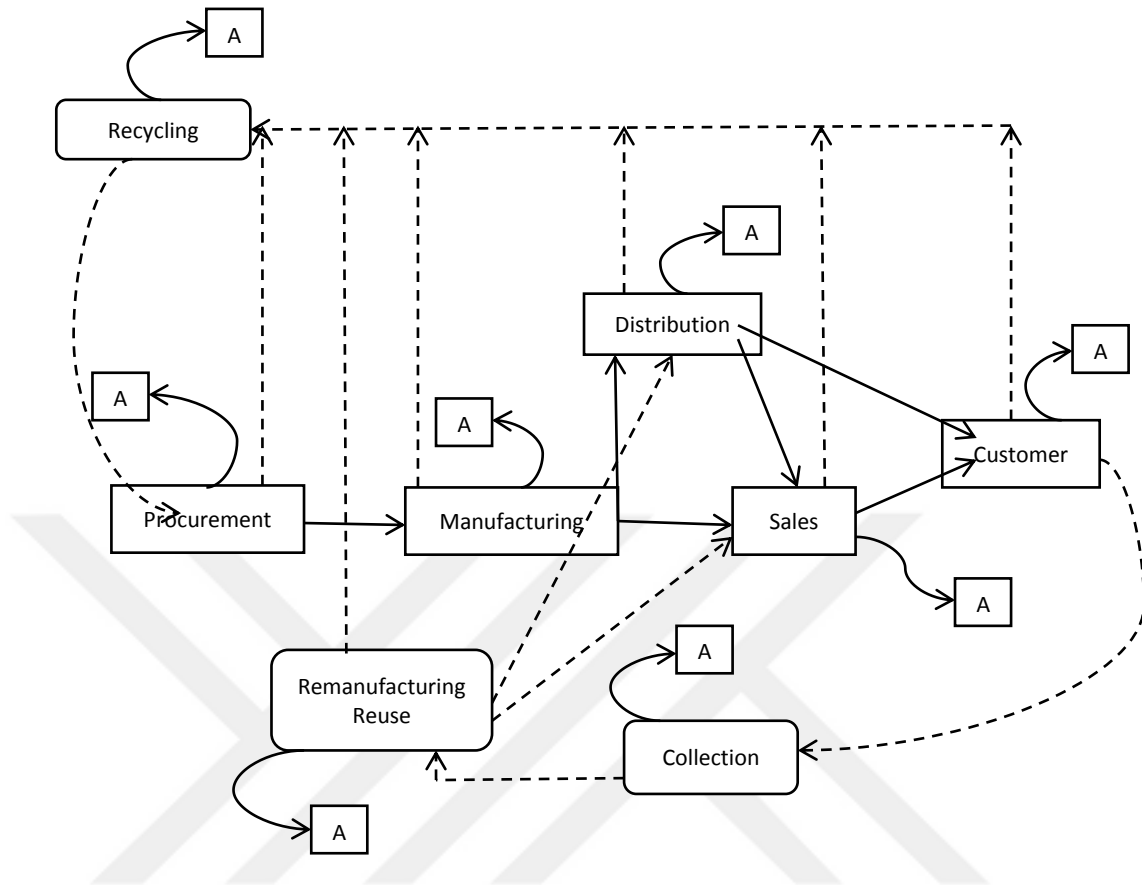
A traditional supply chain consists of five section such as raw materials, industrial, distribution, consumption, and waste. Each ring within the supply chain leads to environmental pollution, wastes, and other hazards. For example, a company may use an environmentally harmful material such as lead (Ho et al. 2009). At this stage, environment-friendly supply consists of wide range activities such as information gathering about the environment about the material and component that has been purchased and cooperation with the several institutions to minimize the logistics effects of the material flows (Vachon and Klassen, 2005).

1.2.8.2 Reverse Logistics Activities

The effective management of the supply chains is possible through reverse logistics and green management approaches as well as the instant control of each ring within the chain. These developments require a transition from traditional supply chain management to the green supply chain management. By adding "green" to the supply chain management concept, its scope has been expanded and has brought up that organization should be structured in a way to contain the environment sensitivity

at each step from the logistics functions to the end customers (Simpson and Power, 2005). Through green supply chain management, the negative effects of all type of wastes on the environment such as energy, emissions, chemicals and solid waste are aimed to be eliminated in the supply chain process. The definition and scope of the Green Supply Chain Management begin from green procurement and extends from supplier to manufacturer, from manufacturer to customer and to integrated green supply chain flow and even reverse logistics (Zhu and Sarkis, 2004). Therefore, green supply chain management should be assessed as the integration of environment into the supply chain management, involving steps such as product design, purchasing, and selection of material, manufacturing processes, delivery of the final product to the customer and end of life management of the product of which life cycle has finished. Through green supply chain management, the negative effects of all type of wastes on the environment such as energy, emissions, chemicals and solid waste are aimed to be eliminated in the supply chain process. The chain also includes reuse or recycling of the product. In the extended supply chain planning, product design, manufacturing, fabrication, assembly, transportation, storage, distribution functions are carried out. The following figure shows the "A" is represented by the processes that occur at the end of the waste material.

Figure 3: Extended Supply Chain



Resource: Beamon, 1999.

The new environmental era is forcing the emergence of new production initiatives worldwide. In this way, the means to the coexistence of industrial development and environmental protection are developed. The first step in meeting this obligation is a redefinition of the main structure of the entire supply chain by harmonizing the minimization of the level of waste and resource with the environmental concerns (Beamon, 1999).

In order to reduce the environmental impact of the supply chain, several activities have to be fulfilled together. First of all, the enterprises are to create their internal environmental management system to develop their environmental performances. Secondly, businesses have to make green designs to green the products in other words to minimize the environmental impacts of the product throughout their life cycle. In order to reduce the environmental impact of the supply chain, purchasing, production and distribution activities have to be green that are

included in the supply chain. In this context, procurement is the most important part of the green supply chain because raw material mainly qualifies the products to be produced. Furthermore, the procurement is also closely related to the supplier relations. Will we make our procurement from the green suppliers that produce the green raw material or from others for our products? Hence, the decision to buy green raw material is a strategic decision. It completely affects the supplier relations. This decision may mean to come to a parting way with some suppliers which do not comply with the environmental standards and establish relations with the new suppliers that meet the standard (Grant, 2008). Surely, these decisions will have positive and negative effects. Therefore, the results should be well considered and analyzed.

1.2.8.3 Green Purchasing

In the early 2000's, the first green movement began with the emergence of the "sustainability" concept. At that time, sustainability activities have not been analyzed in deep and considered as a temporary marketing movement. Only a few large companies are able to identify the right actions and integrated them to the product development processes.

Cited as sustainable purchasing, environmental purchasing or green purchasing in the literature, this concept means purchasing the materials and technologies that enable designing and production of the product in a way to minimize the effects of that product on the human and environmental health while carrying out its basic functions. There are some improvements such as reuse, changing the packing materials and transport methods with environmental ones, designing the environmental production processes, reducing the raw material, energy, water resources used in the production to reduce the environmental impacts of a product (NJDEP, 2006). Green purchasing is a process that requires knowledge about the raw material of a product, the location where it is manufactured and how to dispose of the final products (SPN, 2007).

According to Sarkis (2003), who is one of the most important researchers on these matters, green purchasing refers to the fact that materials to be purchased for production should be chosen from the materials which are recyclable reused or

recycled ones. At the same time, Sarkis argues that environment friendliness should be pursued for purchasing of the technologies to be used in production just like the materials. It is possible to use lesser energy and lesser waste during the production through these technologies.

A business may substantially reduce its waste costs by purchasing green materials. The manufacturer may work out to reduce the packaging wastes in the process in which the supplier would take part and thus reducing costs and waste amounts. In general terms, green products have more product life and thus reducing the waste disposal costs. Furthermore, green products reduce the costs for they use the resources more efficiently while carrying out their functions (SPN, 2007). Storing and disposal costs can be reduced with green material purchasing. For environment-friendly products require no special precautions during storing and using, it will not have additional occupational health and safety costs.

The customers started to purchase green products as the environment awareness increases. Therefore, companies, which meet such demand of the customers, in other words, carrying out green purchasing activities, would do much better and they would have new customers. Green purchasing is an important indicator for the stakeholders of the organization. It shows that a company assumes the outcomes of its actions and places importance on health and safety matters. The sensitivity shown in such matters will have a positive effect on the public and facilitate the compliance with the government regulations. It would strengthen the image of the company thanks to the public and state support and would have a financial gain out of it (SPN, 2007).

Almost all firms and government agencies realize that every purchase has a global environmental impact, and also there are lots of potential improvements to increase efficiency in purchasing (Wisner et al. 2005). The more sustainable actions on logistics activities, transportation, producing, and supplier relations as a part of purchasing, the more efficiency and value for public.

There are many environmental benefits of green purchasing. It is possible to protect the natural resources, which deplete rapidly through the effective use of the resources. Green products and services result in lesser pollution and consequentially, it is useful for reducing the emissions that cause global warming.

1.2.9. Sustainable Cities

It is inevitable that the cities which produce the phenomenon that prevents the sustainability, and pollution and all vital activities have taken place, have to be associated with the sustainability approach. Today, at large part of the world, at least in the countries covered by the European Union, considering that 80 percent of the population live in the cities, urban areas are undoubtedly the most influential places that affect the life quality of the people. Urban areas constitute the source of the environmental problems due to the intensity of the events that have been carried out. Uncontrollable-growing cities threatens especially the future of the least developed and developing countries, while developed countries "mega" cities also generate the source of important problems such as spread, pollution, transport, social segregation. The only solution to this chaotic condition is to match the sustainable development policies with the urbanization (Yazar, 2009).

Realizing sustainable cities model is a very comprehensive concept for protection of the environment. It has economic, social and cultural dimensions as well as environmental ones. It involves the equality concept between the current and next generations and people today (Uslu, 2009).

The negative and devastating effects of the cities on the natural resources have to be sustainable that is to say that protect the rights of the next generations while covering the requirements of the cities today. Increasing ecology knowledge and awareness on the protection of nature has enabled "sustainability" concept to be a priority in the cities (Uslu, 2009). By providing sustainability in the cities, new habitable spaces will emerge where next generations will live their life comfortably and the existing life quality of the population will increase as well as solving the current environmental problems.

In particular, the physical development trend, showing itself along with the urban sprawl, increasing construction and transportation infrastructure conflicts with potential actions stipulated by the sustainable development when combined with the decentralization in the urban functions, rising prices of the commercial and residential areas per space and growth based on the special transportation (Tsenkova, 1999).

Sustainable urbanization has three basic objectives: First of all, it is overcoming the solution of the problem to improve the life quality in purchasing public services and using the common areas of the city and in the relations of people with the cities. Secondly, it is to strengthen the ability of the city to maintain its existence as a living space. Finally, it is the requirement to question the existing production and consumption patterns fundamentally in transforming the resources with the use of environmental values over the carrying capacity of the city (Yazar, 2009).

The sustainable urban development contains social justice, sustainable economies, and environmental sustainability. The least damaging developments for the environment should be allowed to make sure sustainability in the cities. For sustainable urbanization; the housing need, created by the increasing population within the cities as a space saving development should be covered vertically not horizontally and natural habitat and water resources have to be protected and the use of motor vehicles should not be encouraged and the lands for road or parking should not be planned in a way to narrow down the living spaces of the people (Eryıldız, 2007).

The concept of sustainable urbanization is closely related to the physical characteristics of the city. Indeed, we can see that there is an emphasis on the physical features of the city such as city size, relation to its surrounding and its width in all methods from "administrative boundary criteria to population growth criteria, economic criteria to sociological criteria" used to define the urban concept (Keleş, 2004).

The main issues that need to be specified in the physical scope of the cities are the transportation system that connects all service areas in the city and shapes the macro form of the city. The volume of traffic increases with the growth of cities and consequently, many problems arise such as environmental pollution, noise pollution, road safety, the deterioration of the urban landscape (Banister, 2000). In addition, the adoption of road system for transport may lead to urban leap and results in obstructing the alternative systems such as pedestrian and bicycle in the urban area by bringing private automobile dependency.

Sustainable urbanization approach is to predict the implementation and taking the decisions regarding the future of the city with the participation of the all local groups. The creation and strengthening of local institutional capacity are an important objective. In other words, the actors of the sustainable development idea are all public sector, the private sector, NGOs, academia and professional associations in the local level. Involving the local stakeholders ensures the adoption of decisions by local stakeholders and makes the process more transparent and facilitate the implementation of the decision (Quaid, 2002).

In the process of realization of sustainable urbanization, public institutions, private sector organizations, NGOs, local population have to play an active role in the process decision making and act in coordination in the preparation, decision making and application of the policies that associated with the city. Thus, all walks of society would easily adopt the decisions taken in the city and the chance to implement such policies and decisions would be higher. In this sense, a sustainable city is a city that achieves balancing the economic, environmental and socioeconomic progress with the active citizen participation (Yazar, 2009). In this context, the objective of the sustainable urbanization is protection and development of the biodiversity, use of renewable energy resources and elimination of clean, reliable water finding risks, improving the life quality, challenging poverty, solution of employment and nutrition problems and restructuring in technology (Keleş, 2004).

CHAPTER TWO

MUNICIPALITIES AND SUPPLY CHAIN MANAGEMENT IN MUNICIPALITIES

2.1 PUBLIC SECTOR AND MUNICIPALITIES

Local governments constitute the important and indispensable element of public administration in all countries. The power and effectiveness of local governments in a country are closely related to the level of democracy within the country. As local governments are important in terms of democracy, they are the indispensable institutions for providing productivity and efficiency in local services. The municipalities as a local government institution have a faster decision making and service providing capabilities than the central government for, they have administrative and financial autonomy. Such autonomy is not unlimited, the administrative tutelage of the central government still continues in legal terms.

The existence of the municipalities is a benefit for central governments. This is because municipalities ease the burden of the central government by taking over the local duties and enable more effective and productive service provision. In addition, service provision at right amount and place will prevent the waste of resource and time. Municipalities have high innovative structures and entrepreneurship for their autonomous structures and their closeness to the public. They may develop new service methods due to their structures.

2.1.1. Public Sector and Public Sector in Turkey

The traditional public administration, which once a worldwide centralized, based on the vertical organization, hard, closed and bulky with the effect of the information revolution, changing economic, social conditions and globalization in recent years, has been replaced by a new public administration approach, basing on the localization, efficiency, productivity, social participation, transparency, accountability, horizontal and flexible organization and citizen satisfaction (Barca and Nohutçu, 2008). The most important reason for new public administration management to gain importance is that public sector is not sufficiently effective for covering the expectations of the citizens and solution of the social problems (Durna

and Eren 2002). At this point, strategic management and planning has become one of the most important tools for new public administration to achieve its goals and strategic management, started to be applied by the private sector has become the indispensable for the public sector.

Another reason for strategic management to be mandatory for the public sector is that some services provided by the public sector have started to be rendered by the private sector as well and the increasing competition between the private sector and public sector (Aktan, 2006). Due to the narrowing of the natural monopoly of the state and more effective market conditions in areas such as energy and communication, public sector feels the need to refresh itself against the private sector.

2.1.2. Local Government

Today, in general terms, the management structure of the state shapes around the "central administration" and "decentralization" (Gül et al. 2014). Central administration refers to administration of the state from a single point for political, legal and administrative terms (Moğol, 2012). It can be defined as administrating the decisions and activities regarding the public services to be rendered to the citizens from the center of the state, the capital, by the central administration organs and provincial organizations within its hierarchical organization structure (Gül et al. 2014) with a different definition.

Local governments are defined as the public entities with autonomy, of which duties and authorities are set by laws and which are established to cover the common and local needs of the communities, settled in a specific region within a country (Karaaslan, 2007). In another statement supporting the definition, they are expressed as "the public entity, of which decision-making bodies are elected to serve and established to provide a general relief and cover the common needs of the people, living in a geography with specific boundaries" (Gül et al. 2014)

One of the important dynamics of national development in a globalized world is urban management. City governments are liable to provide the needs of the spaces with every growing dimension and ever increasing number of people and manage, direct and supervise the growth (Ökmen and Parlak, 2010). Good urban management

is management that can fulfill these objectives effectively and efficiently. The service needs for the urban spaces, growing in direct proportion to the urban population should be covered by the local government.

Local government agencies that are the part of a country's administrative structure and management system has a separate autonomous entity from the state. This autonomy has been granted with a view to providing better service in line with the interest of the country and to taking the independent decision from the central government under the authorities given with the laws. To living up to the productivity and efficiency in providing the services in a good condition may be considered as a separate factor to strengthen the existence of the autonomy.

Local governments are the autonomous units, authorized to establish the internal organization structures to enable realization of such operation and implementation process and to use the resources at the right place and effectively under the relevant services and to take decision, make choices for public services, granted for them and collect financial resources for them through tax etc. (Güler, 2009). The local governments, of which founding principles, duties, and authorities, revenue systems are set by the legislature, are not subject to the hierarchical supervision of the central government. The supervision conducted on the local governments is for compliance with the law. The central government is not an upper hierarchical unit for executing the powers granted to the local government under legal limits.

Local governments refer to the administration of local population with the bodies, elected by themselves. This concept is not as opposed to the central government and should be seen as an integral part of the central government. Local governments that are introduced at the points where there are drawbacks of the central government substantially ease the duty burden of the central government by providing the public services under their authority granted by the laws and thus contributing to the smooth process of the state administration (Keleş, 2009).

The most important factor for local governments, undergone different processes up until now to continue their existence is that it is impossible for central government to meet the entire ever-changing local services without any hassle. In order to solve this problem, local administrations with an autonomous administration

that is separated from the administration structure of the central government have been constituted. In this perspective, it is possible to say that local governments are the units that reduce the weight of the central government in the political and administrative area and enable people to take part in the decision-making machinery and democratization (Ulusoy and Akdemir, 2013).

The local governments, having a say in the administration of the public spaces, identified as the common areas in a country, comes to the fore as the units that are shaped in accordance with the existing demands of that location. The requirement of local government stands out with the social dynamics for transferring the labor, resource, information, and idea etc. of the society to the local and national scale (Özer and Akçakaya, 2014). The current situation in the areas within the authority of such governments sets out how they could regulate under the autonomy of the administration.

When the central governments, which are authorized for providing services for the entire country, offers a solution to the different demands of the different geographical regions within its boundaries with a single model in general terms, the effectiveness and suitability of the service go down can be seen. This situation may lead to dissatisfaction of those who request the service; therefore, local governments for a higher effectiveness and productivity in service provision are needed (Ulusoy and Akdemir, 2013).

The basic criteria for maintaining of the administrative, social, economic and political reasons, shown as the reason for the existence of the local governments are effectiveness, participation, and freedom. Local governments fulfill an implementer mechanism duty for these three concepts exist as required. The functionality of such mechanisms for providing the public services has a particular importance for local governments to be more powerful on different qualifications.

These entire public services may be thought to be managed by the central government; however, technically it is not possible and not preferable on psychological grounds (Güler, 2009). In general terms, the authority to execute services that are specific to a certain geography is granted to the municipalities, which is the local government. Municipalities constitute the second type of local government. They are the public entities to render service with a view to organizing

and meeting the common and civil requirement of a town and its population. As opposed to the special provincial administrations, the municipalities are the administration units of the certain and limited locations where people reside collectively.

2.1.3 Municipalities

The municipalities which are autonomous local government units have become powerful in parallel with the growing number of the people, living in the cities and to the growth of the cities and strengthening the local democracy and decentralization and this influence has been reflected in the number of the municipalities in time. The task of the municipalities, which are responsible for covering the local needs, is to offer participatory, effective, efficient, coordinated and just services to solve the urban problems and cover the service demands of the residents. Besides the administrative requirements, municipalities, which are the closest units to the public, are the structures that enable implementation of policies and people to participate in the administration and local and urban policy production processes.

The municipalities are the local government units to establish to cover the local common needs. The municipality system in Turkey has an experience that has been generated with the impact of different processes for duty, authority and responsibility terms. The change and its effect on the administration mechanism, municipalities have undergone a set of important structural and functional transformation. The latest constitutional regulation for the municipalities is 1982 Constitution, which has been taken place as a local government unit in constitution and laws at different periods.

2.2. STRATEGIC MANAGEMENT IN MUNICIPALITIES

Strategic management emerged as a different philosophical perspective on the basis of competition superiority under the leadership of Chandler, Ansoff, Andrews et al. in the USA in 1960, as a sub domain under a general management umbrella (Powell, 2002, p. 873) However, none of the other management theories try to explain the competition superiority as a focus problem. In this respect, strategic

management, which researches the level of success between the businesses on the competition axis, has developed as a separate management discipline (Barca and Hızıroğlu, 2009).

Strategic management that was introduced in the second half of the twenty's century is a process of strategic decision generation and allocation process. "What is our job, what should it be?" By asking such questions, they should set an aim and ensure such decisions to give results at later terms (Güçlü, 2003). Strategic management has a feature to integrate the entire management processes for creating a systematic and effective approach toward generating, supervising and updating a strategic objective and target by an organization. Strategic management is integrative especially for focusing on the several organizational levels and functional sections about the general objectives, targets and matters, engaging with the internal management processes and programs towards the intended results at the external environment and connecting operational, daily decisions on the longer term strategic targets (Poister and Streib, 1999). It focuses on the integration of management, organization, marketing, finance, accounting, manufacturing, research, development and computer information systems toward the entire organization related to the non-routine, uncertain, complex situations.

One of the rhetoric of the new management approach is to establish more competitive structure and reduce management costs in providing local services. At the end of this development, it can be expressed that local governments had to share their authorities with the voluntary organizations and private sector organizations especially after 1990's. It can be said that municipality approach has developed into an entrepreneur municipality from that of the welfare municipality (Eryılmaz, 2007).

New approaches to the recent public administration, in other words, the new public administration approach includes not only the central government but also all public units that provide services to the public. Public Financial Management and Control Law no 5018 is that kind of act. Local governments have been naturally affected from the new public administration management and had to review their service provision methods along with their administration structure.

Today, local governments reveal a wide range of techniques to improve their management. Local governments reduce the costs, develop productivity, efficiency

and quality performance for the citizen satisfaction and become more responsible and accountable and improve the trust of the citizen to the state. Despite the compliance criticism for some of such techniques or their challenges in the application, public institutions have to meet with the new ways for management of the resources such as traditional management processes where there are serious deficiencies. More competitive and uncertain environment has made the management development more necessary (Naschold and Daley, 1999).

In the strategic management process to respond to the evolving needs of the environmental conditions in our country and ensure transparency, local governments have assumed several new obligations with the new regulations. Some local governments consider this process as a procedure, some as an opportunity. The methods and approaches required to be applied in the strategic planning process have been stipulated by the legislation. However, there arise some problems in the strategic planning processes in the municipalities due to the absence of expert personnel to carry out these activities in the municipalities or not at an intended level or failure of top management to have enough knowledge about the strategic management (Parlak and Ökmen, 2013).

2.3 GREEN PRACTICES IN MUNICIPALITIES

Many of the requirements related to people's daily life are within the scope of local government service areas. Therefore, improving and protecting the living space and conditions of the people on a decent level and enhancing the life quality of the individuals are within the scope of the local governments. The effectiveness of the preventive, restorer and formative of the environment management depends on the direct duty and responsibility of the local governments in environment management (Geray, 1998).

The development, occurring on the importance of the environmental problems on a global scale, has made the local governments as one of the most important actors that is effective in the environment. Agenda 21, one of the outputs of the United Nations Conference on Environment and Development held in Rio in 1992, has granted local governments more effective functions in planning, decision

making and implementation in environment protection and development with NGOs and other partners (Sümer, 2009).

Environmental problems directly concern local governments, especially the municipality as the problem of the city and citizen. Municipalities are local government units generating infrastructure and services for the management and protection of the environment in urban areas. Legally defined tasks of municipalities contain solid waste management, clean water supply, sanitation and the provision of wastewater treatment services, construction and maintenance of green areas, provision of urban transport services, urban construction and maintenance of internal streets and avenues and planning of the city and the provision of development services. Basic functions and powers of municipalities in environmental protection have the nature of administrative law enforcement services. In addition, our legal system allows the municipalities to render all type of services toward the environment, which have been assigned to meet the local common requirements (Keleş et al. 2012).

As can be seen in the local management theory, the main emphasis of decentralization is that the people of that region know best how to benefit from the resources and which ways to use along with the problems of the regions and their solutions. Thus, environment as a local problem is known by the residents and administrators of that region. The environmental management is a process to balance between the carrying capacity of the environment and human requirements and the effects on covering such requirements with a specific administrative system (Şengül, 1999). The local elements should have an "integrated environment management system" in the system as well, as it is in the other problems. In this respect, municipalities as the basic management tool are standing out.

The basic duty and authorities of the municipalities in protection and sustainability of the environment should be assessed within the "administrative enforcement service". The municipalities have duties such as the provision of district and city services, organizing the activities within the district for inhabitants to live within a healthy environment and laying down rules for that purpose and establishing and operating an effective environment management.

To sum up, along with the structuring the environment management at gradually growing and different scales that contains each other, local governments, especially the municipalities have a particular importance within this structure. Because the municipalities are the institutions that affect the environment with the other public services that they carry out and that may assume functions in the environment management directly. At this point, municipalities have important responsibilities for maintaining the activities of the people by protecting the natural balance. In this context, in general terms, we can list the main environmental duties of the municipalities toward the city in accordance with the corporate and legal regulations as follows; to ensure the orderly and healthy development of towns and cities, to provide preventive health services, to ensure healthy and planned urbanization, to check structuring, to build sewer, to protect water resources and the coast, waste disposal, to collect and destroy solid waste and to provide welfare for the residents, engage in public transport operations and to regulate traffic, to make and change settlement and zoning plans, apply zoning plans and supervise them regarding the environment. In addition, they offer services such as keeping the public spaces clean, safe and healthy (Orhan, 2014).

The regulations that constitute the limits of the activities areas and define the powers and responsibilities of the local governments regarding the environment are not limited to the environment law or local government laws. Many laws and regulations regarding the environment provide important duties and responsibilities to the local governments for implementations of the laws and regulations. Initially, it is possible to see that these regulations which entered into the force as a part of the right to health have considerably diversified. This diversity shows itself in the rolling out some specialized regulations mainly on solid waste and water quality (Orhan, 2014).

Sustainability refers to improving the life quality of the people by protecting the natural resources. In this context, assessing the social, economic and ecological together and organizing the activities in a way to the benefit of each of them will help the sustainable development (Mishra and Sharma, 2010). Municipalities are required to organize the activities in a way to keep the environment in the spotlight with the green management approach. Furthermore, empowering all bodies of the

municipality in an economic manner, more effective use of the natural resources, decreasing the emission volume, environmental protection, cleaner environment generation will be achievable through green management.

2.4. SERVICE SUPPLY CHAIN

One of the values phenomena to be considered by the citizens is to get the municipality service in a short time. It is not possible for an institution to respond to the request of the citizen in a short time where there are bureaucratic procedures, administrative structures that do not allow flexibility, and no feedback. Supply chain management services would reach the intended customer satisfaction by focusing on the things, given value by the customers (citizens) only without making costly investments.

The service unions model is a model that enables local governments to provide some services in a more effective manner by establishing units between each other. It is only possible for local units to carry out some set of local services by getting together voluntarily. The service unions model was given a place in 1982 Constitution of Turkey, which was a method for rendering one or more than one services in cooperation in countries such as Germany, Japan, Netherlands, Sweden and Belgium (Keleş, 2009). The last paragraph of article 127 of the Constitution is as follows; The formation of local administrative bodies into a union with the permission of the Council of Ministers for the purpose of performing specific public services; and the functions, powers, financial and security arrangements of these unions, and their reciprocal ties and relations with the central administration, shall be regulated by law.

It is possible to form local federations in the metropolitan cities to prevent irregular urban development, arising out of the urbanization, forming local administrative bodies at suitable sizes for the service provisions and provide cross services collaborations, carry out local autonomy and participation functions. This model contains two-tier local government structuring. In this organization, top management, and lower level units share some local duties in line with their capacity, power, and technical development and public revenues are shared between these units. The units offering top level services have to carry out services such as

planning, transport, infrastructure, education, health, water and lighting. Lower level units fulfill the responsibility of urban roads, sanitation, foods and some supervision work (Gül et al. 2014).

2.4.1. Service Approach and Service Work

Service concept is a concept that is encountered in all areas that are directly or indirectly related to human. In order for companies to be sustainable and achieve their profitability targets, which are in the service industry that has become a single market with the globalization, they have to be customer driven not market oriented.

According to Grönroos (2000), the service is an activity or a set of activities that offers solutions to the customer problems, that forms during the interaction between the customer, service personnel and/or service provider and physical resources or goods and/or systems, that have more or less untouchable structure naturally, even if not absolute. Grönroos focuses on the interaction dimension of the service. As these interactions may be between people who perform services and customers directly, it may be with the physical resources or goods at the place where the services have been provided. According to Kotler (1982), service is an activity and a performance which is provided by one party to another one that is abstract (non-touched) and not giving ownership rights to anything.

While Goetsch and Davis (1998) defines service as carrying out a work for someone else, Uyguç (1998) defines service as a work consumed where it is produced or action, performance, social event or an attempt. In this sense, service is the products which are not physical and directly provide benefit to the customers and that are produced by the human and human effort by machine.

One of the reasons for the existence of the State is to provide goods and services to the citizens and improve the wealth of citizens. This objective has undergone major changes and developments in time. As a result of the changes and developments that have occurred in the activities of the state, many public services could not be provided as it was done at the early times.

The state produces and provides the public goods and services, to which people need, as they started to live together. The state provides these services through central government or local governments or through both. The problems

encountered by the local governments in the provision the local needs have led them to use external organizations. Local governments have begun to use the external private institutions in the provision of the public services. In other words, local governments have undergone privatization for the provision of the public services. In this regard, they choose to provide public services by using effective resource and personnel without any red tape (Çarkçı, 2007).

The concept of public service, which has been affected by the new public administration approach, has undergone change. Today, public services have become a commodity on a market. The use of public resources has ceased to be used for funding the public services with the "users pay" approach. The reason for this is a lack of public resources. In line with it, public services are sold and charged like a market good. The person, who uses public services, has to pay to the extent of his/her use. As local governments and private sector had some works in common in the past, the government had a substantial advantage over the private sector in this old structure. This administration superiority has started to change with the activities that are carried out in line with the new public administration approach (Güler, 2005).

The change of perspective in public administration has shown itself in control aspects. Another perspective that is on the verge of a change in public service is that control has started to be a society based, not state based. Envisaging the downsizing of the state, this approach stipulates that people should control the public services rather than the state and aims to have a more democratic structure (Toprak, 2006).

The idea of privatization of the urban services is the result of the new public administration approach in line with the new conservatism approach, emerging in 1980's. Carrying the traditional liberal approach a step further, the neo-cons argue that the public has to be open for the private sector for the provision of some basic services. Local governments provide some infrastructure services such as road, water, sewer and waste management and other services such as sanitation, transformation and garbage collection. However, these services are intended to be opened to the private sector with a new approach. In particular, the private sector entered into this service area with the tender management, applied in the product purchase and contracting services in 1990's (Güler, 2005).

If the important thing is to cover the collective needs in providing the public services; what matters is the ensuring efficiency in providing the public services rather than public services are carried out by the public institutions or private sector. Local governments can be more effective than the central governments in providing the public services. For local governments are the closest administrative bodies to the people, that makes them more advantages than the central government for providing the services. They can be more effective for determining the needs of local people, determining the priority, being in direct relation with the users of services and preventing the unnecessary sources and waste of time in providing the services than the central government (Aydınlı, 2004). At this point, the importance of the local governments arises once again.

2.4.2 Supply Chain Management Services Concept

Supply chain refers to the entire processes for sales and production, created by the different processes and products which are produced for the top-tier customers. In addition, the supply chain is referred to the entire partners, formed by the suppliers, distributors, and final users. Customer satisfaction, service quality, and improving the competition are among the features of the supply chain. (Svensson, 2007). Supply chain decreases the costs and resources as it increases the productivity and efficiency. At the same time, supply chain management has the perspective of cutting the costs and level of inventory as well as developing the cooperation by increasing the profit (Seuring and Müller, 2008). As can be seen, supply chain management is considerably important for improving the customer satisfaction, service quality, efficiency and effectiveness, and decreasing the costs and resources of the company. The supply chain management also substantially contributes to the strengthening of the information flow, cutting the costs, increasing the profit and developing the cooperation.

There are technological solutions regarding the management of the customer services. For example; they are the ability of collecting, planning and managing the service requests, coming from the variable resources such as fax, e-mail, telephone, internet and intranet and responding the customer queries in a reliable, correct and fast manner by forwarding and following up the service requests collected at a single

center to the technical personnel by the service manager, and controlling the service qualities provided by the institutions by following up the status and closure time of the incoming service request (Rao and Holt, 2005).

The needs of the customers and supply facilities of the company tried to be balanced in the supply chain management services. The production, procurement, and distribution have attempted to be harmonized with the demand forecasting (Poister and Streib, 1999). This process is associated with the development of alternative plans to be applied once the efficiency has stopped and faced with unexpected events and management of such plans.

An important element that plays an important role in an active supply chain management is to meet the customer requirements to realize the orders. An active order processing requires integration of manufacturing, logistics and marketing plans. The company has to develop a partnership with the important members in the supply chain to minimize the total delivery cost to the customer and meet the customer requirements (Croxtton et al. 2001). Preparing the purchase order, the business delivers the order related information to the supplier through electronic means. The data delivered to the supplier in a structured format is recorded on the system as an order entry through a software. Order processing system starts the process of request preparing after making necessary arrangements as in the orders written on the paper.

Supplier relations management, a reflection of customer relations, involves the development of existing relations with the suppliers (Mota et al. 2014). The company should further its relations with the subgroup, considered as important and establish a routine relation with others. It has to enter into a product and service agreement with the supplier in which the rules of relations have been defined. Suppliers should be obliged to comply with the agreement. Managing this process, supplier relations management is responsible for definition and execution of such product and service agreement.

Successful and talented producers allow the flow of real time data during the ups and downs within the supply chain and establish close relations with the suppliers. As a result, thereof; they appear as the well-coordinated inventory steps, as the products that can be delivered in at a right time and place and in a fast and

reliable manner and as orders responded in a short time and advanced operation performance (Sanders, 2005).

To ensure information sharing between the supply chain members to improve the performance of the supply chain, collaborative planning (shared information), coordination of business flow (supply chain partners to work together) and system adaptation of the new model technologies (the works done by the supply chain elements to develop and redesign the supply chain performance). Collaborative planning, forecasting, and replenishment is a process of manufacturing product to the liking of the customer and synchronizing the personal requests of two or more companies and customer demand. In this process, it is sharing of supportive information such as party written comments, sales trends, information on sales, inventory, product information, and promotions arranged on the calendar and forecasts (Whitley and Ulmer, 2013; Pule 2014).

In successful supply chain management; we can set reduction of production costs, increasing the level of competition and competitiveness and profitability, to increase the businesses' value and best integration to market, increasing the market share, increasing the customer services and performance as the basic targets.

2.5. THE ROLE OF MUNICIPALITY IN SERVICES INDUSTRY

Municipality culture is one of the concepts, related to the effectiveness in providing the public services. Municipal culture refers to the institutionalization of the municipality and having a certain standard for providing the public services. Even though the mayor and employees were changed in a municipality, which created the municipality culture, there is no disruption of public services. Because, the municipality has certain standards for providing the public services (Al, 2008). The influence of the local people is vast for the creation of the municipality culture along with the legislation. This is because municipalities are influenced by the social, cultural, economic and geographical features of the local people and region. These elements have influences on the formation of the municipality culture. It is impossible to say that there is a municipality culture if the new mayor removed and replaced the pavements done in the period of the previous mayor and all public

services were started over. To ensure effectiveness in providing public services creating a municipal culture seems essential at this point.

It is possible to define municipal services as "the continuous and regular activities under the control and supervision of the municipality that are provided to ensure public interest and meet the common requirements in a district by a municipality, voluntary initiatives, and private sector institutions (Bozlağan, 2004). The municipalities provide a larger section of the urban services through alternative service provision methods to encourage local people to participate in the administration and service provision and improve the efficiency and productivity in the provision of the service. Privatization is the most widely used method today. Briefly, privatization is referred to awarding local services to the private legal entities or provision of local services by transferring some local organizations to the private legal entities completely. In other words, privatization is a process of transferring functions to the private sector, which have been priced below than its costs and carried out by the public institutions as a monopoly (Eryılmaz, 2007).

It can be observed that it is preferred to carry out the big infrastructure projects with the participation of the private sector with a view to shifting the limited finance resources to the areas which must be assumed by the state such as public order and national security and decrease of financial deficit of the public in 1980's in Turkey (Çarkçı, 2007).

In general terms, highways, subways, suspension bridge, airports, power plants and similar public investments that require a large amount of capital and advanced technology are aimed to be built without a burden on the state. The basic objective of the municipalities is to build projects such as subway, tourism facilities and shopping malls that provide a financial resource in the long run without a financial or technical burden on the municipality on a direct basis (Toprak, 2006). Especially municipalities in Turkey have carried out services such as subways, rail systems, commercial centers which could not be carried out with their own budget means by using this model. Besides, they benefit from this model to make office buildings, bus stations, hotel, motels; recreation centers (Keleş et al. 2012).

The administration should act extremely smart in decision making and policy determining phases for ensuring the effectiveness of the provision of public services.

It is very important to render the service at the closest place where the need arises. By this way, the most appropriate public service is delivered to those who need at a lesser cost and appropriate time. It is a very important phase for effectiveness in the provision of the public services. In the feedback phase, it can be tested whether objectives and aims set out before are reached or not. The satisfaction of the public after having the service creates the main theme of the feedback phase. In this way, it is determined whether the service meets the need (Keleş, 2009).

For local governments are the closest administrative bodies to the people, that makes them more advantages than the central government for providing the services. They can be more effective for determining the needs of local people, determining the priority, being in direct relation with the users of services and preventing the unnecessary sources and waste of time in providing the services than the central government (Aydınlı, 2004). At this point, the importance of the municipalities arises once again.

2.6 MUNICIPAL SUPPLY CHAIN CONCEPT

In general terms, the features of the supply chain are to ensure customer and citizen satisfaction and service quality and enhance the competition. Supply chain decreases the costs and resources as it increases the productivity and efficiency. At the same time, supply chain management has the perspective of cutting the costs and level of inventory as well as developing the cooperation by increasing the profit.

2.6.1. Municipal Supply Chain

A service provider should ask his customers what is valuable and what is not. One type of the local governments, Municipalities attempt to identify what is valuable for the citizens by asking their expectations from the municipal services that are provided to the customers. The most valuable thing for citizens in municipality services is to reach to the service that they demand as soon as possible.

It is a type of waste that occurs due to the overstock than required or keeping so many products in the intermediary processes. Standing and waiting material refers to nothing as long as it turns into a product. This waste arises as a result of material requirements planning errors, non-standard applications in material flow between the

warehouse and production, and emergent and unplanned purchases. Overstock can cause a waste of space and cash; however, finishing up the stock leads to the additional movement, cost and instant delivery wastes. Therefore, we can eliminate the wastes by carrying out the operations with the right amount of material and stock in the supply chain management (Grabau, 2011).

If the business can change the number and type of the goods in a rapid fashion, stock costs out of the fixed manufacturing may be reduced. Flexible manufacturing may require additional equipment, space, and staff to meet the high demand; and machinery which is idle or missing in the periods when the demand gets lesser may shoulder the cost of the labor force. The amount of labor force may be adjusted with applications such as overtime, temporary or part-time employees, recruiting new workers or dismissal which may be alternative for them. The production capacity in the short term may be enhanced by subcontracting, contracting and additional machinery and space lease (Doğruer, 2005).

Municipalities should establish at least one strategic plan preparation team which is suitable for their scale. If required, the municipalities with wide organizations such as metropolitan municipalities may fulfill top decisions and general coordination by establishing a team. Thus, the division of labor and responsibilities are defined, and the importance placed on the plan may be presented with a top participation. While municipalities create preparation programs, they have to consider the human resources, organization structure, technical equipment, administrative scale and similar issues.

2.6.2. Evaluation of Municipal Supply Chain

Municipalities carry out the local and daily services to the benefit of the local residents. The role and importance of such services for social life to be peaceful and silent is considerably important. The services include; garbage collection service, fire service, sewage and drainage, slaughterhouses, wholesale fish market and the modern services, urban transport, services regarding the cleaning quality and prices of the recreation and entertainment places, organizing the gardens and parks, cleaning of all type of foods and drinks, construction control regarding the construction services (Eryıldız, 2007).

Managing the relations with the suppliers in the process of rendering the public services of the municipalities, managing the relations with the suppliers, obtaining competition advantage for the chain, and using the information technologies are the important matters for the efficiency of the system (Gümüş, 2012). Changes in the cultures of the businesses within the system are an important factor for improving the efficiency of the supply chain. It is not possible to manage the supply chain effectively without designing information systems to deliver the right information on time to all members within the supply chain. It is required to provide a cooperation between the supply chain members to manage the supply chain effectively. Cooperation between them depends on the effective information sharing (Chandra and Kumar, 2000). Strategic decisions are for identifying the future position of the supply chain and have long term effects on the supply chain. In addition, the decisions on monthly forecasts, corporate distribution planning, corporate production planning, corporate materials planning are taken at that level (Hall, 2001).

Tactical decisions have shorter terms than the strategic decisions (Lambert et al. 1998). Such decisions in local governments are taken to support and for successful implementation of the strategic decisions because demands may differ from the forecasts in practice. Therefore, managers have to take some tactical decisions for meeting the demand of workforce, materials, and other resources. The manager to take tactical decisions should focus on the implementation of the strategic decisions. Tactical studies include demand forecasting, production planning, and inventory control (Güleş et al. 2009), and decisions for scheduling the overtimes for meeting the order and production needs of the materials which have short delivery time (Hasan, 2013).

Operational decisions are usually taken for a day or a week basis and for chain element such as plant or distribution center to meet the daily activities in a profitable and best way. Operation decisions are on inventory control and management, information sharing, coordination, operational tools, quality control, job scheduling, machine loading, inventory distribution and status of the order when the machine is broken down (Nobel et al. 2013).

Besides, suppliers are a critical circle within the supply chain. Late, incomplete, incorrect and so on delivery will disrupt the production programs of the manufacturers, increase their stock costs and delay the end products (Pereira, 2009). For such reasons, the relations with the suppliers are very important for municipalities to maintain their activities. As a result, supply chain management provides coordination in a way to encompass the marketing, sale, product development, and finance and information technologies by incorporating the entire logistic activities and production operations for municipalities.

2.6.3 Purchasing in Municipalities

Each company which purchases material or services may face some risks within the supply chain and all of these risks may do a considerable harm to the business by negatively affecting the entire supply chain. To prevent such risks and minimize the operational damages, you have to benefit from the strategic methods which make the procurement function effective. Purchasing function is there to ensure materials and services to be provided at the right quality, amount, time, price and source. As the share of the investments made to the procurement, the importance of this function arises.

As is known, local governments provide services at a wider range every day due to the increasing, diversifying of the people's need, changing the nature of the needs, changing the preferences of the people and legislation. However, they do not have sufficient financial resource and administrative autonomy in spite of such diverse services. Not having enough financial resources and being under the heavy supervision of the central government, local governments make an effort to develop different service relations to provide services in more effective and productive manner. The needs of citizens have to be met in a complete and effective manner in demand forecasting and order management, which has been carried out in the supply chain under municipal service (Eryıldız, 2007). To do this, an appropriate planning system has to be generated to integrate the production activities with the orders and new products that may respond to the changes in the demands should be planned in the shortest time possible and production and distribution should be done (Cooper et al., 1997). Purchasing functions should be realized by creating orders according to

the order and decide on the availability of personnel, equipment, material and other inputs.

Purchasing is a systematic process where operational requirements are met at the intended quality, optimal amount and time. According to another definition, it is a typical procurement process where operational requirements are met at the most suitable conditions by talking to the identified suppliers for businesses to carry out basic and ancillary activities (Baier et al., 2008).

Strategic planning is the design of future in line with the business mission to realize the long-term objectives of the businesses (Montana and Charnov, 2008). In this context, strategic purchasing is a process of planning, management, development and controlling of the internal and external components within the supply chain of the business in line with the policies of the business to realize the supply activities of the businesses (Burt and Pinkerton 1996).

The effect of material and services to be purchased on the costs and their ratio within the total costs is one of the most important elements that may affect the purchasing decisions. The effect of material to be purchased on the quality is equally important. Quality problems can cause disruptions in business processes. In addition, it may affect the end consumers and thus paving the way for the considerably high cost for the businesses in the long run. The availability of the material or substances to be purchased, minimum stock amount and stock turnover are the important components in purchasing (Beamon, 1999). To purchase more or less material due to the errors in the stock controls prevents effective and productive finance. This will make the limited financial resources idle, for that reason knowing the exact amount of the available stocks is very important for purchasing decisions. Materials specifications, procurement, and commissioning, suitability for out-sourcing and multi-purposefulness are the other effective purchasing decisions (Delmas and Monteil, 2009).

Purchasing management is a part of supply chain management. Supply chain management is the whole of the approaches which are used to meet the service level requirements and minimizing the cost of the entire system through delivering the goods at the right amount, location and time by integrating the suppliers, manufacturers, warehouses, and stores in an effective manner (Vickery et al. 2003).

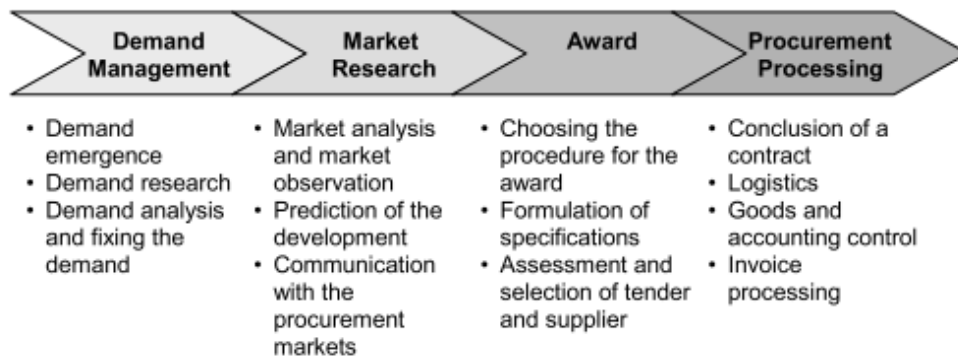
A successful supply chain management bases on developing a strategic partnership with the commercial partners within the supply chain. Supply chain management is an extended form of logistic concepts. A supplier relations management in an effective cooperation is required to manage the supply chain costs. Therefore, purchasing and supply management (including the supplier management) is an integral part of the supply chain management (Görçün, 2013).

If purchase processes are done in a smooth and coordinated manner, the problems will be reduced to that extent. While purchasing specialist creates the plans, she/he should consider the risks that may arise in practice. A setback in purchasing may pave the way for the emergence of unrecoverable situations by influencing the manufacturing process directly (Arıkan and Küçükçe, 2012). All disruptions in purchasing should be reported in writing and necessary precautions should be taken to prevent them. When materials or equipment to be purchased is received, they should be controlled whether they are in compliance with the requirements. Such controls contain supplier on site acceptance test, on-site business's acceptance test after the delivery and instant test on first run or use of the equipment after the delivery.

The importance of purchasing in the supply chain management is undeniable. Purchasing provides the connection between the internal and external supply chain. Therefore, the role of the purchasing function has changed and assumed a more strategic role to add a value to the business rather than supporting the other functions in the business. Purchasing function has turned into a "procurement function", indicating its role more important than this role (Badenhorst-Weiss et al. 2011). On the other hand; The lack of a well-defined purchasing policy, deficiency in the structure of purchasing (decision-making) process or loss of control of purchasing costs may give way to unexpected financial losses (Van Weele, 2005).

Public procurement at the same time a part of the supply chain management. Because it consists of the functions for corresponds of public's need. And public procurement can be divided into four phases: "Demand management, market research, award, procurement processing" (Günther and Klauke; Kotzab et. al. 2005, pp:219)

Figure 4: Public Procurement Process



Resource: Kotzab, H., Seuring, S., Müller, M., and Reiner, G., 2006: 220.

The entire public tender legislation has been put to the use of management and bidders and an implementation standard has been created by using modern training methods, information and communication technologies by with "tender applications training and assistance project" that has been carried out within 2003 towards the development of purchasing activities within the supply chain of the public institutions. This project lays down a basis for the electronic public procurement system.

There are five different methods of tender such as sealed bid, selective limited tendering, open tendering, negotiated tendering, competition tendering under the State Procurement Law no 2886 until 4734 Public Procurement Law enters into practice. In the 4734 Law; in order to ensure parallelism with international procurement practices; there are four methods of tendering such as open tendering, selective limited tendering, negotiated tendering and direct procurement. However, direct procurement has been taken out as a method of procurement and turned into another method of procurement with the amendments inserted into the law. The procurement through design competition is another method regulated in the tendering legislation.

The companies have the power to set the price for the goods and services for their products for tenders where there is no full competition. In this regard, failure of public institutions to ensure full competition will cause the creation of rent. The wealth of the society reduces by this rent. This power held by the companies prevents

effective use of the resources in the public procurement and such procurement finishes with a higher cost than expected (Çetinkaya, 2014).

Being the greatest goods and service buyer in the economy, the public sector should ensure the opportunity equality between those who would like to sell goods and services to the state and make no distinction between them, by this way the competition and productivity will increase and the public opinion that public tenders are doors for unjust profit will vanish. Therefore, public procurement should be carried out with the procedures which would ensure transparency. It is possible to say that open tendering is the most transparent method of tendering under the existing procurement legislation.

It has been determined as the method of tendering at the beginning in the public tender law no 4734 (www.csb.gov.tr/) and direct procurement and procurement through design are the other method of procurement regulated as the other methods of procurement. If the delivery of goods or service or construction work to be done through direct procurement requires a certain time, this procurement has to be done through a contract and if it would be procured once, the contract is at the discretion of the administration. However, the procurement of goods and services which are obligatory for ensuring the compliance and standardization of the existing goods, equipment, technology or services has to be done through a contract. An approval certificate has to be issued, assigned a person or persons by the tendering authority has to make market price research and all supporting documents have to be attached to the approval certificate for such procurement. Price research may be conducted through the methods used in the determination of the prices during the calculation of the approximate costs.

For public services to be met in line with the public interests and needs, the administration has to purchase the goods and services in accordance with the requirements of the services. While meeting the public needs for goods and services, it is important for public not to be at loss and to prevent the irregularities. Considering all of these needs and problems, the legislator attempts to keep the public need at the maximum level by laying down some regulations. However, the administration has some difficulties in procuring the goods and services due to the increasing diversity of goods and services, failure of legislation to keep up with the

process and rapid development of the technology in a globalized world (Çetinkaya, 2014).

The tender legislation has been regulated with a view to supplying the best goods at best price" in parallel with the efficiency and productivity for laying down the rules that regulate the procurement from the private sector of the needs that are required for service provision by the public institutions or by provision of some part of the public services by the private sector. Even though such regulations are for the most suitable price by ensuring the competition conditions, rent-seeking people or groups can act to have illicit gain from the public spending.

Since the early 2000s, there have been researches about the supply chain management in the public institutions and have been carried out works whether they would be implemented, which type of model will reveal if applied and whether to reach the intended results. For example, it is possible for a public institution to carry out all of the purchasing, use and maintenance and repairing activities under supply chain management in the process throughout the supply, use, and disposal of the office material, information processing materials, system, device, tool, machinery that are required by the public institution to fulfill its duties.

CHAPTER THREE

METHODOLOGY

3.1. STUDY ON İZMİR METROPOLITAN MUNICIPALITY

This part is composed of methodology of study, institutional structure of İzmir Metropolitan Municipality and general structure of research application.

3.1.1. Purpose of The Study

Only in the last decade, the term of service supply chain management has been in literature. Municipal supply chain management is part of service supply management (Arlbjørn et al., 2011). There is still not enough research carried out in the field of municipal supply chain management. Research gaps still exist in supply chain management municipalities. The reason for this gap is the fact that in practice, municipalities do not have full supply chain management. For instance, currently, the organizational structural of municipalities in Turkey does not include any department named “supply chain” precisely. Even if there are municipalities in the world that include a little bit of supply chain concept, municipal supply chain management can hardly be seen as it is in the literature.

This study is based on the gap in literature in the field of supply chain management in municipalities. Since supply chain management is a very broad concept and its implementation as a form of management will have many impacts on many areas, the subject of the study is limited to its effect on city sustainability.

In summary, the main objective of this study is to examine the effects of supply-chain management on city sustainability in metropolitan municipalities as the most important actor in local governments. Supply chain management can be taken into account seriously in municipalities if only more research could be done in this area. Considering the impact of municipalities on the city, it believed that any kind of positive contribution made in this field would have direct and multiplier effect on the city. Besides, this opinion is presented to measure the perspectives of different stakeholders of the municipality.

The research question and sub- questions are listed below:

RQ : Does supply chain management in municipalities have any effect on city sustainability?

SQ1 : Is there any difference among the stakeholders' perspectives on sustainability?

SQ2: Is “SRM” function of supply chain management related to city sustainability?

SQ3: Is “ISCM” function of supply chain management related to city sustainability?

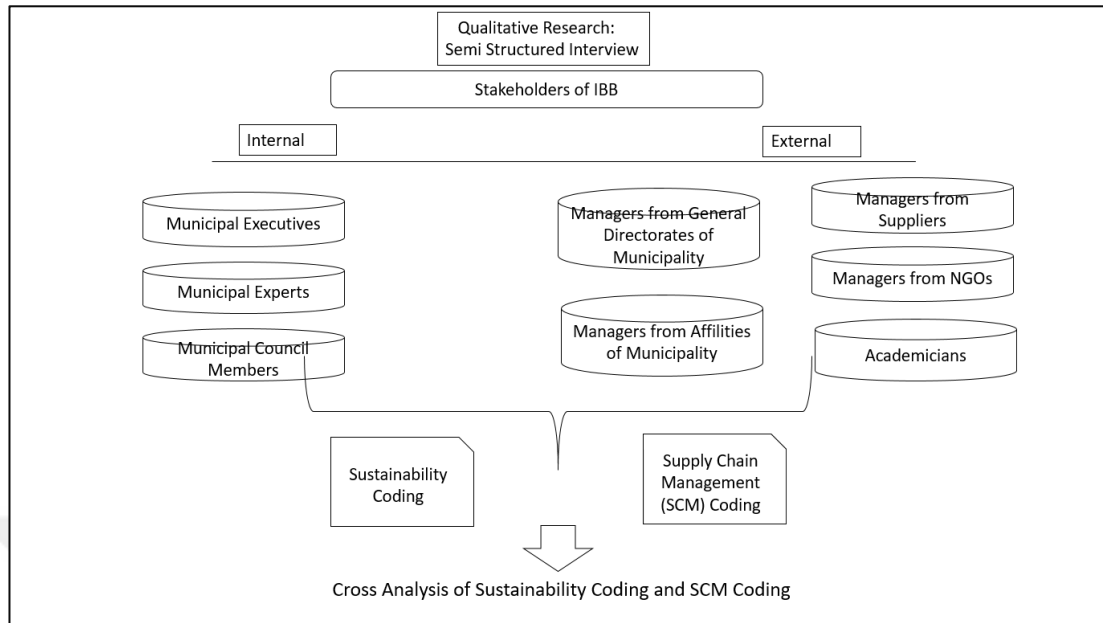
SQ4: Is “CRM” function of supply chain management related to city sustainability?

3.1.2. Research Design

The objective of this study is to evaluate the effect of supply chain management in municipalities on city sustainability. For this purpose, the views of stakeholders of Izmir Metropolitan Municipality has been studied as the sample case through semi-structured interview method. The research framework showing the application to reach the research purpose is as follows (Figure 5).

Municipalities are among the institutions with high impact on the city in terms of supply chain. İzmir Metropolitan Municipality is also one of the municipalities attaching importance on city sustainability. For this reason, different stakeholders of the municipality were asked about their opinions on city sustainability and the ones included in municipal supply chain management were examined. Thus, the impact of supply chain management on the steps that municipalities should take for city sustainability has been demonstrated in terms of stakeholder considerations.

Figure 5: Research Framework



The interview questions focus on “sustainability” since there can be differences among the opinions and perceptions of stakeholders. Since supply chain management is an issue which was studied frequently in literature and whose main concepts are directly accepted by authorities in line with common definitions, the perception on this issue was not directly examined. Therefore, the interview questions were prepared to examine whether the answers given by the participants fall into supply chain management scope.

3.1.3. Data Collection Tool

Within the context of analysis of research questions, qualitative research was performed with semi-constructed interview technique. In-depth interview method was chosen for this study since the opinion of each participant is important in terms of the decision-making process which can affect the citizens. It was aimed to record the opinions of the participant by means of detailed questions and flexible answers and thus, get opinions relevant to the subject of this study in a way to cover cause and effect relationships.

As Collis and Hussey explained, semi-structured interview is a qualitative analysis technique performed in the light of a pre-set question kit and the researcher is able to collect information in depth from participants thanks to the previously-

determined questions (Collis and Hussey, 2003). The aim of this study is to provide in-depth findings by the participants. Therefore, interview method was chosen as the qualitative research method since there is insufficient number of studies based on a common terminology that examines supply chain management on municipalities. Since supply chain concept is an unfamiliar concept for public institutions in our country, it was aimed to carry out in-dept knowledge check in the interviews and include all participants' opinions relevant to the concept within the study.

Although the interview questions have similar characteristics to those as part of constructed interview method, semi-constructed interview method was preferred since the stakeholders are under an institution and there are definite questions varying by the information obtained from stakeholders. Moreover, according to the questions from interviewees, there are some cases in which the course of the question was changed, and deeper questions were asked. The purpose here is to obtain the parts of the given answers to be involved in the research as a consequence of different perception of concepts by stakeholders.

Content analysis, explaining the collected data and the content of communication tools is a method used to reveal the relationships between these data. Therefore, the semi-structured interviews conducted in order to gain a deeper understanding of the participants' views on the research topic were analyzed through content analysis (Neuman, 2017; Yıldırım and Şimşek, 2016).

3.1.4. Data Collection Process

As mentioned in the previous sections of the study, city sustainability and the role of municipalities in this field have become more important. Nowadays, many municipalities have added sustainability to their agendas and started to develop projects in this area.

Izmir Metropolitan Municipality is a municipality that attaches importance to sustainability and develops both national and international projects. Izmir Metropolitan Municipality received "Environment and Sustainable Development Award" with its green transport and energy projects as well as the grand prize in "Healthy Environment" category as part of Turkey Healthy Cities Association's Best

Practices Contest 2018 (<https://direnclikent2019.izmir.bel.tr/tr/iklimleMucadele/24/70>, last Access: 03.08.2019).

Izmir, which has its own dynamics, is the 3rd in the country in terms of population size and socioeconomic development. With its high growth rate, İzmir has become one of the five fastest growing metropolitan economies in the world. Furthermore, according to the quality of life index, it was ranked first in Turkey (<http://www.visitizmir.org.tr/sayfa/izmir/sayilarla-izmir>, last Access: 20.01.2019).

Izmir was chosen to carry out the study due to its dynamics and specific characteristics.

3.1.4.1 General Information on İzmir Metropolitan Municipality

Izmir Metropolitan Municipality authority and responsibility area was 50 km diameter circle before 2012 according to the law. It was expanded to the provincial borders with the law numbered 6360 (Law dated 12.11.2012 date and numbered 6360).

There are 30 districts within the borders of İzmir Metropolitan Municipality. The total population of these districts is 4,320.519 (TÜİK, 2018 ADNK).

During this study, Aziz Kocaoglu and Tunç Soyer served as İZBB Mayors. Aziz Kocaoglu served between 2004 and 2019. As of April 2019, Tunç Soyer was appointed as the new mayor.

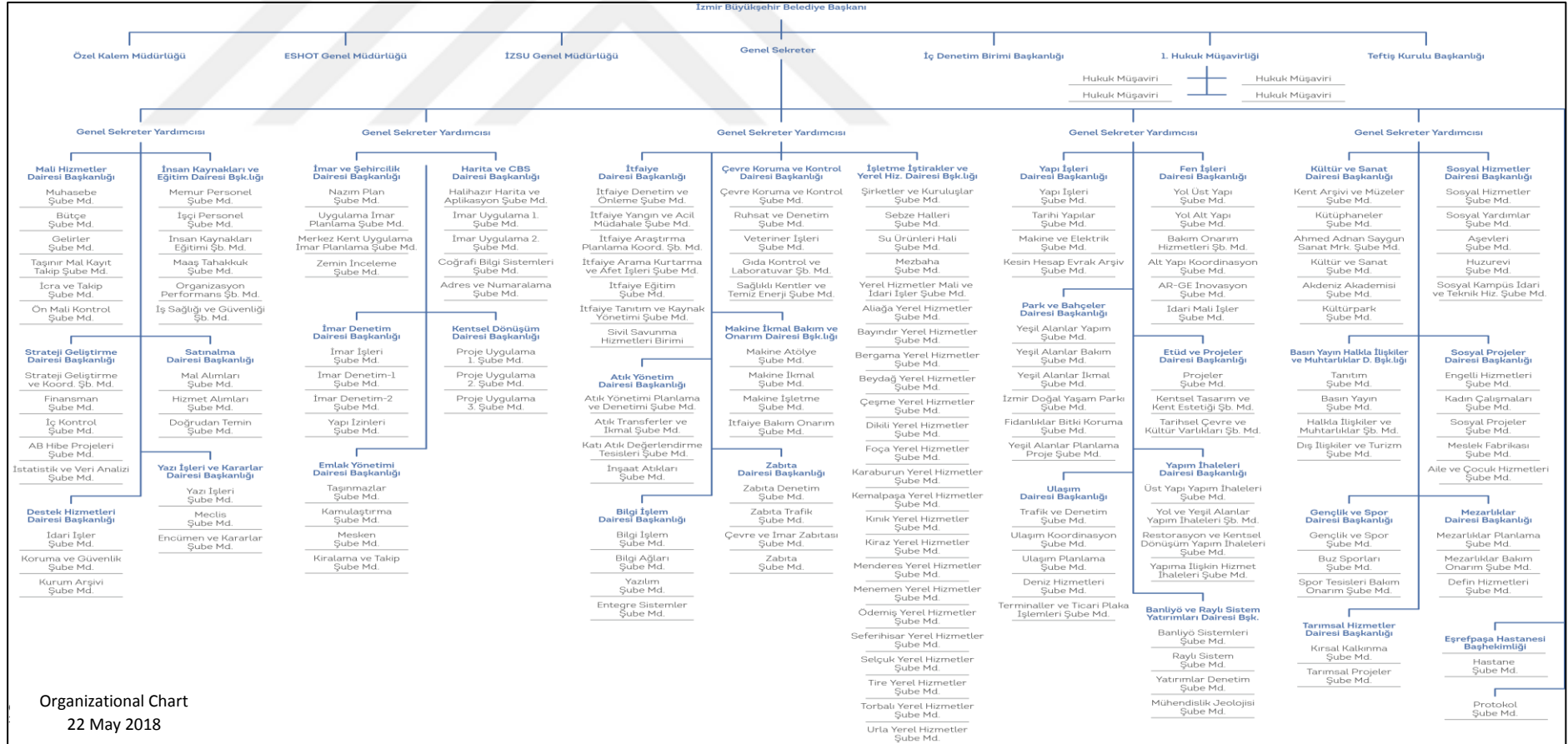
Metropolitan Municipality Law No. 5216 and Municipality Law No. 5393 are arranged according to the principles set forth for the regulation and management of the metropolitan municipalities. According to these laws, the management and decision-making bodies of the Metropolitan Municipality are Metropolitan Municipal Council, Metropolitan Municipal Council and the Mayor.

When the structure of this organization is taken into consideration, we see a classical public institution structure. Separated according to their functions, each group is hierarchically tied to the Head of Departments, Deputy Secretary General and a Secretary General, to whom all are affiliated as it is seen in Figure 6. Since this structure is similar in all municipalities, it applies to all departments where supply chain management was applied within the framework of this study.

There is not a department in Turkey named directly for “supply chain” in the institutional structure of municipalities. However, this does not mean that there is no supply-chain in municipalities.



Figure 6: Organizational Chart of İzmir Metropolitan Municipality



Resource: İzmir Metropolitan Municipality Budget, 2019

3.1.4.2 Supply Chain Structure of Izmir Metropolitan Municipality

The supply chain of a firm can be shown by three main macro processes (Figure 7): The first process is “Customer Relationship Management (CRM)”. This process is related with marketing, pricing, selling, order management etc. issues. Second process is “Internal Supply Chain Management (ISCM)” which is related to strategic planning, demand planning, supply planning, fulfillment and field service. The last process is “Supplier Relationship Management (SRM)”. This process includes source, purchasing, design collaboration, supply collaboration and purchasing decisions and issues. A summary of the macro processes of supply chain (Chopra, Meindl 2010) is shown below.

Figure 7: Supply Chain Macro Processes



Resource: Chopra and Meindl, 2016; pp:12.

Within the scope of these definitions, although not directly named, most of the departments in the institutional structure are members of the supply chain. For instance, Department of Purchasing is related to source processes; Department of Support Services is related to buying process; Making service designs with stakeholders rather than suppliers directly is among the duties of Strategy Development Department; and Strategic Planning process of ISCM is directly related to Strategy Development Department; Department of Support Services is related to demand/supply planning process; Department of Press and Media and Public Relations and Department of Strategy Development Departments is related to marketing; Department of Financial Services is related to pricing, and almost all departments are associated with order management and etc.

In addition to the three main processes, Chopra and Meindl (2010) regards information technologies as the key role of management of these processes in a

coordinated and integrated way. Information technologies have been analyzed by taking into consideration that it is significant in terms of supply-chain in municipalities. Information technologies are primarily the task of the Department of Information Processing in municipalities.

Within this concept, the structure of Izmir Metropolitan Municipality and the functioning of the involved units have been examined below. This examination was aimed to form a guideline for supply-chain management and sustenance of chain for municipalities.

As it can be understood, the supply chain structure in municipalities does actually exist and is very important. However, it is not possible to say this is a proper supply chain management.

Apart from the absence of a department directly related to SCM in institutional structures of municipalities in Turkey, there is no part indicating the name of such concept directly in the regulation.

Another issue to be examined in this structure is the planning process. It is the starting point for planning both in terms of SCM and design and implementation of all projects related to city sustainability. In addition, the clearest picture of a municipality's perspective is their plans.

The planning process in Metropolitan Municipalities begins with strategic plans in the widest sense. The obligation to arrange strategic plan was enacted in 2006. According to this law, all municipalities with a population over 50.000 have to arrange a strategic plan and this obligation has to be fulfilled in 6 months following the local elections. In strategic plans, there are generally strategic aims depending mission, vision reports and the projects to be carried out to achieve them. There are also detailed investigations to be made in arranging these plans.

IZBB, just like all metropolitan municipalities, arranged its first strategic plan in 2006, second strategic plan in 2010-2015, and 2015-2020 strategic plan is still valid. The purposes and aims that will enable achieving institutional vision are divided into strategic fields in terms of easier management and orderliness. In the last valid strategic plan of IZBB, there are 10 strategic fields. These are as follows:

Strategic Sectors:

1. Governance
2. Environmental Management
3. Urban Conservation and Planning
4. Urban Conservation and Planning
5. Urban Infrastructure
6. Transportation
7. Social Solidarity and Health
8. Culture, Arts and Sports
9. Tourism and Local Economy
10. Disaster Management and Security

When taking into consideration the years of 2014, 2013, 2012, 2011 and 2010 and their classification according to the sectors with regards to strategic plan, it can be seen that “infrastructure” and “transportation” sectors have the highest percentages. The extent to which the strategic sectors, projects and activities directly impacting the sustainable supply chain of municipality and city supply chain was examined in the following sections.

3.1.4.3. Structure of Interviews

To achieve the goals of study, in-depth interviews were conducted with 32 participants. Of these participants, 17 are internal stakeholders, 15 are external stakeholders of the IZBB which is the case institution. Interviews were made face-to-face with personal appointments and it took 30 to 50 minutes approximately.

Four different interview forms were prepared for different types of participants. First of these forms was prepared to obtain the opinions of experts and managers in the municipality. Afterwards, the second one was prepared to get the opinions of managers from general directorates and affiliates of municipality. The third interview form was prepared to get to know the experts from selected NGO's of municipality. Finally, the last interview forms were prepared to examine the selected suppliers' opinions on sustainability and municipality's outlook. These forms generally have the same structure. The only difference in the forms is the number of questions made to broaden or simplify the interview as per the participant type. For example, each question asked to internal stakeholders was not addressed to NGO

participants since they do not have enough knowledge about the internal processes or structure of the IZBB.

In the first part of the question forms, there is demographic information to get to know and analyze the participants. In the second part, there are questions to examine the knowledge levels of the participants in terms of concepts, and to determine their viewpoints to the roles and the capacities of municipality depending on these concepts. The third part is composed of the repetition of the questions in the second part of the interview after the definitions of concepts in the literature was given. In this part, the goal is to determine the differences, if any, between the responses of the participants after the definitions were read and their initial responses.

3.1.4.4. Sampling

An important step of the qualitative research process is choosing the sample. One of the sampling models used in the qualitative research is called “purposeful sampling”. In contrast to quantitative sampling the main purpose in the purposeful sampling model is to collect information in depth about a person, event or case that forms the subject of the research depending on a certain purpose (Maxwell, 2018).

“Purposeful sampling” method is used as a sampling choice in this research. The main reason for using this method is to obtain deep information from the people who will provide opinion about “sustainability” and “municipality” and contribute to the research and enable the interviewees to be elected homogenously in the fields within the research subject such as different departments representing economic, social and environmental areas. Besides, it is aimed for the chosen sample to represent various stakeholders. These stakeholders were identified as two groups as internal and external stakeholders. Thus, the questions to be asked to internal and external stakeholders were also separated. The research sample is composed of two groups as internal and external in general.

The sample group chosen as internal is composed of technical experts working in the departments especially on sustainability of municipality, managers of critical departments who can contribute to thesis subject, top executives, and one member from the council chosen among the parliament forming the municipality

decision mechanism and consultants giving service to municipality on environmental/ social issues.

The sample group chosen as external is composed of municipality general directorates with different stakeholders to gather the widest information available, municipality companies, non-governmental organizations related to municipalities, technical experts of Ministry regarding municipality, academicians with knowledge about the issue and municipality, and suppliers in long-run relationship with municipality.

3.1.4.5. Pilot Study

Making a pilot practice by interviewing with a small number of experts gives a chance to learn whether the research structure is appropriate for the study they envision. They will come to grips with some of the practical aspects of establishing access, making contact, and conducting the interview. The pilot study can alert them to elements of their own interview techniques that support the objectives of the study and to those that detract from those objectives. After completing the pilot study, researchers can step back, reflect on their experience, discuss it with their doctoral committee, and revise their research approach based on what they have learned from their pilot experience (Seidman, 2006).

Therefore, pilot study was performed with the first five of technical experts, who are working on environmental issues, project management, strategic management and accounting areas, among internal interviewees whose educational levels are bachelor's or master's degrees. The questions not understood in interview forms were corrected and two questions were added due to need after the analysis (scoring of top executives – mid-level executives). The studies were continued after the addition these questions and pilot studies were repeated.

3.1.4.6. Data Analysis

The analysis process started with the study of the demographic information of the participants. This part starts with summary of the educational status and expertise areas of the participants. Secondly, the question “How many years you have been working in the IZBB?” was only addressed to the internal stakeholders. Thirdly, the

titles and job fields were asked in this section of the form. Finally, the relationship between the duties and the institution they work in IZBB were asked.

After the demographic part was completed, a comparative examination of expert opinions was examined comparatively in the second part which is about "measuring the level of conceptual knowledge and general beliefs about the contribution of the municipality to city sustainability". The interviews were completed after the participants scored the success of the municipality on sustainability.

Following the completion of the interviews, the content analysis process was started. This section primarily includes the documentation of the interview forms. Voice recordings and notes taken during the interview were used to transfer the data to the computer. The answers outside the scope of the subject were removed from the participant answers. After the documentation, the data was prepared for analysis via Excel. This form was designed by the researcher in a way that allows the analysis of the answers in the most detailed manner, close to the logic of the package programs used in content analysis. The content analysis, which was performed by forming meaningful relationships in the data obtained from the research was used within the scope of this study and the frequency of repetition of the data was also examined. These categories were formed by coding. The coding part is the most important part of the qualitative analysis. Three sources can be used in coding: according to the concepts extracted from the data, according to predetermined concepts and a combination of two methods (Strauss and Corbin, 1990). In this study, supply-chain management and sustainability literature were also used in forming the codes to contribute the purpose of the research; the coding of sustainability sources were formulated with the method of "researcher's composing code" and the coding of supply chain management sources were formulated with literature.

During study, coding was performed in accordance with the aim of the research. Codes were chosen elaborately. The reason for this is to be able to capture all codes that are similar to each other from the responses collected by the researcher from different stakeholders, and to create relevant and meaningful categories of the same ones.

For the purpose of the study, a second coding was performed on the same data. In this coding, the same answers were examined by using supply chain management literature. The participants' answers were evaluated whether to be used

under certain titles within the framework of SCM. With this analysis, the areas where supply chain management will affect city sustainability were revealed.

Besides, this study was designed to obtain practically usable results. Therefore, categories were chosen in a clear and plain way for the readers and examiners of the study for better comprehensibility.

3.1.5. Reliability and validity

The role that the researcher undertakes in qualitative research is more effective than other methods. The roles of processing, analyzing, solving and interpreting the data are on the researcher as well as collecting the data in its own environment (Gürbüz and Şahin, 2015 ;382).

As stated by Yıldırım and Şimşek (2016), it was aimed to reveal the concepts underlying the data and the relationships between these concepts through inductive analysis. In qualitative research method by Strauss and Corbin (1990), the coding-based analysis used in the analysis of data was carried out. Two separate coding were made since it was aimed to research two main concepts to be obtained from the data as a result of this study and whether there is a relationship between these two. The first coding is the open coding the researcher made according to the concepts extracted from the data and the other one is the method of “coding made within a general frame” (Yıldırım and Şimşek, 2016; pp 246), which depends on literature; however, important codes were added to the research in general to test the data pointing out supply chain management. Therefore, in this study, inductive analysis was used to analyze the data.

The issues of reliability and validity determined with absolute restrictions in quantitative researches are directly related to the researcher in qualitative researches.

Validity in qualitative researches is related to correctly measuring the phenomenon that the measuring device aims to measure. It means that the researcher observes the phenomenon as it is and as unbiasedly as possible (Kirk and Miller, 1986). Validity in the qualitative research is also related to the measure of the likelihood that the measuring instrument intends to measure. The researcher's search implies that it is as observable as possible and as unbiased as possible.

In order to increase the reliability of this study, data were made available to the participants for answering them in their own environment during the interview

and the document analysis was interpreted objectively in analysis part by keeping them in full detail as possible. Moreover, interview solutions and coding were read and confirmed by two additional experts. One of these two experts is an academician who has a PhD in the study area and the other is an expert in qualitative research. To test the validity of the coding, all answers were gathered under three titles as subcodes, codes, and categories, and sent to experts for confirmation.

All interviewees were given a number. Therefore, it was ensured that the participants did not give answers under the influence of their relationship with the municipality. Being anonymous relieved the participants' mind and thus, they were able to express their opinion freely.

The summary of the qualitative data obtained was expressed as elaborately as possible. All data were discussed together with data gathering method as well as professional experience and stakeholder statuses of the interviewees. By this way, it was aimed to explicitly put forth the connection between specific qualifications of the participants (person/institution) and their answers. Besides all these, the data was recorded and analyzed objectively without any intervention. The researcher objectively cited the information he/she had about the institution, made the application, and confirmed the observations and findings in view of this knowledge with institutional data. The observation and the researcher's opinion depending on his/her experience were not included in the research content in the event that they were not confirmed by the interviewees and not supported by institutional data.

3.1.6. Limitations of Research

Municipality is an institution with many different departments and provides services in almost every field for city. This increases the difficulty and complexity of any study to be performed in municipalities. In this study, the departments directly related to thesis subject and the experts to get included in the related job definition were chosen while performing the internal stakeholder interviews. Again, interviews can be carried out with many different departments within different studies. If the subject is studied by dividing it in different titles in the prospective studies, many findings may be obtained which can contribute to literature and practice as a result of interviews with these departments.

In the analysis of the study related to supply chain management, there are some limitations due to the breadth of the concept and the difficulty of its implementation in the municipality. As mentioned in the previous sections, coding analysis was examined within the framework of the macro supply chain process given by Chopra, Meindl, namely SRM, CRM and ISCM. Among these factors, some additions to the concept were made to contribute to this study.

Another limitation of the study is the selection of stakeholders. The most important external stakeholders of municipalities are citizens. However, inclusion of the citizens in the study is difficult in terms of urban size and structural differences of the city's regions. Since the effects of administrative issues on the city were investigated in the study, an in-depth interview method was applied and therefore no analysis was conducted on citizens' opinion.

Richer findings can be obtained if these fields are widened in prospective studies.

CHAPTER FOUR

ANALYSIS AND RESULTS

There are two main fields within the context of study subject and study goal. Within the context of qualitative research of these fields, two separate analyses were made in terms of “sustainability”, and “supply chain management”. Later, the relationship of these two analyses together and especially the steps to be taken for city sustainability were examined regarding which ones of the fields considered important are within the context of supply chain management.

Therefore, in this section, firstly summary information of the participants is given. Afterwards, general analysis of the research questions is asked to determine the participants' perspective on sustainability is given. Later there are two separate analyzing were done which contains the results of the study. The data were coded separately for the two sections and the relationship between the codes were examined and categories were formed.

In the last part, the intersecting points were analyzed, and the results were given. This study revealed which of the participants' responses were related to municipal supply chain management.

4.1. ANALYSIS OF DEMOGRAPHIC QUESTIONS

As mentioned in the previous sections, separate questionnaires were prepared depending on the participant groups. All interviews started with the common demographic section.

The first question of interview involves demographic information of the participants such as age, educational level and educational field. The titles and job fields were asked in the second and third questions. Most of the interviewed participants consisted of people graduated from technical schools. Yet, the departments and branches to contribute economic and social field were chosen in that sustainability contained three fields. Among these experts, there are many different disciplines such as sociologist, city planner, one participant graduated from nursery school, and an economist. 19 of the participants were female and 13 of them were male.

Most of the interviewed participants consisted of people graduated from technical schools such as engineering, economy, architect. Yet, the departments and

branches to contribute economic and social field were chosen in that sustainability contained three fields. Among these experts, there are many different disciplines such as sociologist, city planner, nursery school, and an economist.

Internal stakeholders' departments are Environmental Protection, Purchasing, Budget Management, EU and Grant Projects, Strategy Development, Waste Management, City Planning, Engineering Geology, Support Services, Internal Auditing. Additionally, two of the internal stakeholders are top manager and one of them is council member and the other one of them is consultant. They have expertise areas in a variety of economist, environmental engineer, industrial engineer, civil engineer, purchasing expert, project management expert, waste management expert, geological engineer, topographical engineer and etc. (Table 1).

Table 1: Descriptive Features of Internal Stakeholder Participants

Stage	Type of Specialty	Classification of working area	Type of Position
1. Pilot Study	Environmental Engineer	Environment	Expert
2. Pilot Study	Industrial Engineer	Environment	Expert
3. Pilot Study	Civil Engineer	Environment	Expert
4. Pilot Study	Technician	Economic	Expert
5. Pilot Study	Business Administration	Social	Expert
6. Main Study	Industrial Engineer	Economic	Expert
7. Main Study	Business Administration	Economic/Social/Environment	Top Manager
8. Main Study	Accounting/Finance	Economic	Expert
9. Main Study	Environmental Engineer	Environment	Manager
10. Main Study	Finance/Auditor	Economic/Social	Expert
11. Main Study	Industrial Engineer	Economic/Social	Manager
12. Main Study	Nursing	Social	Expert
13. Main Study	City Planner	Environment/Social	Expert
14. Main Study	Finance	Economic/Social	Top Manager
15. Main Study	Civil Engineer	Social	Expert
16. Main Study	Geological Engineer	Social	Manager
17. Main Study	Geological Engineer	Environment/Social	Manager

External Stakeholder participants were chosen among stakeholders who will enable performing research in municipalities that is a research institution and function in many different fields and that have a very large circumference. These are composed of different municipal companies that can be related to research subject, general directorates of municipality, long-term working suppliers, and academicians involved in the subject. Most of the external stakeholders are manager in their own institutions. And their specialties are in many different fields such as lawyer, environment related fields, economy (Table 2).

Table 2: Descriptive Features of External Stakeholder Participants

Stage	Type of Stakeholder	Classification of working area	Type of Position
1. Main Study	General Directorate of IZBB	Social	Manager
2. Main Study	Affiliates of IZBB	Economic	Manager
3. Main Study	General Directorate of IZBB	Environmental	Manager
4. Main Study	Affiliates of IZBB	Economic	Manager
5. Main Study	Affiliates of IZBB	Economic	Manager
6. Main Study	NGO (Professional chamber)	Environmental	Manager
7. Main Study	Institute	Environmental	Expert
8. Main Study	Ministry	Social	Expert
9. Main Study	NGO (Foundation)	Environmental	Manager
10. Main Study	NGO (professional chamber)	Social	Manager
11. Main Study	Supplier (Cooperative)	Environmental	Manager
12. Main Study	Supplier (Cooperative)	Environmental	Manager
13. Main Study	Supplier (Private Sector)	Economic	Manager
14. Main Study	Academician	-	-
15. Main Study	Academician	-	-

In the demographic part, following question is “the year of working in municipality” was for internal stakeholder. The working years of the participants in the municipality are generally equally distributed. The distribution of the participants

between the years 1-5 years in the municipality is 24%; the distribution of the 6-10 years is %29; the distribution of the 11-15 years and 15-20 years are %24.

The second part of interviews considers participants' knowledge and consciousness on sustainability concepts. Additionally, in this section of the interview, there are questions examining the municipality's situation about sustainability.

The reason why municipal activities are asked to both stakeholder groups are that they will be examined whether there is a difference between their responses. While external stakeholders respond entirely from the citizen perspective, internal stakeholders respond from both the employees / managers of the organization and the citizen.

Before moving on to the last part of the interviews, the participants were given a definition of sustainability. The aim of this step of study is to determine whether there is a difference between the answers given by the participants and the answers after hearing the definition of sustainability within the scope of this study. The last part of the interview focuses on general thoughts about IZBB. Additionally, there is a question related with supply, unlike all other questions as "If the municipality takes sustainability into account in all its decisions and actions and makes its purchasing activities according to sustainability; how does this affect suppliers?" asked to all participants and examined their thoughts in issue.

Finally, "How much do you think the top/mid-level managers are conscious of/ How much do you think IZBB is conscious?" questions were asked to investigate what the participants think about the municipality's sustainability level.

4.2. ANALYSIS OF THE STUDY IN TERMS OF SUSTAINABILITY CODING

In the consequence of the performed interviews, three main categories and five sub-categories appeared as the result of coding process made on sustainability (Table 3). These are "green activities", "social equity", and "management". The point that attracts attention here is that the definition of sustainability involves three main elements as environmental, economic and social (Dyllick and Hockerts, 2002; Fricker, 1998; and Munasinghe, 2004; Kettner et al.2006). Yet, considering the effect of institutional studies over city sustainability in this study, many institutional

proficiencies have been mentioned as well as the issues such as the investments in economic field, economic sufficiency.

Table 3: Sustainability Categories and Sub- Categories

Green Strategies	Social Equity	Management
Waste Management	Positive Discrimination	Productivity
Renewable Energy	Urbanization	Planning
Natural Resource	Social municipalism	Improvement
Environmental Activities	Local Development	Purchasing
Green Purchasing	Awareness Raising	Service/Municipalism

The first part of all interviews were formed of demographic questions. After this part, the questions into perceptions and thoughts of sustainability started. The first three questions are;

“Did you hear the terms sustainability?”

“Which words do you think of when you hear the terms of sustainability?”

“What is the meaning of sustainability for you?” The findings for the questions are as follows;

These questions were analyzed separately although their content analysis was performed similarly. They were not included in frequency numbers and content analysis of codes, because these questions are related only to sustainability part of the study. So, there will not be a comparative analysis because there is not a SCM coding.

Another reason for the analysis of these questions separately is to investigate whether there is a relationship between the level of knowledge and the answers. The answers to these questions and the sustainability definitions in the literature were compared and the participants' knowledge was analyzed and the answers to these questions and their relationship were interpreted. In order to measure the participants' knowledge on sustainability, the definitions in the literature and the terms related to the concept have been used.

Except for one of the experts, they were quite familiar with the concept of sustainability. The expert who is only 1-year municipal employee, he heard the

concept of sustainability for the first time after entering to the municipality. This person is civil engineer and is among the younger workers of the municipality.

When we look at the answers and interpretations of questions on the concept and meaning of sustainability, we can say that each participant perceived the concept of "sustainability" differently.

Table 4 is shown that the answers of "what are the words that first come to their minds in terms of sustainability" question. Among these answers environmental, continuity, economy and energy are the most emphasized. However, within this thesis, even a single answer from a single expert has been taken into consideration.

Table 4: Most Related Words with Sustainability

Air	Circular economy	Clean Energy	Collectivism	Continuity
Ecological	Economy	Ecosystem	Effect	Energy
Environmental	Feasible	Fuel	Good Agricultural	Improvement
Innovation	Life	Localism	Nature	Next Generation
No consumable	Organized	Production	Participation	Produce
Productivity	Profitable	Project	Quality	Recycling
Regularity	Repeat	Social	Soil	Stability
Stay on Hold	System	Technology	Value	Waste
Water				

The fact that among these answers there are responses directly related to the jobs of the interviewees such as waste, stability, recycling, good agriculture, ecological foot prints is the indicator that the term sustainability is also used in professional lives of people. However, the responses such as locality, innovation, technology, system, quality, collectivity, organized production are the responses in the deep meanings of sustainability and the ones that must be first recalled. And, all these responses were given by the people out of their professional field context. For example, IN_7 is industrial engineer and gave the response of technology; IN_13 is a city planner and gave the responses of collectivity and organized production.

The mostly repeated codes in responses are environmental and continuity. These responses actually show an expected result. The issue of environment is the

title associated at most with sustainability. Interviewees perception of sustainability as continuity, continuity was examined. The most probable cause of this is the translation of the definition into Turkish. Yet, in the combination of the responses of this question and following analyses, the interesting point is that the word “environment” did not come to the forefront in more detailed questions although it was the first word that came to mind when sustainability was said.

The question following two main questions was “What is the meaning of sustainability for you?”. The purpose of this question is to explore what sustainability, which is one of the two main topics of the research, means for the participants.

The distribution of the coding formed at the end of the study for the responses given to the question “What is the meaning of sustainability for you?” is given in Table 5. This table is given separately in the general coding table. This is because, as mentioned earlier, some questions cannot be analyzed together with supply chain management coding.

Table 5: Analysis of “What is the meaning of sustainability for you?” Question

Category	Code	Frequency	
		Internal St.	External St.
Green Strategies		4	8
	Waste Management	1	2
	Renewable Energy	1	0
	Natural Resource	2	2
	Environmental Activities	0	4
	Green Purchasing	0	0
Social Equity		8	3
	Positive Discrimination	0	0
	Urbanization	1	0
	Social municipalism	0	0
	Local Development	2	1
	Awareness Raising	5	2
Management		29	19
	Productivity	16	15
	Planning	3	1
	Improvement	8	3
	Purchasing	1	0
	Service/Municipalism	1	0

The mostly related category with sustainability is “management” by participants. The reason for this is the high number of “Continuation” responses given by both internal and external stakeholders. Continuation is included in “management” category under the sub-category “productivity” within this category group.

For instance, IN_4 responded to this question “Continuation is making investments correctly, taking actions focusing on the result, making no waste, purchasing well chosen goods”, on the other hand, IN_9, IN_10 and IN_15 responded “Continuation is moving towards the better, providing the continuation of life and providing the continuation”. Ex_4 explained sustainability with “Continuation is conducting the affairs and activities without failing”.

From all of the internal stakeholders, responses from positive viewpoint were obtained. Among external stakeholders, negative comment was obtained from only one person. This negative response given by Ex_3 is “Investments continue in a way to enable postponement without considering the environment and without any precautions. It gives opportunity to use resources but does not involve any precaution about their preservation”. This response, as understood in the interview later on, was given because he/she has witnessed that sustainability is completely used for advertisement and for covering the harmful rather than useful activities. However, as the questions went by, his/her idea changed within the study with the help of the explanation of the concept to him/her, and he/ she stated many positive opinions in which he/ she related the research institution IZBB with sustainability. Yet, this was an important contribution in terms of examining the negative viewpoint of the concept on people. This issue is of specificity to be scrutinized by other researchers.

The interview questions from the analysis of these three questions onwards were analyzed with content analysis method. The analysis of the above-mentioned three categories for the sustainability part of interviews is as follows.

Table 6: Summary of Sustainability Coding Findings

Sub-Category	Sustainability Category	Frequency		Percentage within all codes %
		Internal St.	External St.	
	Green Strategies	84	85	46%
Waste Management		11	15	7%
Renewable Energy		37	35	20%
Natural Resource		4	11	4%
Environmental Activities		31	22	14%
Green Purchasing		1	2	1%
	Social Equity	32	63	26%
Positive Discrimination		7	4	3%
Urbanization		7	2	2%
Social municipalism		6	20	7%
Local Development		5	15	5%
Awareness Raising		7	22	8%
	Management	49	53	28%
Productivity		10	11	6%
Planning		18	19	10%
Improvement		12	16	8%
Purchasing		2	2	1%
Service/Municipalism		7	5	3%

As can be seen from this table, the greatest emphasis is on green strategies categories and the least emphasis is on social equity in internal stakeholders and on

management in external stakeholders. While internal and external stakeholder emphasis is observed close to one another in all categories, more emphasis about natural resources, social municipalism, local development and awareness categories is obtained in external stakeholders than internal stakeholders.

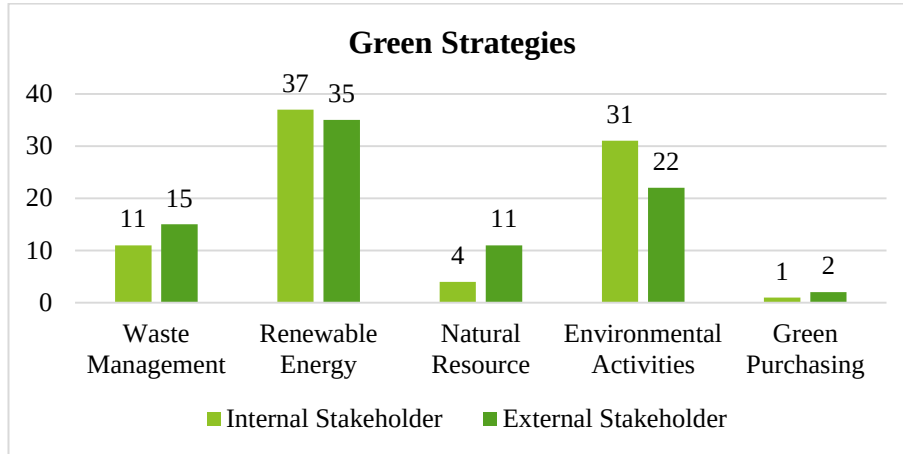
4.2.1. Green Strategies

When the green strategy category, the first category, is examined, the coding of responses of stakeholders to municipality's activities about city sustainability and its status, to thoughts about sustainability and to questions within the research are observed to be parallel to definitions of environment among sustainability elements in literature.

With the perception that the world has only one future and this future can be ensured with common consciousness, environmental and ecological problems have gained an international dimension, and the issues mentioned within this field are carrying capacity, biological diversity, ecosystem integrity, global warming, environmental pollution, noise pollution, road safety, the deterioration of the city landscape, development of the biodiversity, use of renewable energy resources and elimination of clean, reliable water finding and etc.(Ökmen, 2003; Kettner et al. 2006; Banister, 2000, Keleş, 2004).

Green strategy category was emphasized by 84 internal, 85 external stakeholders. A great majority of the participants in the study gave responses to the questions within the frame of environment such as the performed activities, and the fields to be invested regarding sustainability even if they do not directly relate sustainability with environment.

Figure 8: Green Strategies Sub-Categories and Distribution



There are five sub-categories that form the green strategies category such as “waste management, renewable energy, natural resources, environmental activities and green purchasing” (Figure 8). The most- emphasized category among these fields is renewable energy both in internal and in external stakeholders. This is one of the most important findings for the study. The applications that municipalities have to do by law and the ones that municipalities are doing in practice are not energy based. Improvement is seen only in inner structure and renewable energy investments are seen in investments in the name of institutional sustainability. For instance, “energy” sector, comprising this field in IZBB and taking part in 2010-2017 strategic plan as a separate strategic sector, was not named as a separate sector in 2015-2020 strategic plan and passes in a purpose definition sentence in “Environmental Management” sector. For this sector decided to be abolished, the share of total municipal expenses by the end of 2010-2014 is 0.003%.

Despite all these, it has been the mostly emphasized field by stakeholders considering the city sustainability. If IZBB conducts more projects concerning renewable energy, it is clear to have high contribution to city sustainability. Gordon, et al. 2011) explained in their study that renewable resources are important for green sustainability activities and Schaltegger and Burritt (2014) are explained that it is using for measuring sustainability level.

4.2.1.1 Waste Management

This sub-category, which emphasizes 11 times from internal stakeholders and 15 times from external stakeholders, has a 7% share in total.

With the response *“Before working in the municipality, I thought that nothing had been done in the municipality, but then I learned that the municipality has many projects for sustainability. For example, with the new solid waste plant to be built in Yamanlar, renewable energy will be produced, and this energy will meet the electricity needs of many houses”*, IN_2 related the activities about waste management and renewable energy to sustainability after being informed about municipal activities.

EX_8 stated this topic as the fields in which the municipality is insufficient in terms of sustainability and said: *“In general, neither almost all municipalities in Turkey are sustainable, nor IZBB. For example, I know the problems of Harmandalı waste disposal site. We can not say IZBB sustainable in that sense.”* IN_2 said in another response regarding Harmandalı Waste Disposal Site *“Harmandalı should be closed and made a new facility as a solid waste facility”*.

Ex_1, considering what can be done in terms of sustainability, said *We may prefer products that are recyclable in our internal working conditions.”* Again,

Ex_9 expressed the insufficiency of IZBB on this issue by saying *“I think that municipalities are lacking in sustainability in terms of separation and recycling of municipal waste.”*

From the comments it is understood that both internal and external stakeholders clearly think that the issue of waste is included in the things that municipality has to do regarding city sustainability. The reason why IZBB is regarded as insufficient is that the current facility has lived out its life and is damaging the city and construction of integrated waste management facilities planned to start are being built, which is especially on the agenda about waste management (İzmir Büyükşehir Belediyesi, 2017; İzmir Büyükşehir Belediyesi, 2015).

4.2.1.2 Renewable Energy

The issue of renewable energy is one of the issues that has been on the agenda and whose importance has been increasing in recent years (Seydioğulları, 2013). At the same time, our country possesses a potential in many different fields on energy such as solar energy, wind energy and geothermal energy (Gençoğlu, 2002).

This sub-category, which emphasizes 37 times from internal stakeholders and 35 times from external stakeholders, has the highest share with a 20% share in sustainability coding.

It is not surprising for the issue to be the most-emphasized sub-category both in internal and in external in not only green strategies but also all analysis results at the interview results because of its increasing importance lately and its place in our country.

IN_2 related the definition of sustainability directly to the use of renewable energy and responded “...*To take some measures to leave the raw material resources used for future generations and to use them with renewable methods*”.

Among the duties and responsibilities of IZBB directly related to this issue, there are issues in Directorate of Healthy Cities and Clean Energy such as;

“-making studies regarding energy provision using renewable energy sources,
- making studies of awareness and consciousness related to energy efficiency and usage of sustainable and renewable energy sources and
- making a study of database and inventory of İzmir’s clean energy”
(<https://www.izmir.bel.tr/tr/Birimler/289>). This shows that the issue is detailed and cared for at a level at which it cannot find a place in many municipalities. IN_1, IN_7, and IN_12 mentioned the existence of this directorate and the relationship of its studies with city sustainability.

IN_1 “*We are a motivated municipality, but I do not think that we have tangible works. We are a municipality with a directorate dealing with this issue.... Healthy Cities and Clean Energy Directorate, they work to reduce CO2 emissions of 20 years later, they prepare workshops, produce reports and produce similar types of projects. It creates awareness, none of them were discussed 10 years ago.*”

IN_7 “*Internal stakeholders are informed and tried to create perceptions. In particular, training meetings are held within the scope of the Clean Energy Directorate renewable energy action plan of related directorate. This is not enough, but the projects are going on and they will even go up.*”

IN_12 “*There are special units that are dedicated to this job. NGOs are working with them.*”

However, the insufficiency of investments and studies were emphasized by almost all participants although the directorate is in an institutional structure.

Although thinking that municipality is not at a sufficient level regarding the issue of sustainability yet, IN_15 *“Efforts about the subject have just begun and they tend to focus on popular topics. Much more can be done. For example, energy efficient buildings can be constructed in the urban transformation area.”*

Although having a good command of Clean Energy Directorate studies and expressing the ones conducted on this issue, IN_7 added *“Even if all employees are not involved, the external stakeholders may be more expectant. Associations and environmental NGOs may have more anticipations. From the outside it looks like there are more things to do”*

IN_3 explain *“the municipality should make an investment especially on energy production from solid waste or wind energy for sustainability”*.

IN_10 mentioned his/her opinions on the same subject *“It must be determined in which areas the problem is. The areas with the least support and the areas that need the most public support should be identified and the rent areas should be protected. The municipality should use and supervise the sustainability authorities in city planning. They have a lot of responsibility for transportation. Investments can be made in this area. The highest investments in our strategic plan are already in this area. The issues that can not be transferred to the private sector are the areas that the municipality needs to invest”*

EX_1 said, emphasizing the tasks of IZBB on city sustainability and its model structure on this issue, *“The municipalities should have a very big energy and natural resource user, and they should also set strategies for themselves. It should also invest in the areas of transportation and use of natural resources”*

EX_6 explaining the tasks undertaken by municipalities about city sustainability *“IZBB has duties about energy efficiency in buildings, use of clean energy in transportation. There are Izmir BB deficiencies on energy. For example, it should use renewable energy sources in heating, enlightenment.”*.

4.2.1.3 Environmental Activities

The subject of environmental activities is the second most mentioned sub-category within the Green Strategies category where the internal stakeholders emphasize 31 times and the external stakeholders 22 times.

IN_17 stated the concepts regarding environment with his/her response *“The CO2 emissions have been found to be sustainable in all aspects of the project in terms of environment, employment, sound and image pollution”*

Among all participants, only IN_8 thinks that the duties of municipalities regarding sustainability are within legal obligations, and explained the issue as *“Within the scope of the metropolitan municipal law numbered 5216, there are duties within the authority and responsibilities of the units having environmental and sustainability related responsibilities”*

IN_13 stressed that the success of IZBB in the field of environment depends on objective measurements. *“In a study for Turkey's sustainable cities, IZBB ranks first when viewed on objective criteria. In addition, it is ranked first in terms of quality of life. This is seen in many index studies”*. In this field it was awarded for The Best Environment Project by the Union of Local Administrative and for “Healthy city Planning and Environment” by the Union of Healthy Cities (2015 Activity report, pp 397), and also Within the scope of the UN Environment Program Mediterranean Action Plan, the Izmir Metropolitan Municipality won Environment Friendly City Award

for the purpose of promoting sustainable development of the cities in the Mediterranean (<http://www.hurriyet.com.tr/izmire-cevre-dostu-odulu-40684187>).

IN_10 emphasized that it is his/her duty to contribute to all stakeholders as well as improving him/herself on the issues about environment as *“Besides its own sustainability, it also has to contribute to stakeholders”*.

IN_12 stated that IZBB conducts positive applications in the field of environment *“... there are plans and studies about sustainability in every area of the city of the metropolitan municipalities. These are trying to be done.”*

EX_9 exactly stated that municipalities have duties on this field as *“Local governments have duties to improve and implement living standards and all rights. Definitely sustainability should come first for them”*, IN_1 also supporting provided this information as *“Municipalities should monitor sustainability in all activities. Because a large number of resources are used in every activity. And these resources are not unlimited”*.

EX_1 stated that there are successful sustainability investments in the fields of transportation investments, biological treatment and in the fields to prevent CO2 release.

IN_4 emphasized that positive activities have been conducted on the issue in transportation field, saying *“For example, in transportation, these issues are taken into consideration, fuel is saved, and vehicles with low carbon emissions”*

EX_3 explained that he/she considers IZBB successful by saying *“There are activities in the field of sustainability such as tram project, green area, use of the gulf in marine transportation, projects for CO2 reduction”*

IZBB has also committed to reduce the amount of CO2 released into the atmosphere by 20% by 2020 by implementing environmental transportation projects by reducing waiting times in traffic (2017 Faaliyet Raporu).

The muchness of emphasis on this sub-category is related to the investments made by IZBB especially in transportation in recent years. The projects of Tram and Izban (light rail system) are the ones that attract the most attention.

4.2.1.4 Natural Resources

This subcategory, which emphasizes 4 times from internal stakeholders and 11 times from external stakeholders, has a 4% share in total. This subcategory is the one with the largest difference in the number of internal / external stakeholder responses within its category.

Most of the participants mentioned the utilization of resources in these responses. It was especially mentioned that natural resources are scarce, and their more correct utilization is of importance in terms of sustainability considering the prospective generations. The point that attracts attention in this category is that not internal but external stakeholders touched on the issue.

Here are some of the opinions of the participants who mention the necessity of the preservation of natural resources:

IN_13 and IN_14 made a match directly with this code in the definition of sustainability and said respectively *“Protecting natural cultural assets, making efforts to protect local people's values, especially those that can be transferred to new generations”* and *“Protection of the conditions of investments during construction and contribution”*.

EX_6 made the definition of sustainability as *“In my opinion, considering the future use of the available resources, reducing consumption, reducing the dependence on resources, preventing environmental pollution, consuming it without polluting means sustainability.”*

Each of the participants IN_1, IN_14, EX_2, EX_3 mentioned the necessity of the preservation of natural resources as water, soil etc. in the questions regarding sustainability.

4.2.1.5 Green Purchasing

Green purchasing was addressed by 1 internal stakeholder and 2 external stakeholders. With these numbers, it is the category with the least emphasis in all coding. A subject with such little emphasis could be considered within another related category. However, even the three accents required for the subject of the study were evaluated separately as they constitute a very important place.

IN_1 explained, by relating directly to green purchasing, whether municipality has a mission on sustainability *“there is a duty about incentive, for example. Companies that use clean energy in tenders may be preferred. We may prefer products that are recyclable under our own internal working conditions. It can work on water, air, electricity generation and recovery”*. What’s more, this participant is an expert not in affairs of purchase but in environment.

EX_8 said that green purchasing should be the second in rank while he/she was listing the field that IZBB should invest on in the future.

EX_14 listed the things that should be done by IZBB as *“Investments in the smartening the city should be a priority. Efficiency, efficiency should be developed and purchasing in municipality must be smart”*.

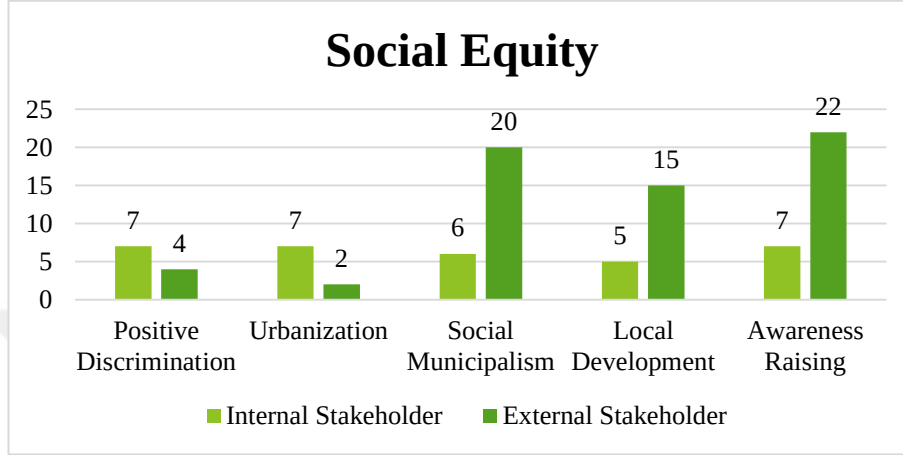
4.2.2. Social Equity

Sustainable city development is emphasized in many sources. Under this context, there are titles of social justice, sustainable economies and environmental sustainability, urbanization, preservation and improving life quality, struggle with poverty, solution of the problems of employment and nutrition, and reconstruction in technology (Eryıldız, 2007 and Keleş, 2004). There are some similarities such as urbanization and social municipality in the code that formed after the performed

interviews with literature. Participants addressed many of these issues in their responses under this category.

Social equity was addressed by 32 internal stakeholder and 63 external stakeholders.

Figure 9: Social Equity Sub-Category and Distribution



The social equality category consists of 5 sub-categories and the highest sub-category in terms of the frequency of emphasis is awareness rising and social municipalism for external stakeholders (Figure 9).

4.2.2.1. Positive Discrimination

7 of the responses related to the positive discrimination subcategory were transmitted from internal stakeholders and 4 from external stakeholders. The point that draws attention here is all responses related to this category were taken after the definition of sustainability was given to the participants.

Most of these responses are the projects regarding “Abla Abi Kardeş Projesi”, one of the important social projects conducted by IZBB since 2007, and the ones related to “süt kuzusu”, depending on the corporation with cooperatives, and to seasonal flowers.

Abla Abi Kardaş Project is a project based on benefiting from the voluntary work of young people to give social support to children with limited urban and social opportunities in disadvantaged areas in order to spread the culture of solidarity and voluntary work (<https://www.izmir.bel.tr/tr/Projeler/abla-agabey-kardes/1390/4>, last access 10.12.2018).

IN_10 added this project to the IZBB's projects within the context of sustainability and explained *"We have social projects, like the Abba/Abi-Kardeş project. We also have projects like cash benefits and vocational courses"*

IN_14 responded to the same question *"Milk project, "Abba-Abi-Kardeş" project, assistance to schools, projects for collective integration of elderly people, activities to eliminate inequality in general"*.

"Milk Lamb" project since 2007, the milk taken from Tire Milk Cooperative between the years 2008-2012 220 thousand children in 250 schools have been distributed. Since 2012, the project that provides milk distribution to all 1-5 years old children living in the city is the project.

Besides, IZBB supports local development with many projects. One of them is the support to Bayındır Flower Producers Agricultural Development Cooperative (BAYÇİKOOP). BAYÇİKOOP has been making contracts with the municipality since 2007. In this way, production has become international level. For example, after the definition given, EX_5 responded to the projects within the frame of IZBB sustainability *"there are projects that we support production of cooperatives such as milk produce, distributive and produce flower"*.

4.2.2.2 Urbanization

The responses about urbanization sub-category have been taken in the questions inquiring how the perception is regarding IZBB's image in terms of sustainability. Only one participant among external stakeholders cited to this sub-category. Urbanization was handled 7 times by internal stakeholders and 2 times by external stakeholders.

IN_15 regarded critically the topics of IZBB in the field of sustainability as *"Appropriate solutions can be developed so that people living in urban regeneration can continue their lives in good conditions"* and, on the issue of investments to be made, responded *"Urban transformation, because today is a very important issue. Very new in Turkey and especially Izmir scale. It is an area that affects all aspects of sustainability. It can be very effective if business is done considering the social and environmental dimensions as well as the architecture and engineering that directly affect the three basic dimensions"*. It explains the participant's sensitivity on this

topic that he/ she is working over urban transformation and maintaining his/ her activities with socially disadvantaged people.

IN_10 responded *“The municipality has the power to sustain sustainability in the field of urban planning. These should be used in planning the city, in zoning situations, and to ensure sustainability”*.

Urban transformation was the field on which the participants touched at least apart from their responses of purchase within the study. Yet, this is an expected result, because the perception of sustainability has not yet achieved a point at this depth.

EX_9 made a critical approach to IZBB on this field, mentioned about his topic, saying *“IZBB should review its decisions on vertical construction in terms of sustainability”*. Although this person is a forest engineer, he/ she mentioned social issues of urban transformation and impoverishment after the given definition.

4.2.2.3. Social Municipalism

Social municipalism has been emphasized 6 times by internal stakeholders and 20 times by external stakeholders.

The most remarkable issue about this sub-category is that the number of citations by external stakeholders is much higher than those by internal stakeholders.

IN_7, and IN_12 expressed about the activities on sustainability that there are activities that IZBB conducts in corporation with NGOs and similar institutions. EX_9 responded to the same subject considering that if projects are produced in more corporation with NGOs and stakeholders, more positive effects can be given on city sustainability and activities with higher multiplier effect can be carried out. IN_10 thinks that corporation with NGOs should be made in more projects although there are projects in corporation with cooperatives.

With the explanation *“Within the scope of the mission and vision of the municipality, there is a goal of being a role model in becoming a social municipality. In this sense, he must do what falls on it”*, IN_12 showed to have a command of the mission and vision of municipality and stated to think that a promise given in this field directly effects on city sustainability.

As mentioned in the literature, although sustainability is associated with the environment in the first place, IN_5 said that the priority areas that should be

invested for city sustainability should be social and economic areas before the definition of sustainability is given.

EX_12 explained *“Projects produced in areas such as infrastructure are important, but social projects have more impact on city sustainability. Especially as the structure of our city we are looking for projects in these areas and we care about”*. thus, he/she pointed out that the structure of the city could explain the perception of sustainability

4.2.2.4 Local Development

Among the principles of IZBB is “the sustainability of local development”, but in the repealed 2010-2017 Strategic Plan, there is not a direct aim and objective related to local development. In the new 2015-2019 Strategic Plan, which is in effect now, “Tourism and Local Economy” was determined as the strategic sector and an objective serving directly to this field was determined and projects were developed. This shows that the interest and investments of IZBB in the field has increased within the last five-year plan. Although there is such a change in internal plans, the responses about local economy were lower in internal stakeholders than in external stakeholders. Local development sub-category has been emphasized 5 times by internal stakeholders and 15 times by external stakeholders.

IN_3 gave the response that the development of new projects for being a comfortable city on the issue will affect on sustainability and U_15 gave the response that employment for dwellers’ leading their lives with better life conditions and producing the projects for solutions suitable for their life conditions will affect on sustainability.

IN_13 defined direct sustainability as *“Cooperation, responsible life (being respectful to the lifestyle of the region), experiential, to protect natural cultural assets, to protect the values of the local, especially the values that can be passed on to new generations”*

External stakeholders described the subject with responses regarding value, employment, welfare, invest in villages and mostly corporation with local cooperatives. EX_11 responded the question regarding the outer appearance of IZBB in terms of sustainability *“On behalf of the cooperatives it continues to be very stable and increasing. There is a relationship that increases the capacity. He finds it very*

successful in this sense; also, very successful in terms of citizens. There are absolutely missing aspects, but they are very successful in general.”

4.2.2.5 Awareness Raising

Under the social equity category, the sub-category that got the highest number of responses was “awareness raising”. Again, in this code, likewise, there is a difference in the frequency of the responses of internal stakeholders and external stakeholders. This sub-category has been emphasized 5 times by internal stakeholders and 15 times by external stakeholders.

IN_2 and IN_1 think that IZBB should explain the sustainability to the public, and IN_7 thinks that the internal stakeholder has been informed about this issue, but that more studies should be done for the public.

EX_4, EX_11, EX_12 stated that they chose priorities to ensure benefit to the city by paying regard to the interests of residents in realizing the activities of the municipality. Besides, EX_4 stated that municipalities are in direct touch with residents according to its structure and therefore municipalities have important duties in terms of sustainability.

According to EX_1, municipalities are utilizers of huge energy and natural resources and municipalities should set strategies for themselves. EX_2, EX_6, EX_7 and EX_10 stated ideas supporting of this thought and said that an example should be served about sustainability and the studies of education, consciousness should be widespread.

Ex_12 expressed that the current potential in human resource should be supported and the trainings should be increased, EX_7 saying that professional trainings should be increased.

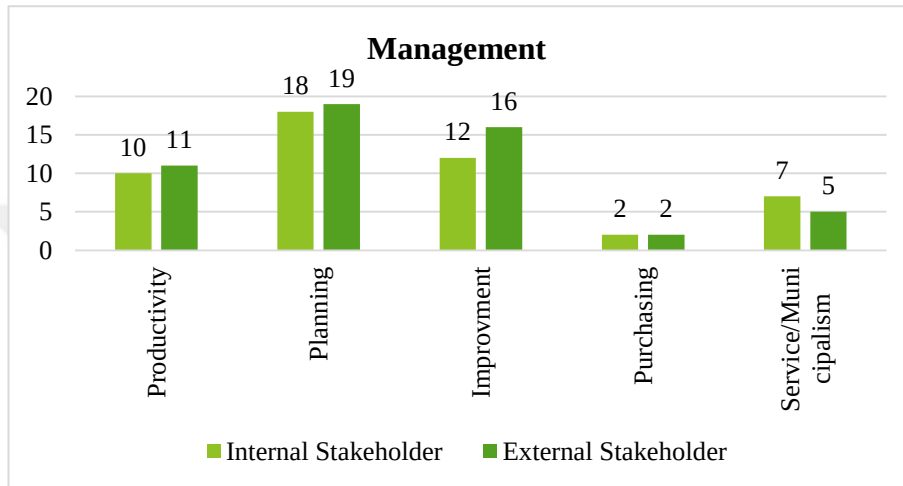
4.2.3. Management

Although sustainability is divided into three main elements, it is clear that some internal developments and managerial abilities are needed for realizing these elements. Sustainability is considered to be a new management style in literature and internal elements of institutional sustainability is included in sub-titles to be owned within the concern such as institutional information management and transfer, institutional learning, institutional value, institutional happiness, institutional

citizenship, institutional esteem, institutional social responsibility, institutional management and institutional social capital (Kuşat, 2012; Sarıkaya and Kaya,2007).

Similarly, in examining the effect of municipalities on city sustainability, many responses were obtained both from internal and from external stakeholders within the management category. These sub-categories are productivity, planning, improvement, purchasing, and service/municipalism.

Figure 10: Management Sub-Categories and Distribution



As seen in the Figure 10, the sub-category mostly cited under the management category is planning both for internal and for external stakeholders. This category has been emphasized 49 times by internal stakeholders and 53 times by external stakeholders.

Even, planning is the one which is the mostly cited sub-category after the two sub-categories under environment category. Planning is followed closely by improvement sub-category under management category.

4.2.3.1 Productivity

This sub-category has been emphasized 10 times by internal stakeholders and 11 times by external stakeholders.

IN_1, IN_7, IN_14 related the effect of municipality over city sustainability to financial sustainability. IZBB has a high score from international institutions on financial scoring on this subject and they regard this subject among their superiorities (IZBB activity report, 2015, pp 82-83; IZBB activity report, 2016, pp 257).

Also, internal stakeholders frequently mentioned the efficient utilization of resources and continuation. For example, IN_4 defined sustainability as “not wasting resources”, IN_2 as “*consuming raw materials such as raw materials and energy to be transmitted to future generations*” and IN_11 as “*acting without forgetting that resources utilized in activities are not limited*”.

The subject cited at most by internal stakeholders within management category is continuation. Almost all internal stakeholders related sustainability to continuation.

The most interesting response from the internal stakeholders under this sub-category is that IN_3 stated that IZBB should give importance to R&D investments to contribute to sustainability. There was only one person who mentioned this subject in the definition of interviews.

4 people from external stakeholders mentioned the subject of efficient utilization of resources. For instance, EX_3 said “*since the projects are generally long-term for IZBB, it is necessary to use all kinds of resources in the most appropriate way*”.

Continuation is also a subject dealt with by external stakeholders. EX_8 stated this issue saying, “*Sustainability is not a linear process, we cannot express it as input-output, we can call it a cycle, it can be expressed as a continuum, not as a certain time*”.

EX_9 expressed, in explaining the appearance of municipality in terms of sustainability, that activities do not pay enough regard to urban contributions and do not watch out this although they can increase the multiplier effect by cooperating with NGOs.

EX_4 stated the fields that should be invested in by municipality to contribute to city sustainability as “human” before and after the definition. This is the most obvious contribution in the meaning of “investment in human and employees” among the interviews.

4.2.3.2 Planning

This sub-category has been emphasized 18 times by internal stakeholders and 19 times by external stakeholders. This is the most highlighted sub-category under the management category. The reason for this is “strategic planning”. Both internal

and external stakeholders referred to this issue. The ability of planning and the importance given to this field are critical for every concern. However, it is more important for institutions acting in many fields and organizations with a wide and diverse target groups like municipalities. This point of view was shown by the interviewees.

It was emphasized by the participants that in the activities conducted by municipality, it should regard the needs of residents and the city, and its producing well-planned projects depending on strategy may have effect on many fields as well as city sustainability.

For example, IN_6 said *“IZBB should make all investments for the purpose related with sustainability, it should not work to save the day”* and similarly EX_13 explained as *“Long-term projects should be produced, not projects to save the day”*.

IN_14 and IN_2 emphasized that IZBB arranges strategic plans, determines sustainability as its vision in these plans and produces service in line with these plans.

EX_3 explained IZBB regarding city sustainability by saying *“Since our projects have a long term such as 30 years, it is necessary to use all kinds of sources in the most appropriate way. And projects need to be done that way too”*. This viewpoint reveals that it generally considers the project that it can affect on city sustainability as long-term projects. And, it is highlighted that any kind of planning has a critical role in long-term projects.

Also, another issue regarded as important under this sub-category is that municipalities have a determinant role in terms of city sustainability. IN_10 stated that it should have many objectives such as developing pioneer projects and producing special policies to needed fields by saying *“IZBB should investigate which area she should invest more”*; EX_7 *“It may determine more regional policies that may lead to sanctions. It can also create awareness about the subject. For example, if it produces projects that show a better attitude towards waste management, and develops sound policies, many institutions also exhibit similar behavior”*.

IN_2 and IN_3 said that it is important to advertise and market these investments as the investments themselves.

One of the different responses within this code is IN_12's response "*IZBB is a positive and principled institution. It does not move to save the day, it does not keep interests on the front, it cares about citizens and sustainability*"; another one is IN_17's response "*The problems that may arise in the major engineering constructions should be prevented both in economic and physical areas. In other words, specialization and detailed planning are needed during the study / project phase*". This one is the only participant to cite risk management among these interviews.

4.2.3.3 Development

The issue of development is one of the sub-categories that stakeholders deal with. Many issues of importance for the country such as continuation, specialization, development were dealt with. This sub-category has been emphasized 12 times by internal stakeholders and 16 times by external stakeholders.

Preservation and improvement of the current situation has been discussed by many participants. For example, in defining sustainability, IN_7 used the words "*Continuity, regularity, continuity of the system, productivity, protection of assets*". IN_12 said that the investments made for city sustainability could be possible by the fact that it was not completed when finished and its effect and use was sustainable; IN_14 stated that applied policies have continuation in IZBB and he /she thought that a correct and long-term planning was made for a sustainable city life.

EX_5 emphasized that all the steps to be taken for environment should be done by caring for development. Another addition to the issue of development came from Ex_7 with the thoughts "*sustainability can be ensured by contributing to development and improvement of areas remote from the center; all districts should be given service equally and in the fields of needs*".

Emphasizing that the projects made by municipalities are produced for citizens different from private sector, EX_9 responded "*I think that the sustainability in the projects, which are associated with the human and environment issues, related to produce endless benefits from the moment they are planned*".

One of the remarkable responses to this sub-category is the response by EX_14 that taking steps to make cities smart is critical in terms of city sustainability

and is the response by IN_8 that institutional culture should be focused on and the response by IN_1 that it is important for ethical council to be more active.

The duties of the ethics committee include setting the culture of ethics, defining the principles of ethical conduct of public officials, eradicating the principles of honesty, transparency and impartiality, eliminating situations that create distrust in society and increasing public confidence in public administration (<https://www.izmir.bel.tr/tr/EtikKomisyonuUyeleri/6/47>, last access 12.11.2018). This is important because of the fact that especially the issue of ethical council was not mentioned by any of the participants.

4.2.3.4 Purchasing

There were five participants who thought that the issue of purchasing has effects on city sustainability. This sub-category has been emphasized 3 times by internal stakeholders and 2 times by external stakeholders. The responses that gave were actually related with pioneer applications considering the structure of municipalities and purchasing power in the city.

The relationship of purchasing issue with city sustainability was explained by EX_4 by saying to think that well-chosen quality products should be bought and by IN_1 by saying that priority should be given to firms with definite attitudes about clean energy and sustainability in the contracts.

EX_10 stated that there are cooperatives among the stakeholders of the municipality from which it makes its purchases and these purchases have great effect in terms of cooperatives, explained that if he adds certain criteria for purchases, it will have effect both on cooperatives and on other producers.

EX_8 and EX_14 expressed that sustainable and smart behavior should be displayed on supply issue.

4.2.3.5 Service /Municipalism

This sub-category has been emphasized 7 times by internal stakeholders and 5 times by external stakeholders. At the very top of the mostly emphasized subjects that form the service/municipalism sub-category are infrastructure and citizen-orientation. Because the institution where the application is carried out is municipality, the issue of infrastructure was specifically related and emphasized to

sustainability, since this field is accepted as the main tasks of municipalities. Citizen-orientation is again one of the issues special to institution. Municipalities are institutions existing for serving the citizens.

EX_9 and EX_14 stated that municipalities should make investments to improve the living standards of local citizens for city sustainability, should realize the local improvement from the viewpoint of citizens; IN_14 mentioned that all of the investments by municipality should be citizen-oriented and all of these services were related to sustainability; IN_16 and IN_13 expressed that producing public activities to ensure welfare of citizens is critical for sustainability.

The most interesting response in this coding is the response of IN_4 as “burial services” to the question “what are the current tasks of municipality in terms of city sustainability?”. This disclosed that municipalities should regard sustainability at every point of its service range width referred to as from birth to death.

4.3. ANALYSIS OF THE STUDY IN TERMS OF SUPPLY CHAIN MANAGEMENT

As mentioned above, interviews were subject to two separate categories. The second one is the coding belonging to supply chain management. The aim of this performed second coding is to examine in detail the relationship of the responses given about what should be done by municipalities about city sustainability with supply chain management.

This coding made in terms of supply chain starts out from Supply Chain Macro Processes of Chopra and Meindl, (2006) (Table 7) additions being made to be assessed within the titles under the supply chain management in the context of study. The most important one of the performed implementations is the evaluation of CRM field as citizenship management rather than customer for institutions as municipalities. Also, call center management under this title is evaluated as the department serving as HIM (Citizenship Contact Service) in IZBB and its tasks. Therefore, in this study, issues related to call center management were evaluated as more comprehensive and more meaningful concept in terms of municipal supply chain as citizen relationship management.

Besides, “sustainability” and “management” sub-categories were added under ISCM category. These titles are the ones that will remain within ISCM definition of the responses obtained for study subject.

Table 7: Supply Chain Management Categories and Sub-Categories

CRM	ISCM	SRM
Marketing	Strategic Planning	Source
Pricing	Demand/Supply Planning	Supply Collaboration
Order Management	Fulfillment	
Citizenship Contact Service (HIM)	Financial Management	
	Information Technologies	
	Sustainability	
	Management	

Resource: Edited from Chopra and Meindl, 2006; pp:12.

The ones not mentioned by participants, which are negotiate and buy, were excluded from these sub-categories and the rest are shown in Table 8.

Table 8: Summary of Supply Chain Management Coding Findings

Sub-Category	Supply Chain Management Category	Frequency		Percentage within all categories %
		Internal St.	External St.	
	CRM	35	36	25%
Marketing		3	7	3%
Pricing		1	0	0%
Order Management		25	19	16%
Citizenship Contact Service (HIM)		6	10	6%
	ISCM	121	69	68%
Strategic Planning		36	30	24%
Demand/Supply Planning		1	1	1%
Fulfillment		3	1	1%
Financial Management		3	0	1%
Information Technologies		1	0	0%
Sustainability		76	37	41%
Management		1	0	0%
	SRM	10	8	7%
Source		6	5	4%
Supply Collaboration		4	3	3%

4.3.1. Citizen Relationship Management (CRM)

CRM is one of the critical points of supply chain management. Especially if we are talking about the service supply chain like municipal supply chain management, it becomes more important. Accurate understanding of the expectations of citizens, directly affects the quality of the service to be produced. Internal stakeholders are mentioned 35 and external stakeholders mentioned 36 times of CRM. And as seen, internal external stakeholder frequencies are similar.

4.3.1.1 Marketing

Internal stakeholders are mentioned 3 and external stakeholders mentioned 7 times of marketing sub-category. Four participants referred to this sub-category. IN_1 expressed that made investments couldn't be transferred to the residents sufficiently and advertisement was not at the needed level. EX_3 stated similar thoughts. EX_12 expressed the studies on making the city a brand city to the place of what should be done for city sustainability. Other references in this area relate to the importance and necessity of the relationship with the target market.

4.3.1.2 Pricing

This issue was only highlighted by one participant about budget planning and financial sustainability. The reason for this is that municipalities serve without having any aim of profit and there is no pricing in the provided services. The participant who made this comment was a manager in financial services for long years and thus has more knowledge in this topic than the other participants.

4.3.1.3 Order management

Order management is the mostly mentioned sub-category under CRM category and the third one within supply chain. The subject of order management, as mentioned above, is of extreme importance in institutions like municipalities because it is a field comprising the management processes of the service provided to citizens.

This sub-category was cited 44 times, 25 times from internal stakeholders and 19 times from external stakeholders.

Once order management is a concept that includes service production, it has been mentioned so much. Because the first thing that comes to mind when it comes to municipalities is the way in which services and services are presented.

The production of services is a very large area for municipalities, providing services for the many needs of citizens from birth to grave. Therefore, the answers are also in very different areas.

For instance, IN_13 mentioned that *“the necessity of the municipality to produce services to improve the quality of life of citizens”*. Similarly, IN_14 stated that services were made in order to make the city more livable without the concern of rent. IN_15 on the other hand, said that even though the sustainability issues are still insufficient, it is necessary to develop solutions suitable for the living conditions of citizens and citizens in order to maintain their lives with better living conditions.

IN_9 believes that, contrary to the other participants, the municipality has no direct duties on sustainability. Nevertheless, it is believed that the services and investment decisions produced have an indirect effect on city sustainability. IN_17 likewise considers that there is no official duty and responsibility given to the municipalities by law on sustainability. He added as *“However, of course, there are duties in terms of sustainability of the city”*.

IN_21 says that *“...municipalities are one of the most important institutions in terms of sustainability. The purpose of the establishment and presence of municipalities is to ensure the well-being of people and to make people happy. Therefore, municipalities should take this into account in all their services and investments”*.

EX_9 said that *“local governments have duties to improve and implement living standards and all human rights. Definitely sustainability should come first for them”* and EX_4 explained that *“...as the municipality provides direct service to the public, it has direct duties related to city sustainability”*.

IN_10 believes that municipalities have duties in terms of city sustainability services that cannot be transferred to the private sector and said that *“...since it is the only authority in these areas, it should produce more attentive and planned service”*.

EX_7 and EX_8 underlined that municipalities have duties in terms of women's employment and social service production.

IN_1, IN_2, IN_6 and IN_13 similarly mentioned the services of the municipality in social areas. IN_13 stated that *“the municipality should produce services for groups with socio-economic fragility”* and said that *“the municipality should produce activities to eliminate inequality in general”*.

EX_5 is the only participant that mentioned economic development and the municipal duties on this issue. He said that if municipality consider economic development than city sustainability will also affect positively.

4.3.1.4 Citizenship Contact Service (HIM)

Citizenship contact is an important field in terms of service institutions in direct interaction with citizens like municipalities (Bremer, A. A., and Prado, L. A. L. 2006, Bonsón, et al. 2012). Within the IZBB hierarchical structure there is a HIM directorate which is under the Department of Press, Publications, Public Relations and Neighborhood Authorities. The answers included in this category are generally references to jobs that are among the tasks of this department. This sub-category was cited 6 times from internal stakeholders and 10 times from external stakeholders.

On this sub-category, participants generally responded in a way to draw attention to the issue of evaluating and answering the complaints from citizens in a better and quality way. IN_14 contributed on this topic *“institution gives responses to all complaints about the topics as transportation and water in particular in the same way”*.

The comments of external stakeholders are on the fields about listening and evaluating the complaints of citizens.

EX_11 responded that *“...municipality has a determined and increasing relationship with cooperatives. Its relationship with citizens on the field is so successful...”*.

EX_4 said that *“...municipalities are the institutions that know the locality best. Therefore, it is again they that will understand the demands from the locality and find the correct answers...”*.

4.3.2. Internal Supply Chain Management (ISCM)

The ISCM process aims to meet the demand generated by the CRM process on time and at the lowest possible cost (Kazancoglu, 2008). Integrated planning

issues are processes to be applied before any decision on almost every field, namely, in capacity management in any sense, in production managements, in purchasing and determining a market, and in advertisements (Chopra, Meindl, 2017). ISCM category was cited 121 times from internal stakeholders and 69 times from external stakeholders. With these frequencies, the ISCM category has been the most cited category in SCM coding.

4.3.2.1 Strategic Planning

With a broader context, planning includes suppliers' finance and information processes with a continual flow in the end user beginning from suppliers. Apart from all these, it is necessary to plan institutional and external risks and restrictions for a good SCM (Chopra, Meindl, 2017; Manuj, I. and Mentzer, J.T. 2008; Cucchiella and Gastaldi, 2006). According to Blanchard, planning which is the first process in a classic SCM definition is "the coordination of situations required for the delivery of goods, services and information from supplier to consumer to be provided in the most proper way by balancing the supply and demand" (Balanchard D., 2017).

Within the scope of these definitions strategic planning code is the second most mentioned title in supply chain coding. This sub-category was cited 36 times from internal stakeholders and 30 times from external stakeholders. It may be two possible reasons for this: the participants may have found this topic important in terms of city sustainability or the municipality's success in this area may have brought this title to mind.

A great part of the responses given under this coding gathered under two subjects. The first is that a directorate of city sustainability and the second one is the relationships with stakeholders as NGOs and cooperatives.

IN_7 said that *"a perception about sustainability is tried to be created, for example information and training are being given to internal stakeholders"*.

IN_12 underlined that there were many projects that carried out with NGOs and also there is a special department for sustainability in IZBB institutional structure.

4.3.2.2. Demand/ Supply Planning:

This coding has not been the subject of much emphasis on both internal and external of participants. This may be due to the fact that the application institution is far away from the demand / supply issues as terminology.

IN_9, who referred to this code, said that *“municipalities have some indirect roles in terms of sustainability. Even though these roles are indirect, they affect citizens in terms of services produced, purchases and sustainability of services”*. EX_14 stated that *“the projects needed to increase the smartness of the city is necessary and therefore the purchases should be wise”*.

4.3.2.3. Fulfillment

The fulfillment code was referred to by four participants. Again, this code is considered as a different concept for the municipality is considered to be a low citation. Three of those referring to the code are internal stakeholders and one is external. IN_10, IN_12 and IN_15 emphasized the importance of investments made especially in the economic field which would affect the disadvantageous group. EX_12 on the other hand, addressed the need for citizen needs in the social field. EX_12 said that *“IZBB should work towards sustainability; it should reflect this in every field it operates, and in the economic field it should invest in the economic sustainability of not only the municipality but also the citizen”*.

In fact, fulfillment is directly linked to many areas of internal processes in SCM. Amer, Luong, Lee, and Ashraf (2008) explain that meet customer demands for complex and difficult to predict supply chain structure is possible with optimization and integrated management. In this perspective fulfillment related with strategic planning, management, customer relationship management and etc.

4.3.2.4 Financial Management

Issues related to this topic are mentioned by three participants. All of this participant are internal participants of IZBB. IN_14 said that *“IZBB is tried to ensure the continuity of certain policies especially in the financial field. The financial sustainability of the institution, in particular, affects city sustainability”*; IN_5

explained as *“IZBB has some shortcomings in administrative issues in the economic field. If it can be better in this area, it will have more impact on city sustainability”* and IN_1 *“attention should be paid to borrowing issues. Accurate borrowing will contribute positively to city sustainability”* said.

4.3.2.5 Information Technologies

The use of technology is an important issue in terms of supply chain. It is also indispensable in municipal services. IZBB is a municipality that uses information technologies widely. However, there was only one participant who found two issues related to each other. This participant explained that *“It is important for the city sustainability to produce knowledge of the collective method and to share this knowledge with the citizens”*. As can be seen in this statement, the interpretation of a single participant is very important. The collective knowledge that he refers to is becoming increasingly important.

4.3.2.6 Sustainability

This coding has been the subject most mentioned by subject. 76 of the internal stakeholders were cited 37 times from external stakeholders.

28 of these references concentrate on issues such as energy, CO2 emissions and waste management. Some of these references focus on energy, clean energy, waste management used in internal processes, while others have addressed issues from a wider perspective, such as waste management of the city, by referring to be a pioneer in this field. For instance, IN_2 and IN_12 said that *“solid waste projects will be produced to generate energy and energy will be met with the energy needs of many citizens”*; IN_1 said that *“municipalities should use clean energy and choose to buy from clean energy companies”*. IN_13 commented on this subject: *“IZBB has become a party to the “Covenant of Mayors” and has established an energy action plan. This agreement promised a reduction in CO2 emissions”*.

22 participants cited this category with answers related with sustainable transportation. Transportation has become an important issue especially for İzmir in recent years. For this reason, many questions have been mentioned by the stakeholders. IN_8 said that *“...sustainable transportation methods should be preferred instead of wheeled transportation, municipalities should invest in this area*

for increasing city sustainability”. IN_8, IN_11 and EX_3 stated that especially in sea transportation should be invested.

6 participants emphasized that sustainability was adopted in management and pointed out to the presence of the unit directly related to this issue. And the other answers are generally related with environmental issues.

4.3.2.7. Management

This category has rarely cited. IN_13 stated that managerial issues such as training of internal stakeholders and internal auditing are important for municipalities.

4.3.3. Supplier Relationship Management (SRM)

Under this title, only source and supply collaboration are mentioned and the concepts of negotiate, buy and design collaboration which are exist in the literature under the SRM have not been mentioned.

4.3.3.1 Source

The contributions from this area can be divided into two separate headings. The first one is the “conservation and careful usage of resources”, and the other is the “resource selection and supplier development”. This sub-category was cited 6 times from internal stakeholders and 5 times from external stakeholders.

EX_3 and EX_1 emphasized that large resource users, such as municipalities, should be more careful when consuming natural resources. EX_3 also stated that IZBB behaves more carefully in this area than the private sector.

EX_14 stated that to be a smart city, resources should be chosen wisely.

4.3.3.2 Supply Collaboration

This code has been cited 4 times from internal stakeholders and 3 times from external stakeholders.

All procurements in municipalities are subject to law. This law also makes it impossible to communicate with suppliers in advance. Therefore, collaboration with suppliers in municipalities can be made more difficult. Nevertheless, it is clear that the suggestions from the participants will also have an impact on supply chain

management and city sustainability. For instance, IN_1 *“Municipalities have a role about being an example. If exemplary steps are taken in procurement, this will both improve suppliers and contribute to the city”* he said. IN_10 said that *“IZBB should strive not only to ensure its own sustainability, but also to make its stakeholders more sustainable. For example, it makes direct purchases from cooperatives and farmers. We cooperate with them on this issue ”*.

According to EX_8, more sustainable steps should be taken in terms of procurement and cooperation is essential and lastly EX_14 stated that smart purchases should be made with a similar perspective.

IN_1, IN_10, IN_13 emphasized that the municipality was successful in cooperating with cooperatives and local producers and set an example for developing them.

4.4. CROSS ANALYSIS OF CITY SUSTAINABILITY AND MUNICIPAL SUPPLY CHAIN MANAGEMENT

As discussed in the previous chapters, two analyzes were conducted to achieve the objective of the study. The first of these analyzes is related to sustainability and the other is related to the supply chain management. Below is the table of the where these two different analyzes intersect. These intersections also show where stakeholders' responses to city sustainability take place within the supply chain.

Table 9: Coincidence rate between Green Strategies Category and Supply Chain Categories

Category	Sub-Category	Frequency of Sustainability Coding	Coincidence frequency (sustainability coding- SCM coding)	Coincidence Rate	ISCM	CRM	SRM
Green Strategies (GS)	Waste Management	26	14	54%	11	1	2
	Renewable Energy	72	41	57%	38	3	0
	Natural Resource	15	9	60%	6	1	2
	Environmental Activities	53	26	47%	25	2	0
	Green Purchasing	3	3	100%	1	0	2
	TOTAL	169	93	55%	81	7	6

As can be seen in Table 9, 55% of the participants' opinions on city sustainability which are gathered under the category of green strategies are also under the SCM category.

Table 10: Coincidence rate between Social Equity Category and Supply Chain Categories

Category	Sub-Category	Frequency of Sustainability Coding	Coincidence frequency (sustainability coding- SCM coding)	Coincidence Rate	ISCM	CRM	SRM
Social Equity (S)	Positive Discrimination	11	5	45%	1	4	0
	Urbanization	9	4	44%	3	1	0
	Social municipalism	26	15	58%	7	8	0
	Local Development	20	12	60%	8	4	0
	Awareness Raising	29	17	59%	8	9	0
	TOTAL	95	53	56%	27	26	0

As can be seen in Table 10, 56% of the participants opinions on city sustainability which are gathered under the category of social equity are also under the SCM category.

Table 11: Coincidence rate between Management Category and Supply Chain Categories

Category	Sub-Category	Frequency of Sustainability Coding	Coincidence frequency (sustainability coding- SCM coding)	Coincidence Rate	ISCM	CRM	SRM
Management (M)	Productivity	21	15	71%	10	2	3
	Planning	37	24	65%	21	3	0
	Improvement	28	19	68%	16	3	0
	Purchasing	4	3	75%	0	0	3
	Service/Municipalism	12	7	58%	4	3	0
	TOTAL	102	68	67%	51	11	6

As can be seen in Table 11, 67% of the participants opinions on city sustainability which are gathered under the category of management are also under the SCM category.

The number of repetitions for the answers given in these tables is as important as the percentages. Table 9, Table 10 and Table 11 interpretation were made by taking repetition numbers into consideration.

The majority of Green Strategies category in sustainability coding coincidence rate is composed of renewable energy and environmental activities. As mentioned before, Renewable Energy subcategory is one of the most relevant sustainability issues for the participants. As it can be seen in Table 9, approximately half of the renewable energy responses were replicated in SCM coding. In the Green Strategies category, responses related to environmental activities subcategory are also numerous. Furthermore, almost half of these answers correspond to SCM coding. These two subcategories are generally related with ISCM category in supply chain management-based coding as it can be seen in table 9.

It is thought that the reason why these two issues were mentioned frequently by the participants is that IZBB has a separate unit related to sustainability and IZBB's high budget and well-known environmental investments. In detail, these two issues correspond to "sustainability" and "strategic management" codes under the ISCM category in SCM coding.

Another remarkable point from stakeholders' answers in Green Strategies category with the intersection of SCM coding is the importance of informing the citizen about the environmental projects performed in these areas. As mentioned in the above sections, it is stated that the publicity of the projects carried out by various participants is important.

Other than these two subcategories, the less-mentioned issues are also important for this study. For instance, although the subject of green purchasing is highlighted only three times in both sustainable and SCM categories, it will have a high impact on city sustainability if implemented properly in municipalities. As a matter of fact, the subject of green purchasing has been widely discussed in the literature both in green supply chain and sustainability (Walton, S. V and Handfield, R. B. 1998; Eltayeb, T. and Zailani, S. 2009; Liu et al., 2012).

Table 10 shows the intersection of the Social Equity category (the second category of sustainability coding) with the SCM coding. The most emphasized issues in this subcategory are social municipalism and awareness raising. These

subcategories correspond to the ISCM and CRM categories in SCM coding. This means that the issues related to city sustainability with social issues are fully linked to internal processes and citizen relationship in supply chain management according to IZBB stakeholders. The remarkable height of this intersection is due to the Order Management subcategory in terms of CRM and the Strategic Management subcategory in terms of ISCM.

Table 11 shows the intersection of the Management category of sustainability coding with the SCM coding. Management is the most corresponding category in SCM categories in terms of percentage. The majority of management's reciprocal ratio is the ISCM category. The Strategic Planning and Sustainability subcategories under the ISCM category are the main reasons for such high percentages. The ISCM category, which intersects 51 times with the Management category, 32 of which comes from the Strategic Management subcategory and 14 from the Sustainability subcategory. As mentioned above, a large proportion of the answers that intersect with the CRM category are associated with the Order Management subcategory.

In summary, it can clearly be suggested that the steps related to ISCM, CRM and SRM processes to be implemented in a municipality will have an impact on city sustainability. Certainly, it is clear that some of these areas will have much more impact. Within these research constraints, ISCM processes have emerged as the most impacting process on city sustainability.

4.5 DIFFERENCES BETWEEN INTERNAL and EXTERNAL STAKEHOLDERS' PERSPECTIVES

In order to measure the success of the municipality in terms of sustainability from the perspective of the stakeholders, the external stakeholders were asked to rate the municipality while the internal stakeholders were asked to rate the municipal top management and municipal middle management. The average score given by both internal and external stakeholders for the municipality are 3 points. However, the average score given by the managers of the general directorate and municipal companies among the external stakeholders is 5. This is higher than all other stakeholders' scores. Another remarkable point is that there is only one participant who scored more than 3 points among the external stakeholders. This shows that

despite all efforts by the municipality, the external stakeholders do not believe the sustainability awareness is high enough.

In general, it was observed that external stakeholders generally expressed positive and negative ideas together. For example, the EX_7 stated that “IZBB is unsuccessful in zoning, police, sanitation and waste management, but is successful in corporate social responsibility, cooperative support, local development projects and women-related projects”.

Both internal and external stakeholders have heard the sustainability concept, although they do not know the broadest definition of sustainability. A single participant, who is a civil engineer and has worked in the field for years but is new in the municipality, stated that he had never heard of the concept before. This indicates that the concept of sustainability in the construction field is new.

The analysis of the words reminded by sustainability findings (Table 5) shows that the management category and productivity subcategory are interpreted as sustainability and improvement of municipal tasks carried out by both internal and external stakeholders.

The analysis of the question “What is the meaning of sustainability for you?” shows that environmental activities were not stated by internal stakeholder contrary to the literature. External stakeholders stated environmental activities only four times.

There is a remarkable difference is found in the social equity code in terms of the views of internal and external stakeholders. External stakeholders place much more emphasis on the social equity category when compared to the internal stakeholders. The internal stakeholders addressed the issue 32 times while the external stakeholders mentioned it 63 times. The difference does not originate from a single subcategory. It is clear that the external stakeholders attach greater importance to social municipalism, local development and awareness raising.

When the responses were examined, significant differences were only found under the subcategories of Green Strategies and Social Equity categories in terms of the responses of the internal and external stakeholder. No significant difference was found in the subcategories under the Management category. These differences are in the subcategories of Natural Resources and Environmental Activities under the

Green Strategies category. In the Social Equity category, Social Municipalism, Local Development, Awareness Raising subcategories the frequency of external stakeholder views is much higher. Although IZBB's strategic plan for 2015-2020 sets specific goals and targets for the local economy and has developed clearer projects so far, this issue is not seen relevant to sustainability by the internal stakeholders.

As mentioned in the previous chapters, all the responses that fall into the Positive Discrimination subcategory were given after the participants were reminded of the sustainability definition. This suggests that sustainability and positive discrimination were not initially linked for both stakeholder groups.

4.6 THEORITICAL IMPLICATIONS

Especially in the last 30 years, SCM and sustainability issues have become increasingly important both in literature and in practice (Güleş et al. 2009; Balanchard D. 2017; Gökdemir and Veenhoven 2014; TUBİTAK, 2002).

As mentioned earlier, this study is based on the deficit in the municipal supply chain management in the literature and examines the impact of supply chain management in municipalities which are the most competent institutions in the management of developing and growing cities on city sustainability. Following the aim of the research a qualitative research was conducted and by the help of the content analysis the findings are gained. The relationship between the municipalities and the city sustainability has been neglected in the literature which is examined by the framework of this study. Therefore, the main contribution of this dissertation is showing supply chain management in municipality have an impact on city sustainability. In literature the relationship between city sustainability, urban logistics, income level of city and sustainability and green issues and supply chain management (Croom et al. 2000, Carter and Rogers, 2008; Beske and Seuring, 2014) are generally examined; but still, the literature is infrequent on municipality's effect on city sustainability and complete supply chain management in municipalities were not addressed. In this study, both the effect of supply chain management on city sustainability and supply chain management in municipal structure were analyzed.

The supply chain part of the study Chopra and Meindl's and macro processes template were used. In this template there are three main processes as CRM, ISCM

and SRM. From a municipal point of view to supply chain management customer is not a true. However, since the concept of customer is not accurate in municipalities, the name of this category was changed to Citizen Relations Management. Another changes made on ISCM category with adding management, information technologies and sustainability sub-categories. These sub-categories are relevant to internal processes and also important both in today's supply chain management and municipal management.

As mentioned before, sustainability consists of three dimensions: environmental, social and economic. Seuring and Müller (2008) mentioned in their studies, most of the work in sustainable development literature focused on the economic dimension. City sustainability and sustainable management of supply chain are mostly associated with economic and environmental issues (Yiftachel and Hedgcock, 1993; Simpson and Power, 2005; Uslu, 2009; Beske and Seuring, 2014). As shown by the results of the content analysis related with sustainability in Table 6, social issues were emphasized by participants. Izmir which the study was conducted is a city in good living conditions as mentioned before. In addition, all participants of the study have higher education. As a result of this study, the data showed that city sustainability is cared for in three dimensions by the stakeholders under the scope of the study. It is possible to say that in cities which are have high conscious or high quality of life, citizens have expectations in three dimensions of sustainability.

4.7 PRACTICAL IMPLICATIONS

Based on the results of the study, it is believed the following strategies and recommendations will positively affect city sustainability if implemented by Izmir Metropolitan Municipality.

- The number and frequency of sustainability training for internal stakeholders should be increased.
- There was much emphasis on renewable energy by both internal and external stakeholders. Nevertheless, investment in this area was scarce in the last two strategic plans. The lowest financial investment was made in the "energy" sector with 0.003% in IZBB's 2010 to 2015 investments. In

the new strategic plan, it is observed that the strategic sector in this field was abolished. In addition to large investments in the field of renewable energy in terms of budget, incentives should be developed to set an example for the city and to increase individual awareness/use of renewable energy.

In contrast, “urban infrastructure” sector is the one with the highest expense with 24%. This is followed by “transportation with 16%”, “Urban protection and Planning and Urban Aesthetics” sector with 13%, “Environmental Management” sector is the sector with the 4th highest expenditures with 12%. The new strategic plan of the institution covers the years 2015-2019 and there have been some changes in the sectoral distribution. For example, there is no strategic sector with the name of the energy in a separate name and “Tourism and Local Economy” strategic sector is included. When we look at 2015, 2016, 2017 and 2018 and their classification according to the sectors with regards to the last strategic plan, it can be seen that “urban infrastructure” sector again has the highest percentages with 27%. This is followed by “transportation with 18%”. In this plan period, “Environmental Management” sector is the 3rd sector with the 13%. “Urban protection and Planning and Urban Aesthetics” sector has 10%.

The fact that these expenditures are used in investments directly affecting the city is relevant to the subject of this study. In addition, many of the investments in these sectors were considered important by the stakeholders in terms of city sustainability. For example, investments in the environment field have increased in terms of inter-sectoral ranking in the new strategic plan, and the amount of spending made has also doubled. The increase in these investments will have positive effects on the city. All these expenses are directly made by İZBB. Besides, there are expenses and activities that the same jobs create in the city with multiplier effect. When considered from this large point of view, the effect of the institution over the city increases further.

- Changes should be made in the area of procurement by taking city sustainability into account. For example, procurement procedures can be modified to prevent waste by encouraging higher quality products, and criteria can be added to specifications to eliminate institutions that do not pay attention to sustainability. Thus, the municipality has a direct impact on the city with its expenditures and also has a developing effect on the suppliers who want to enter the procurement tenders.
- Activities should be performed with collaborations such as projects joint with cooperatives that will create multiplier effect. The collaborations both improve the cooperatives in terms of sustainability and will also be guide for similar institutions.

4.8 SUGGESTIONS FOR FURTHER RESEARCH

The study was examined in an institution with a very broad scope, such as a metropolitan municipality. As stated in the restrictions, one of the most important stakeholders of the municipality is citizens. In the future studies, a public survey can be conducted which measures the perception of the municipality in terms of city sustainability and which is expected to increase its contribution to city sustainability. Thus, it can be examined which of the findings of the public survey remain within the scope of municipal supply chain management.

Content analysis under the titles of supply chain management has been made considering Chopra and Meindl (2006) supply chain macro processes. Coding was done under that categories. It is considered that different interpretations can be obtained if different categories are used in the future studies on supply chain in municipalities.

One of the most important characteristics of qualitative research is that it focuses on accessing details that cannot be easily measured, taking into account the variability of events and situations, taking into account the processes that connect the objects examined (Maxwell, (2018); Creswell, (2013)). Since the subject of the research is related to the institution which is political like municipalities and has been working for a certain period of time for election, it is thought that the research may

have different results at different times. With this feature of qualitative research, the changes in the data obtained in-depth can be compared with the results of future studies. Moreover, it is thought that the impact of the mayor, the top manager of the institution, on the subject of research will change as the impact on the city changes. These possible differences can be examined in new studies.

Quantitative research methods can be used to assess the impact of supply chain management processes which are determined by this study that have an effect on city sustainability, on the environmental, social and economic aspects of sustainability.



CONCLUSION

Sustainability, which first came to the forefront thanks to the Brundtland Report published in 1987, means that ensuring development by protecting the resources to be passed on to future generations. The concept of development includes not only economic development but also ecology, local economy, society and socio-economic structure in a much wider scope. Therefore, sustainability is not a concept that can be expressed in one word. Sustainability has been studied in the literature since the 1980s; however, in recent years, it has been complementary to almost all important concepts such as sustainable development, sustainable production and sustainable cities created by climate change.

Supply chain, which is present in all sized enterprises producing and serving, has increased its importance with increasing consumption and globalization. Companies make competition through supply chains. Supply chain management has become a necessity for lowering costs and maximizing customer expectations. While the classical supply chain management approach means managing the process from raw material to the end consumer, today it covers the management of integrated supply chain structures intertwined in the form of a network that aims not only to carry out processes but to add value to the final product.

Supply chain management is a concept based on adapting to changes in the market. The increasing importance of the sustainability concept has brought changes to consumer behavior as well. Firms, institutions and even cities had to position themselves to respond to these changing behaviors. Regardless of the field of production/service, companies and institutions that are able to keep up with the change and lead the market are able to survive. These changes are only possible through supply chains managed in an efficient and agile manner. In this way, the demands of the end consumer can be understood as soon as possible, and the production chain can keep pace with this speed.

Successfully managed supply chains, as mentioned in the literature, affect not only their own internal processes but also the development of their suppliers and even their customers. This study is based on an investigation of the relationship between urban life where sustainability gains importance increasingly and supply chain management of municipalities.

In order to examine whether supply chain management has an impact on city sustainability, which is the main purpose of this study, Izmir Metropolitan Municipality was chosen as implementation institution and a qualitative research was conducted based on the opinions of its stakeholders.

In order to achieve the aim of the research, in-depth interview technique was chosen to understand the views of municipal stakeholders in detail and determine differences if any. Interviews were conducted with internal stakeholders who work as manager or in units directly associated with 17 internal stakeholders of the municipality, and external participants selected from stakeholder institutions/experts who work in units directly associated with 15 external stakeholders of the municipality and can contribute to city sustainability.

At the end of the interviews, two separate content analyzes were conducted. The analyzes started with detailed documentation of all answers accompanied by written and oral records. In the sustainability analysis, from the data obtained, the subcategories and categories were formed by grouping those linked with each other. In the content analysis which made under the titles of supply chain management, it was aimed to find subcategories under the three categories from macro processes in the literature.

The first of the content analyzes is sustainability coding. As a result of this analysis, 15 subcategories were formed. These subcategories are grouped under the Green Strategies, Social Equity and Management categories. The highlights of this part of the analysis are discussed below.

Green Strategies, the first category of sustainability coding, is the most cited category of content analysis. When we examine the Green Strategies category, it is seen that Renewable Energy and Environmental Activities subcategories are the most emphasized ones in coding. The relevance of renewable energy to such city sustainability is a useful outcome. High citation by both internal and external stakeholders indicates high awareness in this area for both stakeholder groups. As an institution, IZBB attached special importance to renewable energy in the previous management period (2010-2015). Such importance was obvious in the strategic plan for that period since a separate strategic area was allocated for it and Directorate of Healthy Cities and Clean Energy was established accordingly. This directorate led

the way for other municipalities. Many participants made comments related to this directorate. Since the internal stakeholders are generally aware of the directorate, they gave more optimistic answers about IZBB's investments. One of the internal stakeholders, the top manager, stated that there were trainings in this field and counted the projects carried out on the subject. No participant gave a positive answer to the question "Have you heard of any training related to sustainability within your institution? Have you ever participated in such training?". This is a substantial deficiency for institutions paying attention to sustainability.

The external stakeholders highly matched renewable energy with city sustainability while mostly indicating that the municipality is not successful enough in this area. When the answers were examined, it was seen that only huge investments to relieve traffic and reduce carbon emissions such as marine transportation and tramway were considered as successful projects carried out by the municipality. However, what is noteworthy is that most of the areas addressed by the external stakeholders are energy efficiency projects that can actually be realized with far less budget. It is seen that they were not aware of the such directorate and pioneering projects in the field of renewable energy.

When the scope and power of the municipality were taken into consideration, the internal and external stakeholders stated that there are steps to be taken in the field of renewable energy by the municipality. For example, one of the internal stakeholders, who is an environmental engineer with great expertise in the field and a manager in the organization, stated that new steps were taken but there is still much to be done.

Again, the Environmental Activities subcategory is the second most cited subject under sustainability coding. The main reason for such high frequency for this subcategory is thought to be that environmental investments are considered among the main duties of municipalities from the perspective of both internal and external stakeholders. The internal stakeholders mentioned environmental activities 30% more than external stakeholders. This may be due to the fact that the activities within the scope of environmental activities are numerous and common projects for municipal internal stakeholders.

Green Purchasing subcategory is the least cited one in the Green Strategies category. The reason why this title is kept apart is that it becomes more of an issue for the research subject. Although the participants were not asked any questions related to procurement and supply, the fact that city sustainability makes the participants think of green purchasing leastwise is an indication of the importance of the impact of municipal supply chain management on city sustainability. Participants believe that although municipalities are subject to very strict laws on procurement, there are still improvements they can make in terms of green purchasing.

With the interview forms, the internal stakeholders and the participants working in the General Directorate and Municipal Companies were asked the question “Would it have an impact on the city if the municipality considered sustainability in all procurement processes?”. The answer to this question revealed that a large number of stakeholders believe there are areas that can be improved in the procurement processes. And apart from two of the stakeholders answering the question, they thought it would make a very positive contribution to city sustainability. For example, one of the internal stakeholder states “There are points in the procurement processes that can be added to specifications such as ISO documents and make a difference in the processes...”. Another one pointed out supply chain management by saying, “Each unit should make their purchasing plans more carefully by considering the needs of citizens...”. One participant did not answer the question since he did not have any idea about the purchasing processes while the other participant, an expert purchasing manager, stated that the law was an obstacle and nothing could be done in this. When the answers to the question were analyzed, it was found that many participants believe there are many areas where steps related to sustainability are can be taken. However, this change should become an institution policy to be accredited and spread to all units.

The second category of the content analysis conducted within the framework of sustainability is Social Equity. In Social Municipalism, Local Development and Awareness Raising subcategories within the Social Equity category, external stakeholders had a more word than the internal stakeholders. This point is examined in the previous section. The overall frequency of Social Equity is very close to that of the Management category. This means that sustainability is seen to be associated

with social issues, especially from the perspective of the external stakeholders. One can easily understand that people living in the city is aware of city sustainability. Before the definition of sustainability, no references were made related to positive discrimination, which is one of the subcategories of this category.

Internal stakeholders rarely addressed the subcategory areas of Social Municipalism, Local Development and Awareness whereas the external stakeholders attached importance to these areas. Due to such difference, one can easily infer that these topics should be attached more importance by the municipality in terms of city sustainability. Furthermore, the external stakeholders stated that IZBB is successful in social projects, sustainable long-term projects for disadvantaged groups, and investments affecting the society in many ways such as cooperatives. When these two data are evaluated together, one can certainly infer that the municipality has many exemplary investments, especially in the fields of social municipalism and local development. However, the municipality is not aware of the fact that these investments fall into sustainability field. In addition, it is believed they do not consider these projects as important as external stakeholders do.

The second content analysis was performed within the scope of supply chain management. The first category of this coding is Citizen Relationship Management which has been mentioned in the literature as Customer Relationship Management. Another change in this category is the subcategory given as Call Center Management in the supply chain management macro processes, and it was changed to the HIM (Citizen Contact Service), which works under the municipality and is directly responsible for the works in this subcategory. In this category, order management was mentioned the most. As a matter of fact, this is a natural consequence. Regardless of the area, the main process is order management in each institution/enterprise. However, what is important here is that the suggestions given when the participants are asked about city sustainability remain within the scope of order management under SCM.

Although cost-based issues such as pricing are very important in the private sector, only one participant emphasized it. As mentioned above, this is due to the fact that municipalities exist to serve citizens without profit.

The second category under this coding is Internal Supply Chain Management. The Strategic Planning subcategory drew attention since city sustainability can be realized through long-term and planned solutions and the municipality is a successful in this field.

One of the least mentioned topics in this area is financial management. This is an interesting finding since it is one of the areas Izmir Metropolitan Municipality is proud of for many years. This result reveals that it will contribute to city sustainability in the light of correct directions on the issues where the municipality is considered successful by the stakeholders, such as financial management. The internal and external stakeholders should be informed about this issue. As a result of the interviews, it was found out that no training and awareness raising activities were carried out for the internal stakeholders of the municipality. One can clearly infer that if the steps are taken in this area, they will have a positive effect.

As in all areas, sustainability concept is gaining importance in supply chain management literature. In this study, many participants gave answers that can be evaluated within the scope of sustainable supply chain management. In particular, the internal stakeholders gave much more reference to this subcategory when compared to others. This result shows us that municipal stakeholders' awareness on sustainability is higher than internal stakeholders. Therefore, the municipality should first take actions to increase the awareness of the internal stakeholders and then make investments for the sensitivity of the external stakeholders in this field.

The last category in the content analysis under the titles of supply chain management is Supplier Relationship Management. Emphasizing this topic shows that municipality as one of the public institutions has a perception parallel to the developments in the private sector. If supply chain management is considered as a whole, then it will be possible to increase the sustainable supply chain practices further in the literature. This will have an impact on city sustainability.

There certain points open for improvement as the references to supply collaboration imply even though the law impedes many areas under the supply chain management. For example, a program can be developed for co-operatives and local producers for direct purchasing, which are currently implemented and exemplified by stakeholders.

The municipality's concept of doing business with cooperatives and local producers falls into the SRM subcategory in SCM coding. Projects are supported as these producers develop themselves further. This understanding of work is similar to that of companies with a successful SCM structure in the field of SRM in the private sector. Therefore, it is a pioneer in the implementation of the projects in the public sector. These issues were addressed by the internal stakeholders. The importance of cooperation and its impact on city sustainability should be better reflected to external stakeholders.

With the interview form, the participants were asked to score the success of the municipality in terms of sustainability. As a result of the analysis of this scoring, no significant relationship was found between the participants' working years and their scores/position as managers or not. The average score by both municipalities and external stakeholders is 3 points. The internal stakeholders gave 3 points on average for both top and mid-level managers. Based on this result, it is concluded that the municipality has sustainability activities; however, there are points that can be improved from the perspective of the internal stakeholders and the external stakeholders working in the general directorates/municipal company that the question was addressed.

In general, the participants' perceptions and statements about sustainability did not change after the definition of sustainability was given. Nevertheless, albeit in the minority, the sustainability perception of several participants changed after the definition of sustainability in the literature was given. For example, after giving the definition, one of the external stakeholders emphasized the issues are related with economy whereas another one mentioned issue related with social.

Another striking result about the “meaning of sustainability” question is that the relationship between the concept and environment is less than expected. When the question "Is sustainability just a matter of the environment?" was asked to experts, only one expert answered “Yes”. As mentioned in the literature (Ashby et al, 2012), the concept of sustainability is generally associated with the environment. Even the work in this area is focused on the environment. Sustainability and the concept of environment were expected to be linked more due to the statements in literature and general idea. However, in the question in which the words that

sustainability brings to minds at first, the second most stressed word environment was given as a response for 4 times only by external stakeholders, but among internal stakeholders this response was never given although there were many people working as regards environment. This indicates the broadness of the concept and increase in the awareness of economic and social fields.

In brief, as citizens, stakeholders' primary expectations from the municipality is to be listened to well about their needs and manage the city properly. Stakeholders think that if the municipality is well managed, it will bring success in the field of city sustainability.



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APPENDICES

APPENDIX 1: INTERVIEW GUIDELINE FOR INTERNAL STAKEHOLDERS (IN ENGLISH)

The main objective of this study is to examine the effects of supply-chain management on city sustainability in metropolitan municipalities as the most important actor in local governments.

The results will be used for only academic research.

Thank you for your time.

Demographic

1. Name, Age, Educational Attainment, Field of Education
2. Job Title
3. Assigned position (existing and in the past)
4. For how many years have you worked in the municipalities?
5. For how many years have you worked in this municipality?

Cognitive Knowledge Level – Consciousness Quantification

6. Did you hear the term of sustainability?
7. Which words do you think of when you hear the term of sustainability?
8. What is the meaning of sustainability for you?
9. Is the sustainability only about environment for you? If the answer is “no”, which areas can you mention about sustainability?
10. How do you think the Municipality looks in terms of sustainability?
11. Do you think that municipalities have a duty on "sustainability"?
12. In which areas should municipalities invest most in terms of "sustainability"?
13. Which activities is your municipality doing within the scope of Sustainability?
14. Are there any goals, objectives or activities related to sustainability in your future plans of the unit that you are authorizing?
15. Have activities such as seminars or training programs been held in the municipality regarding sustainability?

Screening questions after definition and coverage of sustainability

16. In this context, do you think that you want to add to the activities that your municipality carries out in the terms of sustainability?

17. In this context, do you think that the municipalities have a duty on "sustainability"?
18. In this context, in which areas do you think that municipalities should invest or operate in terms of "sustainability"?
19. Do you think people have expectations from the municipality about "sustainability"?
20. Do you think that there are practice or practice areas that need to be done by municipalities related to "sustainability" in the future?
21. How does the municipality make an impact on the city if it moves in all its decisions and actions, taking into account sustainability?
22. Does your municipality consider the terms of "sustainability" in the procurement process? If yes, how? Do you think the legislation will allow it?
23. Do you have any comments on any other topics or interpretations you would like to add?
24. How much do you think the top managers are conscious of? (1 to 5)
25. How much do you think the mid-level managers are conscious of? (1 to 5)

APPENDIX 2: INTERVIEW GUIDELINE FOR INTERNAL STAKEHOLDERS (IN TURKISH)

Bu çalışmanın asıl amacı yerel yönetimlerin en önemli aktörü olan büyükşehir belediyelerinde tedarik zinciri yönetiminin kentsel sürdürülebilirliğe etkisini incelemektir.

Sonuçlar yalnız akademik çalışma için kullanılacaktır.

Zaman ayırdığınız için teşekkür ederim.

Demografik

1. Ad Soyad, Yaş, Eğitim Düzeyi, Eğitim Alanı
2. Unvanınız?
3. Görev Alanınız? (Mevcut ve Geçmişte)
4. Kaç Yıldır Belediyelerde Çalışmaktasınız?
5. Bu belediyede kaç yıldır çalışıyorsunuz?

Kavramsal Bilgi Düzeyi-Bilinç Ölçme

6. “Sürdürülebilirlik” kavramını daha önce duydunuz mu?
7. “Sürdürülebilirlik” denildiğinde aklınıza gelen kelimeler neler?
8. “Sürdürülebilirlik” sizce ne demek?
9. Sizce sürdürülebilirlik kavramı sadece çevre ile ilgili bir olgu mudur? Hayırsa ilgili olduğunu düşündüğünüz başka hangi alanları sayabilirsiniz?
10. Belediyenin Sürdürülebilirlik Açısından Görünüşü sizce nasıl?
11. Sizce “Sürdürülebilirlik” konusunda belediyelerin görevi var mıdır?
12. Sizce “Sürdürülebilirlik” konusunda belediyeler en çok hangi alanlarda yatırım yapmalıdır?
13. Belediyenizin Sürdürülebilirlik kapsamında yaptığı faaliyetler neler?
14. Sizin yetkili olduğunuz birimin gelecek planlarında sürdürülebilirlikle ilgili herhangi amaç/hedef/faaliyet var mı?
15. Sürdürülebilirlik ile ilgili olarak Belediye bünyesinde herhangi bir seminer, eğitim programı vb. etkinlik yapıldı mı?

Sürdürülebilirliğin tanımı ve kapsamı yapıldıktan sonra tarama soruları

16. Bu kapsamda düşündüğünüzde Belediyenizin Sürdürülebilirlik kapsamında yaptığı faaliyetlere eklemek istedikleriniz var mı?

17. Bu kapsamda düşününce sizce “Sürdürülebilirlik” konusunda belediyelerin görevi var mıdır?
18. Bu kapsamda düşününce sizce “Sürdürülebilirlik” konusunda belediyeler en çok hangi alanlarda yatırım/faaliyet yapmalıdır?
19. Sizce halkın “Sürdürülebilirlik” konusunda belediyeden beklentileri var mı ?
20. Gelecekte “Sürdürülebilirlik” ile ilgili belediyelerin yapmasını gerekli gördüğünüz uygulama/uygulama alanları var mı?
21. Belediye tüm karar ve eylemlerinde sürdürülebilirliği gözeterek hareket ederse kent üzerinde nasıl etki yaratır?
22. Belediyenizde satın alma süreçlerinde “Sürdürülebilirlik” kavramı dikkate alınıyor mu? Evet ise ne şekilde? Sizce kanunlar buna engel mi?
23. Eklemek istediğiniz başka konu veya mülakat ile ilgili yorumunuz var mı?
24. Orta Yöneticilerin sürdürülebilirliğe bakışına kaç puan verirsiniz?
25. Üst Yöneticinin sürdürülebilirliğe bakışına kaç puan verirsiniz?

APPENDIX 3: INTERVIEW GUIDELINE FOR EXTERNAL STAKEHOLDERS / General Directorate-Companies (IN ENGLISH)

The main objective of this study is to examine the effects of supply-chain management on city sustainability in metropolitan municipalities as the most important actor in local governments.

The results will be used for only academic research.

Thank you for your time.

Demographic

1. Name, Age, Educational Attainment, Field of Education
2. Job Title
3. Assigned position (existing and in the past)
4. For how many years have you worked in the municipality or companies related with municipalities?
5. Is your business connected to the municipality? If so, what is the connection?

Cognitive Knowledge Level – Consciousness Quantification

6. Did you hear the term of sustainability?
7. Which words do you think of when you hear the term of sustainability?
8. What is the meaning of sustainability for you?
9. Is the sustainability only about environment for you? If the answer is “no”, which areas can you mention about sustainability?
10. How do you think the Municipality looks in terms of sustainability?
11. Do you think that the municipalities have a duty on "sustainability"?
12. In which areas should municipalities invest most in terms of "sustainability"?
13. Which activities is the municipality doing within the scope of Sustainability?
14. Are there any goals, objectives or activities related to sustainability in your future plans of the unit that you are authorizing?

Screening questions after definition and coverage of sustainability

15. In this context, do you think that the municipalities have a duty on "sustainability"?
16. If you think in this context, do you want to add to the activities that the municipality carries out in the context of sustainability?

17. In this context, in which areas do you think that municipalities should invest or operate in terms of "sustainability"?
18. Do you think people have expectations from the municipality about "sustainability"?
19. Do you think that there are practice or practice areas that need to be done by municipalities related to "sustainability" in the future?
20. How does the municipality make an impact on the city if it moves in all its decisions and actions, taking into account sustainability?
21. Does the municipality consider the terms of "sustainability" in the procurement process? If yes, how?
22. Do you have any comments on any other topics or interpretations you would like to add?
23. How much do you think the top managers are conscious of? (1 to 5)
24. How much do you think the mid-level managers are conscious of? (1 to 5)

APPENDIX 4: INTERVIEW GUIDELINE FOR EXTERNAL STAKEHOLDERS / General Directorate-Companies (IN TURKISH)

Bu çalışmanın asıl amacı yerel yönetimlerin en önemli aktörü olan büyükşehir belediyelerinde tedarik zinciri yönetiminin kentsel sürdürülebilirliğe etkisini incelemektir.

Sonuçlar yalnız akademik çalışma için kullanılacaktır.

Zaman ayırdığınız için teşekkür ederim.

Demografik

1. Ad Soyad, Yaş, Eğitim Düzeyi, Eğitim Alanı
2. Unvanınız?
3. Görev Alanınız? (Mevcut ve Geçmişte)
4. Belediyede veya belediye ile ilişkili firmalarda kaç yıldır çalışıyorsunuz?
5. Yaptığınız işin belediye ile bağlantısı var mı? Nedir?

Kavramsal Bilgi Düzeyi-Bilinç Ölçme

6. “Sürdürülebilirlik” kavramını daha önce duydunuz mu?
7. “Sürdürülebilirlik” denildiğinde aklınıza gelen kelimeler neler?
8. “Sürdürülebilirlik” sizce ne demek?
9. Sizce sürdürülebilirlik kavramı sadece çevre ile ilgili bir olgu mudur? Hayırsa ilgili olduğunu düşündüğünüz başka hangi alanları sayabilirsiniz?
10. Belediyenin Sürdürülebilirlik Açısından Görünüşü sizce nasıl?
11. Sizce “Sürdürülebilirlik” konusunda belediyelerin görevi var mıdır?
12. Sizce “Sürdürülebilirlik” konusunda belediyeler en çok hangi alanlarda yatırım yapmalıdır?
13. Belediyenizin Sürdürülebilirlik kapsamında yaptığı faaliyetler neler?
14. Şirketinizde/ Genel müdürlüğünüzün/ Sizin yetkili olduğunuz birimin gelecek planlarında sürdürülebilirlikle ilgili herhangi amaç/hedef/faaliyet var mı?

Sürdürülebilirliğin tanımı ve kapsamı yapıldıktan sonra tarama soruları

15. Bu kapsamda düşününce sizce “Sürdürülebilirlik” konusunda belediyelerin görevi var mıdır?
16. Bu kapsamda düşündüğünüzde Belediyenizin Sürdürülebilirlik kapsamında yaptığı faaliyetlere eklemek istedikleriniz var mı?

17. Bu kapsamda düşününce sizce “Sürdürülebilirlik” konusunda en çok hangi alanlarda yatırım/faaliyet yapılmalıdır?
18. Sizce halkın “Sürdürülebilirlik” konusunda belediyeden beklentileri var mı ?
19. Gelecekte “Sürdürülebilirlik” ile ilgili belediyelerin yapmasını gerekli gördüğünüz uygulama/uygulama alanları var mı?
20. Belediye tüm karar ve eylemlerinde sürdürülebilirliği gözeterek hareket ederse kent üzerinde nasıl etki yaratır?
21. Satın alma süreçlerinde “Sürdürülebilirlik” kavramı dikkate alınıyor mu? Evet ise ne şekilde?
22. Eklemek istediğiniz başka konu veya mülakat ile ilgili yorumunuz var mı?
23. Orta Yöneticilerin sürdürülebilirliğe bakışına kaç puan verirsiniz? (1’den 5’e kadar)
24. Üst Yöneticinin sürdürülebilirliğe bakışına kaç puan verirsiniz? (1’den 5’e kadar)

APPENDIX 5: INTERVIEW GUIDELINE FOR EXTERNAL STAKEHOLDERS / Supplier (IN ENGLISH)

The main objective of this study is to examine the effects of supply-chain management on city sustainability in metropolitan municipalities as the most important actor in local governments.

The results will be used for only academic research.

Thank you for your time.

Demographic

1. Name, Age, Educational Attainment, Field of Education
2. Job Title
3. What's the name of company you work for?
4. Assigned position (existing and in the past)

Cognitive Knowledge Level – Consciousness Quantification

5. Did you hear the term of sustainability?
6. Which words do you think of when you hear the term of sustainability?
7. What is the meaning of sustainability for you?
8. Is the sustainability only about environment for you? If the answer is “no”, which areas can you mention about sustainability?
9. How do you think the Municipality looks in terms of sustainability?
10. Do you think that municipalities have a duty on "sustainability"?
11. Do you think that companies have a duty on "sustainability"?
12. In which areas should municipalities invest most in terms of "sustainability"?

Screening questions after definition and coverage of sustainability

13. If you think in this context, do you want to add to the activities that the municipality carries out in the context of sustainability?
14. In this context, do you think that the municipalities have a duty on "sustainability"?
15. In this context, do you think that the companies have a duty on "sustainability"?
16. In this context, in which areas do you think that municipalities should invest or operate in terms of "sustainability"?

17. Do you think people have expectations from the municipality about "sustainability"?
18. Do you think the municipality can meet these expectations?
19. Do you think that there are practice or practice areas that need to be done by municipalities related to "sustainability" in the future?
20. How does the municipality make an impact on the city if it moves in all its decisions and actions, taking into account sustainability?
21. Do you have any comments on any other topics or interpretations you would like to add?
22. How many points do you give to the municipality point of view of sustainability?

APPENDIX 6: INTERVIEW GUIDELINE FOR EXTERNAL STAKEHOLDERS / Supplier (IN TURKISH)

Bu çalışmanın asıl amacı yerel yönetimlerin en önemli aktörü olan büyükşehir belediyelerinde tedarik zinciri yönetiminin kentsel sürdürülebilirliğe etkisini incelemektir.

Sonuçlar yalnız akademik çalışma için kullanılacaktır.

Zaman ayırdığınız için teşekkür ederim.

Demografik

1. Ad Soyad, Yaş, Eğitim Düzeyi, Eğitim Alanı
2. Unvanınız?
3. Kurumunuz?
4. Görev Alanınız? (Mevcut ve Geçmişte)

Kavramsal Bilgi Düzeyi-Bilinç Ölçme

5. “Sürdürülebilirlik” kavramını daha önce duydunuz mu?
6. “Sürdürülebilirlik” denildiğinde aklınıza gelen kelimeler neler?
7. “Sürdürülebilirlik” sizce ne demek?
8. Sizce sürdürülebilirlik kavramı sadece çevre ile ilgili bir olgu mudur? Hayırsa ilgili olduğunu düşündüğünüz başka hangi alanları sayabilirsiniz?
9. Belediyenin Sürdürülebilirlik Açısından Görünüşü sizce nasıl? (1’den 5’e kadar)
10. Sizce “Sürdürülebilirlik” konusunda belediyelerin görevi var mıdır?
11. Sizce “Sürdürülebilirlik” konusunda firmaların görevi var mıdır?
12. Sizce “Sürdürülebilirlik” konusunda belediyeler en çok hangi alanlarda yatırım yapmalıdır?

Sürdürülebilirliğin tanımı ve kapsamı yapıldıktan sonra tarama soruları

13. Bu kapsamda düşündüğünüzde Belediyenizin Sürdürülebilirlik kapsamında yaptığı faaliyetlere eklemek istedikleriniz var mı?
14. Bu kapsamda düşününce sizce “Sürdürülebilirlik” konusunda belediyelerin görevi var mıdır?
15. Bu kapsamda düşününce Sizce “Sürdürülebilirlik” konusunda firmaların görevi var mıdır?

16. Bu kapsamda düşününce sizce “Sürdürülebilirlik” konusunda belediyeler en çok hangi alanlarda yatırım/faaliyet yapmalıdır?
17. Sizce halkın “Sürdürülebilirlik” konusunda belediyeden beklentileri var mı ?
18. Sizce belediyeniz bu beklentileri karşılayabiliyor mu?
19. Gelecekte “Sürdürülebilirlik” ile ilgili belediyelerin yapmasını gerekli gördüğünüz uygulama/uygulama alanları var mı?
20. Belediye tüm karar ve eylemlerinde sürdürülebilirliği gözeterek hareket ederse kent üzerinde nasıl etki yaratır?
21. Eklemek istediğiniz başka konu veya mülakat ile ilgili yorumunuz var mı?
22. Belediyenin sürdürülebilirliğe bakışına kaç puan verirsiniz? (1 ile 5 arasında)

APPENDIX 7: INTERVIEW GUIDELINE FOR EXTERNAL STAKEHOLDERS / Academicians-NGOs (IN ENGLISH)

The main objective of this study is to examine the effects of supply-chain management on city sustainability in metropolitan municipalities as the most important actor in local governments.

The results will be used for only academic research.

Thank you for your time.

Demographic

1. Name, Age, Educational Attainment, Field of Education
2. Job Title
3. Name of the institution you work for?
4. Assigned position (existing and in the past)
5. Is your business connected to the municipality? If so, what is the connection?

Cognitive Knowledge Level – Consciousness Quantification

6. Did you hear the term of sustainability?
7. Which words do you think of when you hear the term of sustainability?
8. What is the meaning of sustainability for you?
9. Is the sustainability only about environment for you? If the answer is “no”, which areas can you mention about sustainability?
10. How do you think the Municipality looks in terms of sustainability?
11. Do you think that municipalities have a duty on "sustainability"?
12. In which areas should municipalities invest most in terms of "sustainability"?
13. Which activities is the municipality doing within the scope of Sustainability?

Screening questions after definition and coverage of sustainability

14. If you think in this context, do you want to add to the activities that your municipality carries out in the context of sustainability?
15. If you think in this context, do you want to add to the activities that your company carries out in the context of sustainability?
16. In this context, do you think that you want to add to the activities that your municipality carries out in the terms of sustainability?

17. In this context, do you think that the municipalities have a duty on "sustainability"?
18. In this context, in which areas do you think that municipalities should invest or operate in terms of "sustainability"?
19. Do you think people have expectations from the municipality about "sustainability"?
20. Do you think your municipality can meet these expectations?
21. How does the municipality make an impact on the city if it moves in all its decisions and actions, taking into account sustainability?
22. Do you have any comments on any other topics or interpretations you would like to add?
23. How many points do you give to the municipality point of view of sustainability? (1 to 5)

APPENDIX 8: INTERVIEW GUIDELINE FOR EXTERNAL STAKEHOLDERS / Academicians-NGOs (IN TURKISH)

Bu çalışmanın asıl amacı yerel yönetimlerin en önemli aktörü olan büyükşehir belediyelerinde tedarik zinciri yönetiminin kentsel sürdürülebilirliğe etkisini incelemektir.

Sonuçlar yalnız akademik çalışma için kullanılacaktır.

Zaman ayırdığınız için teşekkür ederim.

Demografik

1. Ad Soyad, Yaş, Eğitim Düzeyi, Eğitim Alanı
2. Unvanınız?
3. Kurumunuz?
4. Görev Alanınız? (Mevcut ve Geçmişte)
5. Yaptığınız iş belediye ile bağlantılı mı? Evet ise bağlantısı nedir?

Kavramsal Bilgi Düzeyi-Bilinç Ölçme

6. “Sürdürülebilirlik” kavramını daha önce duydunuz mu?
7. “Sürdürülebilirlik” denildiğinde aklınıza gelen kelimeler neler?
8. “Sürdürülebilirlik” sizce ne demek?
9. Sizce sürdürülebilirlik kavramı sadece çevre ile ilgili bir olgu mudur? Hayırsa ilgili olduğunu düşündüğünüz başka hangi alanları sayabilirsiniz?
10. Belediyenin Sürdürülebilirlik Açısından Görünüşü sizce nasıl?
11. Sizce “Sürdürülebilirlik” konusunda belediyelerin görevi var mıdır?
12. Sizce “Sürdürülebilirlik” konusunda belediyeler en çok hangi alanlarda yatırım yapmalıdır?
13. Belediyenizin Sürdürülebilirlik kapsamında yaptığı faaliyetler neler?

Sürdürülebilirliğin tanımı ve kapsamı yapıldıktan sonra tarama soruları

14. Bu kapsamda düşündüğünüzde Belediyenizin Sürdürülebilirlik kapsamında yaptığı faaliyetlere eklemek istedikleriniz var mı?
15. Bu kapsamda düşününce sizce “Sürdürülebilirlik” konusunda belediyelerin görevi var mıdır?
16. Bu kapsamda düşününce sizce “Sürdürülebilirlik” konusunda belediyeler en çok hangi alanlarda yatırım/faaliyet yapmalıdır?

17. Sizce “Sürdürülebilirlik” konusunda belediyelerin görevi var mıdır?
18. Sizce “Sürdürülebilirlik” konusunda belediyeler en çok hangi alanlarda yatırım yapmalıdır?
19. Sizce halkın “Sürdürülebilirlik” konusunda belediyeden beklentileri var mı ?
20. Sizce belediyeniz bu beklentileri karşılayabiliyor mu?
21. Belediye tüm karar ve eylemlerinde sürdürülebilirliği gözeterek hareket ederse kent üzerinde nasıl etki yaratır?
22. Eklemek istediğiniz başka konu veya mülakat ile ilgili yorumunuz var mı?
23. Belediyenin sürdürülebilirliğe bakışına kaç puan verirsiniz? (1 ile 5 arasında)

