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FACTORING AS A FINANCIAL OPTION: EVIDENCE FROM TURKEY

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FACTORING AS A FINANCIAL OPTION: EVIDENCE FROM TURKEY  
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## ABBREVIATIONS

SMEs: Small and Medium Size Enterprises

SSI: Social Security Administration

AFI: Association of Financial Institution

FCI: Factor Chain International

IFG: International Factors Group

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## ABSTRACT

This paper focuses on factoring use of businesses as a financial option in Turkey. In the study, hypotheses are generated in order to explain the relationship between choice of factoring and types of business. The analysis based on establishing a profile for firms using demographic characteristics such as turnover, age, ownership type, and sector. On the other hand, We enlarge our analysis in order to express the effects of credit availability, collateral requirements by banks and experiencing financial difficulties on the choice of factoring. The study depends on a comprehensive survey. The survey of our study has been performed with 444 firms that 198 of them are working with factoring companies. As a result of the empirical study, we determined that each independent variable have an important influence on the choice of factoring, except sector. In addition to that, we conclude that factoring services as a source for working capital and a tool for cash flow improvement become more popular day by day among the small and medium size enterprises in Turkey.

**Key Words:** Factoring, SMEs, Financing, Credit Rationing, Working Capital

## ÖZET

Bu çalışma Türkiye’de finansal bir seçenek olarak faktoring kullanımına odaklanmaktadır. Çalışmada, firma profilleri ile bu firmaların faktoring kullanımı tercihi arasındaki ilişkinin anlaşılması için hipotezler oluşturulmuştur. Hipotezlere ilişkin çalışma gerçekleştirilirken, firmalara ciro, yaş, ortaklık yapısı ve faaliyet gösterdiği sektör gibi karakteristik özellikleri yardımıyla bir profil oluşturulması amaçlanmıştır. Diğer taraftan, firmaların kredibilitesinin, bankalar tarafından talep edilen teminat tutarlarının ve finansal zorluklar tecrübe etmelerinin faktoring servislerine yönelme noktasındaki etkisini anlamak amacıyla çalışmamız genişletilmiştir. Analiz çalışmaları kapsamlı bir anket çalışmasına dayanmaktadır. 198 adedi faktoring servisleri kullanan firmalardan oluşmak üzere anket çalışması toplam 444 işletme ile gerçekleştirilmiştir. Analiz çalışmaları sonucunda, faaliyet gösterilen sektör dışındaki, belirlenen ve ampirik çalışmada kullanılan tüm değişkenlerin firmaların faktoring servislerine yönelmesi konusunda önemli bir parametre ve etken olduğu belirlenmiştir. Buna ek olarak, işletme sermayesi için finansal bir kaynak ve nakit akışı açısından oldukça iyi bir araç olarak değerlendirilebilecek faktoring servislerinin ülkemizde orta küçük işletmeler arasında günden güne daha popüler hale geldiği görülmüştür.

**Anahtar Kelimeler:** Faktoring, Kobi, Finansman, Kredi Sınırlaması, İşletme Sermayesi

## INTRODUCTION

Small and Medium size enterprises (SMEs) are very important and essential for any economy and any country. Because, the firms have a significant role in terms of contributing to production, employment, and economic growth.

SMEs have constituted % 99,8 of total business enterprises and % 74,2 of total employment in Turkey according to the statistics in 2013 (Statistic Small and Medium Size Enterprises, 2015). In addition to that, There are 1.5 million companies in Turkey according to statistics of Social Security Administration. % 63 of all companies in Turkey employed fewer than three people while % 85 of them employed fewer than ten people.

It shows that small and medium size enterprises are a critical issue for the economy. In common with Turkey, these businesses compose a large part of the economy and the private sector in many developed and developing countries (Beck & Demirguc-Kunt, 2006).

But, small and medium size enterprises are faced with many financial problems in their operations in Turkey, as well as in all other countries. SMEs have challenges in the market when they try to survive, develop and grow. As it is well known, the relatively small firms in Turkey may not take advantage of external financing sources and they try to meet their financial needs by way of equity capital.

SMEs operating in competitive market conditions need a high level of working capital in order to survive and increase sales volume. Alongside competitive market conditions, inflation that affects the market conditions negatively is another difficulty for the businesses. Under these circumstances, SMEs in Turkey seek short-term financing sources by reason of operating with insufficient working capital and credit sales.

Under normal conditions, bank loans and trade credits are the main sources of financing for SMEs. But so many firms have disadvantages in the relationship with

banks. Many small and medium size firms may face with some difficulties to find external sources because of the risk assessment process of financial institutions. Access to finance is influenced by funding preferences such as in the pecking order theory (Howorth, 2001) or risk aversion of banks. So, the banks try to find and prefer less risky ventures or better borrowers (Irwin, D. & Scott, J.M., 2010).

As a result, one of the most important problems is credit rationing for SMEs. And the other one is the finance gap. We will give more detail information about credit rationing and finance gap problems of the firms in the next chapters.

This being the case, small and medium size enterprises seek for alternative financing options in order to solve financial difficulties in the management of working capital. The owners of small and medium size enterprises have been discouraged because they will know that the application will be rejected by banks (Watson & Newby & Mahuka, 2009). In intent to figure out such these problems, many enterprises prefer to pledge account receivable that one the most important component of their working capital. So, this process is defined as factoring (Soufani, 2002).

In the face of behaviors and preferences of firms and enterprises, the factoring sector has rapid growth in Turkey with the effects of the demand side. For instance, the transaction volume of factoring companies in Turkey increased % 20 in comparison with the previous year in 2017 (Association of Financial Institutions 2018).

This study tries to explain the relationship between the characteristics of firms and choice of factoring. We focus on turnover, age, industry, and types of legal ownership in order or establish a profile for borrower firms. And also, the relationship between choice of factoring and other financial issues of firms such as availability of credit, collateral requirements by banks, and experiencing financial distress are tried to be explained.

In order to analyze the relationship, we use a comprehensive survey answered by owners or managers of the business. And also 7 hypotheses are tested to understand the factoring use of respondent firms.

On the other hand, the paper is organized as follows. In the next parts of the introduction, we will discuss credit rationing, finance gap, the question of “is factoring a solution?” and dynamics of the factoring industry in Turkey. In addition to that, we will give some information factoring services and types of factoring transactions provided by factoring companies in Turkey.

Chapter 2 is related to the literature review that we focus on the recent studies concerning our topic. Chapter 3 refers to the tested hypotheses. Chapter 4 is the chapter that data, methodology and sample characteristics are explained. In chapter 5, we will give detail information about our findings obtained by analysis. And Also, the last chapter of our paper is the conclusion part.

## **1.1 CREDIT RATIONING**

Small and medium size enterprises have mainly two option to maintain their operations: usage of equity capital or bank loans. Although equity capital is a source for firms, the level of equity capital of SMEs is limited. In these circumstances, bank loans become more important for enterprises as a financing option. At the same time, bank credit is often a major source of capital assisting SMEs in order to substitute for trade credit with the high-interest expense (Fisman & Love, 2003; Peterson & Rajan, 1997). Notwithstanding, the relatively small firms have a difficulty to find bank loans. This means that the percentage of approved loans by the bank for SMEs is low.

Credit rationing is one of the most important steps performed by the banks. At the same time, this issue is one of the most compeller processes for SMEs. Because financial institutions are very cautious in their risk assessment process in the relationship with borrowers. Lots of assessment methods and tools are used for measuring the credit risk of the debtor.

In recent years, risk assessments methods and tools are improved by means of Risk Center's data and development of information technologies in recent years. These improvements make the risk assessment process more complex and important for each side (banks and borrowers).

Small and medium size enterprises with limited capital structure may not satisfy bank requirements. The firms cannot meet the collateral request by the banks to get credit also. At the same time, financial ratios and structure of the balance sheet of enterprises may not be enough for bank risk assessment process.

Actually, banks prefer to generally work with relatively bigger firms instead of smaller ones. More clearly, providing credit to small and medium size enterprises is not a priority for any bank (Canales & Nanda, 2012). In other respects, SMEs endure a higher rate of interest when they manage to get a bank loan. Banks give loans with higher interest rates because of the credit risk underlined about the financial situation and limited capital structure of SMEs.

On the other hand, because the bank would like to decrease the credit risk and non-performing loans (NPL), collateral requirements by banks increase in the face of the loans demanded by small and young firms. When relatively bigger firms may meet the higher value of collateral requirements by banks, relatively smaller firms have difficulty to meet this kind of collateral requests. In these circumstances, the owners of small and medium size enterprises resort to use personal assets as collateral in order to get banks loans.

Also, some firms such as newly-established firms or businesses that have been experiencing financial distress have a huge disadvantage in the relationship with financial institutions, especially with banks. The relationships are one of the most important points in terms of determining credit rationing (Peterson & Rajan, 1994). According to Peterson and Rajan, the causes of credit rationing, adverse selection, and moral hazard issue become more momentous for small and young firms.

When the financial condition of the firms is not enough to meet the requirements of the banks for credit. Alternative options come up. At this point, factoring companies

come into play. Factoring or invoice discounting system use drawer's financial ratios as base and risk assessment process has been performed over buyer (buyer of factoring company's customer) instead of the seller (customer of factoring company). Under these circumstances, businesses with poor financial ratios have a chance to get external funds.

So, factoring services as an external source of finance for SMEs is a reasonable option. Availability of credit by banks is very limited for the firms that have poor financial ratios. Factoring services support the businesses which have such difficulties to overcome such problems and reach to external financing sources easily.

For these reasons, the usage of factoring services has an increasing trend between recent years. The average growth rate of the factoring sector is % 25 (AFI).

In the next chapter, we will give brief information about the finance gap problem for SMEs.

## **1.2 FINANCE GAP**

Theoretical and empirical studies have been performed related to credit rationing and the finance gap for many years. Small and medium size enterprises are faced with this kind of financial difficulties in Turkey, in common with the rest of the World. The debatable issue here is based on;

- Principal Theory
- Agent Theory
- Asymmetric Information (coming from adverse selection and moral hazard)

(Stiglitz & Weiss, 1981) and (De Meza & Webb, 1987) identified in very well this issue with the contributions by (Cressy, 1996). At the same time, many survey studies have been made in order to obtain empirical evidence over the years abroad. For instance, some of these surveys are listed below that have been based on official reports:

- Macmillian, 1931

- Radcliffe, 1559
- Bolton, 1971
- Wilson, 1971
- Rhodes, 1984
- NEDC, 1986
- Hall, 1989
- ACOST, 1990
- Bank of England, 1994, 1995, 1996, 1997, 1998, 1999

On the other hand, practicing on changing the structure of the equity gap is generated in a good way. For example, (Bester and Hellwig, 1989) and (Mason and Harrison, 1994) defined it as “primarily a shortage of seed, start-up, and early-stage finance”. The evidence of a debt gap has been obtained by means of regular surveys. One of the most common ones is the Forum of Private Business (Binks and Ennew, 1994, 1996, 1998). Also, there are so many others.

The important part of small and medium size enterprises are faced with funding shortage in their survivor and growth process (Cosh & Hughes, 2000). Finding external financing sources is a key obstacle for small and medium size enterprises in terms of surviving and the chance of prosperousness during the start-up period. From this point of view, availability to credit is a vital issue for the firms that are dependent on external financing funds.

It is recognized that the management of working capital for small and medium size enterprises (SMEs) may sometimes be hard work. On the other hand, many empirical and theoretical study shows that SMEs confront the existence of credit rationing and finance gap problems.

It is determined that immediate cash payment in trade activity is not necessary. For instance, so many businesses do not have to make immediate cash payment for their merchandise. On the other hand, enterprises need cash to liabilities. And, many of them seek for short –term bank loans in order to overdraft facilities. But the problem

related to the availability of credit cause a delay of payment and this situation affects the management of working capital and cash flow control.

For small and newly-established businesses, market volatility, weaknesses in the management of working capital and control of cash flow, delayed payment are bigger issues when compared to big businesses.

We will focus on the question that *“Is Factoring Services A Solution”* for SMEs financing in the next section.

### 1.3 IS FACTORING A SOLUTION?

As we mentioned, the management of working capital and access to finance are one of the major problems for small and medium size enterprises. This management and finance problems are vital for relatively younger and smaller firms according to the evidence from our analyses.

Factoring and invoice discounting services are seen as an alternative option that offers some solution to the problems about the management of working capital. So, there are perfect market conditions for factoring companies for sales of factoring and invoice discounting services to firms (Soufani, 2022).

**Table 1.1 Transaction Volume and Number of Customers of Factoring Sector in Turkey**

	30 June 2018	30 June 2017	Change (%)
Transaction Volume (Million TL)	82.201	69.251	18,7%
Number of Customer	122.228	101.536	20,4%

Source: AFI, 2018

As you see the table above, the number of customers of factoring companies in Turkey have increased % 20,4 as of June 2018 in comparison with 2017. This is an indicator that showing the factoring sector as a market with an increasing trend.

Factoring process refers to take responsibility for the collections by factoring company for the seller that is the customer of factoring companies. It is determined

that factoring firm take the credit risk for the solvency of customer firms. (Mian & Smith, 1992) and (Smith & Schnucker, 1994) prove that economies of scale affect the decisions of integrating. (Soufani, 2002) emphasized that "...because credit management internalization is greater when the selling firm is larger and the percentage of trade credit customer is higher" in the paper.

According to factoring companies, factoring and invoice discounting services are the best fit option for new-established and relatively smaller firms. So, the relationship between demand and supply side of factoring is the key factor at this point.

In the next part, you will be informed about the structure and dynamics of the factoring sector in Turkey; the history, the volume, the size.

#### **1.4 FACTORING INDUSTRY IN TURKEY**

Factoring is based on a financial service that provides to the seller the transfer of receivables that refers to sales of goods and services to a factor. There are 3 sides in a factoring transaction: a debtor (a company buying goods or services from seller), a seller (a company selling goods or services to the buyer) and the factor.

Factoring is a kind of financial services enabling the businesses to sell their account receivable to a factoring company for cash payment and facilitating management of working capital and cash flow of firms (Soufani, 2002). Factoring company ensure financing to the seller before the maturity and undertake the risk of non-payment of buyer subject to providing goods or services.

Factoring system has 3 parties as required by transactions: factoring company, customer and debtor.

Factoring company refers to an institution providing factoring services. In this system, the customer (vendor) is the businesses that benefit from services providing by the factoring company. Debtor (buyer) refers to the borrower of receivable in relation to the assignment in order to provide factoring services. On the other hand,

a factoring agreement must be signed by each side of the contract; the factoring company and the customer.

In the oncoming part of this chapter, we will speak of factoring services, types of factoring, cost of factoring, the benefits of factoring to businesses, and historical developments of factoring in the World and Turkey. Then, we are going to give some useful information and statistics in order to understand better what factoring services mean for Turkish SMEs.

#### **1.4.1 Factoring Services**

Factoring services differ from as for that customer needs and priorities. But, there are 3 main factoring services provided by factoring companies; “Transaction of Business”, “Financing” and “Guarantee”.

Transaction of business refers to the management of receivables as a collection. These services focus on;

- Keeping records,
- Keeping receivable accounts,
- Follow-up collection

Collection services depend on the debtor. Because this kind of services is limited with payment made by the debtor and making payment is bound up debtor’s preference. And, factoring transactions have no obligation to follow assigned receivables by way of judgment or execution, to make notification to the debtor, or to make declarations like statements.

Financing refers to a prepayment made by the factoring process. Pre-payment may be rendered by the factoring company as part of the factoring agreement according to the needs and preferences of the customer. Waiting for the term of receivables to be assigned by the customer is not necessary. This process may be named as the provision of funding.

Finally, guarantee means that non-payment risk (credit risk of the buyer) of the debtor is undertaken by the factoring company within the context of the provision of the factoring contract.

#### **1.4.2 Types of Factoring**

Here, we will try to explain the type of factoring. We can say that there are 4 major types of factoring. First one is “full-service factoring”. The second one is “wholesale factoring”. Another one is “maturity factoring”. And the last one is named as “receivable discount”.

Full-service factoring is the most known and traditional type of factoring services. At the same time, this kind of factoring services is used most commonly. This factoring transaction based on a continuous contract signed by the buyer and the factor (factoring company). the factor accepts following within the framework of full-service factoring;

- To assign all receivables (being confirmed with invoices) and other similar documents generating from the particular trading relationship,
- To collect receivables,
- To keep receivable’s record and to make the prepayment

This type of factoring services are sectioned into two groups depending on whether or not undertaking the risk of non-collection of receivables; “Revocable Factoring” and “Irrevocably Factoring”.

Revocable factoring refers to a factoring transaction which factoring company does not take the non-payment risk of the buyer (debtor) on.

Irrevocably factoring based on a factoring transaction that factoring company assumes the nonpayment risk of the buyer (debtor) in the framework of factoring agreement. Any situation of conflict to show up between the relationship between the buyer (debtor) and seller (vendor or customer) is not included in the scope of guarantee.

Wholesale Factoring services are generally used for commercial relations related to low-valued and many receivables. In wholesale factoring transaction, financing function of factoring is at the forefront. Wholesale factoring refers to assigning all sales, stated in other words, the turnover to a factoring company in whole.

The difference between full-service factoring and wholesale factoring is not keeping sales record by the factoring company and not having a guarantee against nonpayment risk of the debtor. Additionally, the seller (vendor) is responsible for the collection of receivable although the statement is made to the debtor on the invoice to render payment to the factoring company.

Maturity factoring refers to not including pre-payment. In this type of factoring services, the collection of receivables and keeping sales records is the basis in the scope of the agreement between customer and factoring company. It may be included in maturity factoring transactions that the factoring company assumes the non-payment risk of the buyer (debtor).

Maturity factoring services are divided into two groups depending on whether or not notify to the debtor by factoring company; "Pre-notified Factoring" and "Factoring Without Notice".

Pre-notified factoring refers to where the assignment of receivables is notified to the buyer (debtor).

Factoring without notice is based on that the assignment of receivables is not notified to the buyer (debtor) by the factoring company. Customer (vendor) make the collection from the debtor (buyer). Thereafter, the customer makes the payment to the factoring company.

Receivable discount is kind of factoring services that generally is a matter of financing services. Receivable discount is a method generally applied to companies which need financing. But companies do not need the management of receivable was assigned to the factoring company. At the same time, the collection of receivables assigned to the factoring company by the vendor is performed by the vendor on behalf of the factoring.

As you can see the explanation above, different types of factoring are created for different needs and priorities of firms by using the factoring transactions separately or together in combination.

A typical factoring transaction (transaction of business) has been performed as follows:

Step 1: Seller (a customer of factoring company) send the invoice related to a trade activity with a buyer and a cheque being the instrument of payment to the factoring company

Step 2: If the demand of the seller for transaction approve, the transaction process starts

Step 3: Factoring company and the seller make the factoring agreement

Step 4: The seller transmits the invoice, cheque and factoring transaction papers to the factoring company

Step 5: Factoring company make the payment to the seller's account

Step 6: Factoring company collect the payment from the drawer of a cheque or debtor of invoice at the maturity date.

### **1.4.3 Cost of Factoring**

There are some fees for firms and enterprises which work with factoring companies in return for the financial services provided by factoring companies. These are summarized as commission, factoring fee, costs, and banking insurance.

The commission is the fees received from the factoring for the service provided to the customer.

Factoring fee means an interest. It refers to an interest amount which the factoring receives against the pre-payment given.

Cost refers that the price except for factoring fees and commissions received by factoring. Costs may be mail, wire transfer, EFT, etc.

The income such as factoring fees, commission, and costs received against services are subject to banking insurance. Only factoring fees, commissions, and costs from transactions providing foreign exchange for Turkey are exempted from banking insurance.

#### **1.4.4. The Benefits of Factoring to The Businesses**

As we mentioned in the above, factoring services can differ in terms of the needs or priorities of firms and be created by using transactions separately or together in combination.

Here, we can talk about why factoring is an important financial instrument for enterprises, especially for SMEs. According to the Association of Financial Institutions (AFI), factoring provides a seller to increase competitiveness and afford the opportunity to enter new markets.

On the other hand, receivables are managed by the expert organization (the factoring company). Factoring services provide regular cash flow to the enterprises. And factoring as financing option creates alternative sources.

At the same time, using factoring provide to credit value increases. Factoring services help enterprises in order to save for time and cost.

#### **1.4.5. Historical Developments of Factoring**

History of factoring is based on Mesopotamia. There are some statements and explanations about the transfer of claims in the Code of Hammurabi. At the beginning of ancient Rome, more systematic transactions and applications were performed. Intermediaries and factor had played a role to manage the good trade of merchants and producers in this period. The usage of factors in trade activity had been increased along with middle age.

The time of colonies in Europe after the 16th century, factors had been needed for the exporter. However, the documented factoring applications firstly started in the time of colonies in the USA.

Modern factoring applications start in the 1950s. The simplicity and secrecy of the transactions were the reason for enterprises to prefer factoring. When we come to 1960s, the modern rule of factoring of today start to be developed and factoring services become an irreplaceable part of business life and finance world by means of institutions such as Factors Chain International (FCI) and International Factors Group (IFG).

Firstly, factoring services were seen as the last funding resource. But, it manages to be essential financing sources in a short while under favor of simplicity of transactions and time-saving structure.

#### **1.4.6. Useful Informations About Turkish Factoring Sector**

In light of these developments, factoring services were discovered by the Turkish market and were adopted by Turkish businessman. Factoring transactions become beneficial finance method for funding of short term receivables in a short time period in Turkey.

Systematic factoring services in Turkey was started in 1988 by the banks. With the effects of the developments about liberalizations as the necessity of acceleration of opening the world economy and the effects of entry of foreign funds, the banks started to provide new financial services. This time period and circumstances formed perfect place factoring services to develop.

Factoring services in departments of banks have been performed in 1988. Decree-Law No.545 regarding loan introduced. Following this regulation, The Factoring Association was founded.

In 2006, the regulation and supervision of factoring companies were transferred from the Turkish Treasury to Banking Regulation and Supervision Agency (BRSA). Between 2007 and 2011, the BRSA brought discipline to the factoring sector through the introduction of a series of legislative changes which applied to factoring, leasing and financing companies.

In 2013, The Factoring Association has been extinguished itself and was listed to The Association of Financial Institutions which was founded with the Law No. 6361. At the same time, enacted on 21 November 2012, Law 6361, “The Leasing, Factoring and Financing Companies Law” gave factoring companies a stronger legal base.

Briefly, after the laws that were put into practice by the government, the factoring sector has been regulated. The sector has been greatly improved in recent years after these developments. Today, 60 company provide factoring services to the customer in Turkey (AFI). The sectoral useful information and indicators can be seen in the table below.

**Table 1.2 The Size of Factoring Sector in Turkey**

<b>Turkey Factoring Sector – Summary of Financial Data (2018June)</b>	
Number of Company	60
Number of Branches	389
Number of Employees	4.824
Number of Customers	122.233

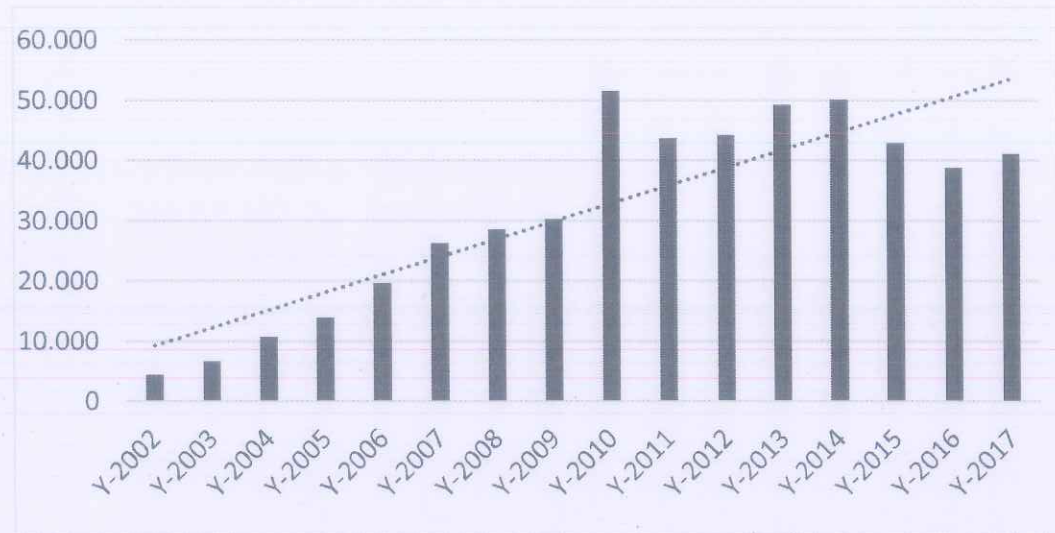
Source: AFI, 2018

As you see, there are 60 factoring companies in Turkey. Some of these are private factoring company when some of these are subsidiaries of banks. On the other hand, factoring companies have 389 branches in different cities in the country. So, we can say that factoring companies have prevalent branch network although less than the bank’s branch network.

When we consider the number of customer of the factoring sector, the factoring companies operating in Turkey have 122.233 customers as of 2018 June. Also, the number of employees is also a good indicator to evaluate the sector. As a result, we can say that the factoring sector in Turkey has great importance when it is considered the volume of the market.

In the table below, the increase in turnover improvement of factoring sector in the country can be seen. As it is presented, the annual average increasing rate of volume of the factoring sector is % 25.

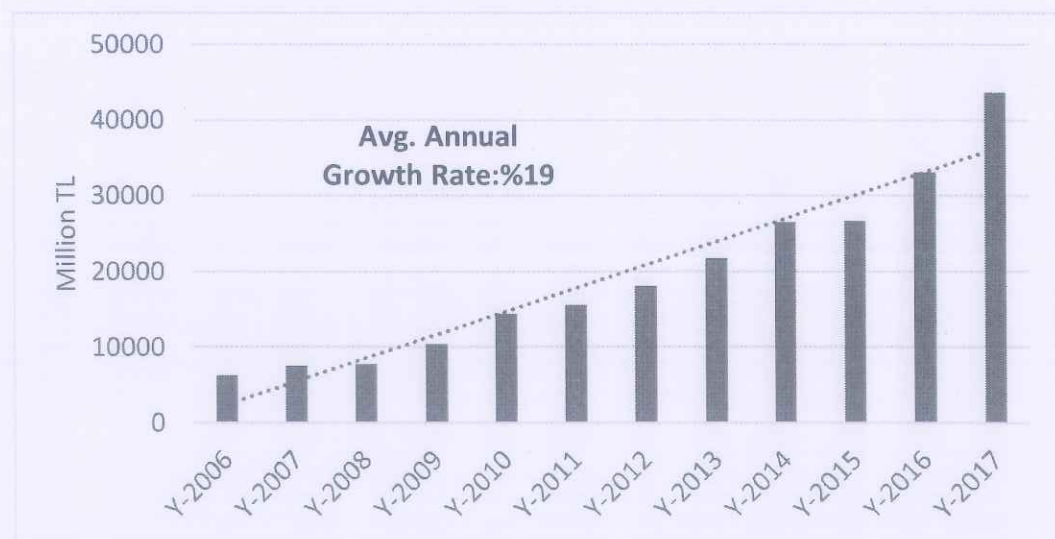
**Figure 1.1 Improvement of Turnover of Turkish Factoring Sector**



Source: AFI, 2018

On the other hand, we see that Turkish factoring sector's size of the asset has an increasing trend between 2006 – 2017. You can see the graph below the details.

**Figure 1.2 Size of Assets of Factoring Sector**



Source: AFI, 2018

In the next section, we will give brief information about the structure of small and medium size enterprises in Turkey.

### **1.5 SMEs IN TURKEY**

In this part of the study, we try to explain the structure of small and medium size enterprises in Turkey. Small and medium size enterprises are of capital importance for the Turkish economy. Because, SMEs constitute a major part of the Turkish economy and SMEs play a great role in the economy (Başçı & Durucan, 20017).

Small and medium size enterprises constitute % 99.77 of all companies in the Turkish economy according to the indicators of The Ministry of Industry and Technology. At the same time, employees working for small and medium size enterprises constitute % 78 of total employment in the country. Additionally, they represent % 65.5 of all domestic sales, % 50 of total investments and % 60 of total export.

However, their share of total credits is limited. Financial problems of small and medium size enterprises stem from insufficient equity and difficulty in funding. On the other hand, financing is very important and plays a key role for SMEs in carrying on their activities (Başçı & Durucan, 2017).

Majority of factoring companies' customers in Turkey is relatively small firms called by small and medium size enterprises. There are 1.5 billion companies in Turkey according to the statistics of the SSI.

As you can see the table below, % 63 of companies in Turkey fewer than three people were employed as of January 2014 while % 85 employed fewer than 10 people.

**Table 1.3 Distribution of Businesses in Turkey by Number of Employees**

<b>Size of Company</b>	<b>Number of Companies</b>	<b>%</b>
1 employee	559.145	35,07
2-3 employees	437.580	27,45
4-6 employees	253.177	15,88

Size of Company	Number of Companies	%
7-9 employees	112.576	7,06
10-19 employees	125.439	7,87
20-49 employees	74.771	4,69
50-99 employees	17.637	1,11
100-249 employees	10.073	0,63
250-499 employees	2.673	0,17
500-999 employees	1.370	0,06
1000+ employees	292	0,02
<b>Total</b>	<b>1.594.264</b>	<b>100</b>

Source: Bulletin of Statistics of the Social Security Administration, 2014

As you see from the statistics, SMEs have great importance for the Turkish economy. At this point, the question that what is the importance of factoring services for SMEs is coming to mind.

There are no statistics on the factoring companies concentration on SMEs. But, the backdrop of such a SMEs concentration in Turkey provides a strong demand for factoring services as a consequence of the financing problems for this kind of companies. As a result, we can say that factoring is the most powerful candidate to assume to be primarily SME financing.

## CHAPTER 2: LITERATURE REVIEW

It is clear that access to finance is crucial for small and medium size enterprises in terms of surviving and for sustainable growth and profitability. At the same time, it is also important for opening a new business and supporting the national economy. Also, we know that financial status, decisions, and behaviors of small and medium size enterprises differ from relatively bigger firms.

The main aim of this section of our paper is to review the literature. Within this framework, we search previous studies- research and papers about factoring choice of small and medium size enterprises as a financing option, and SMEs financing characteristics.

As a result, we show that there is a lot of papers and studies which analyze the financing choice of enterprises and SME financing. On the other hand, a few of them focus on the factoring as a financing option for SMEs directly.

(Soufani, 2002) investigate the major determinant of factoring and invoice discounting choice of small and medium size enterprises (SMEs). The paper develops and tests hypotheses that analyze the relationship between the firm's demographic characteristics and choice of factoring in the UK. Also, the study searches how usage of factoring changes against collateral requirements and availability of credit by banks.

The research of Soufani shows that there is a relationship between the requirement of banking and factoring choice. On the other hand, the paper state that smaller enterprises, the firms in the manufacturing and distribution sector, young businesses and limited companies use more factoring services. At the same time, SMEs generally prefer factoring and invoice discounting in the face of the high value of collateral request and in a situation of financial distress.

(Beck and Demirguc-Kunt, 2006) summarized recent empirical study and their research that focus on access to finance for small and medium size enterprises. The article emphasizes that access to finance is one of the critical constraints for SMEs to grow.

According to the article, there is sufficient evidence that relatively small enterprises confront larger growth constraints to obtain external financing source. Briefly, small and medium size enterprises have less access to financing tools. Beck and Demirguc-Kunt state that developments in finance may help the businesses of different size and increase their access to external financing source. Specific

financing alternative and tools such as factoring can be beneficial for small and medium size enterprises to increase external finance source.

(Wendels & Stöter, 2012) search management of account receivables and factoring option in a bank-based economy. The model in their study is based on firms that confront financial distress, the supplier's risk, and financial flexibility.

They express that the companies that are a strong need for short-term financing and having less availability to bank credit use factoring services. At the same time, relatively larger firms manage debt collection process and account receivables on their own and that kind of businesses prefer in-house factoring. As a result, it is concluded that relatively smaller firms generally prefer full-service factoring.

(Ravaş & David, 2010) investigate financing methods for companies in lack of cash flow. And, they try to explain the relationship between factoring choice of businesses and management of cash flow.

As a result of their study, they express that factoring may be a beneficial alternative for firms to find cash for operations in the situation of limited Access to the traditional financing methods and procedures. On the other hand, invoice discounting services may be the perfect source for financing for the owners of small and medium size enterprises, especially while having financial difficulties.

Ravaş and David also say that obtaining credit from a bank named as traditional financing method can be a difficult and slow process. A factoring company with invoice discounting process provide quick service and short-term working capital.

(Benea & Ioana & Duma, 2013) explain short term financing with receivables of companies. The research analyzes how the financing methods work such as factoring, securitization, and collateral issues and what the advantages and cost of this kind of financing are. The writers state that delayed payment of firms' trade is one of the most important risks in business life and this risk may be reduced with factoring as a financing alternative.

(Aras and Müslümov, 2002) search the problems and difficulties of small and medium size enterprises about financing and economic problems in the Turkish Economy. The study focus on the advantages and disadvantages of SMEs in the economy and the source of financing problems.

Aras and Müslümov say that the sources of finance problem are one of the major factors which affect the competitive power of relatively small and young firms in Turkey. As a result of the analyze, small and medium size enterprises have to use equity capital and trade credit because of the disadvantage in the relationship with banks and difficulties or high-interest expense in capital and money markets in Turkish Economy. The paper emphasizes that relatively small businesses should front alternative financing option to the management of working capital. In addition, the writers state that factoring services are one of the most important alternative financing options.

(Sarıgul, 2012) have studied on the comparison of factoring companies in Turkey as bank subsidiaries and independent factoring companies in terms of selected financial ratios in 2009 and 2010 years. Also, The writer explores the advantages and disadvantages of factoring companies in his study named as “Factoring As A Financing Option In Turkey: A Comparative Study”.

It has been determined that there are studies focusing on demographic characteristics of small and medium size enterprises when we searched the literature.

Size and age are important criteria to measure the size of firms for researches. The age, number of employees, sales, total assets or turnover are used to measure the size of the firms. The size of the firms has a great influence on financial decisions and choice of business (Abdulsaleh, 2013). The influence of the size of business can be shown in the financial decision-making process in companies about whether one financing option or another one should be chosen.

(Cassar, 2004) determined that relatively bigger firms prefer more frequently long term debts and external financing methods including bank loans in consequence of

the study about firm financing and capital structure using a sample consisting of 292 firms.

On the other hand, (Storey, 1994) emphasize that some SMEs use owner-managers personal savings as a financing source in the stage of starting a business rather than an external source of funds. This is also consistent with Peter and Rajan (1994) who search the relationship between firm size and credit availability of business.

(Klapper, Sarria-Allende, and Sulla, 2002) in their study say that young enterprises (the businesses less than 4 years old) rely on more informal financing rather than borrowing from a bank. The paper by (Quartey, 2003) also concluded that there is an obvious positive relationship firm age and availability of external financing sources such as banks.

In addition to that, (Fatoki and Asah, 2011) search the impact of firms and entrepreneurial characteristics on small and medium size enterprises ability to access to external finance in their study in South Africa. They observed that the bigger firms than small and medium size enterprises (firms more than 5 years old) have a better chance to access to credit when it is compared with firms younger than 5 years old.

On the other hand, there some studies that focus on the relationship between ownership type, legal form, and availability of financing funds. According to (Coleman and Cohn, 2000), SME leverage and ownership type are positively related.

In terms of financing, type of ownership and type of organizational structure has great importance. (Neeley and Auken, 2009) say their paper:

“Owners launching firms organized as either a sole proprietorship or non-construction/manufacturing firms should be prepared to use more bootstrap financing than other firms. Owners of these types of firms should be prepared to develop a financial plan that incorporates the use of a greater variety of financing alternatives than owners of firms organized other than a sole proprietorship non-construction/manufacturing firms. As such, a sole proprietorship of non-

construction/manufacturing firms should recognize the potential for the associated greater number of constraints and difficulties in raising start-up capital”.

When we look at the great picture from the lender’s perspective, type of ownership and owner-manager are key points to evaluate the structure of a company. According to (Hutchinson, 1999), type of ownership and owner-manager type businesses leads to maximizing the information asymmetry problem. Also, there some research matching with the statement of Hutchinson that express owner-manager company have some issues.

In addition to that, the sector is one of the most important indicators as the demographic characteristic of any firm. According to several studies made by researchers, financial preferences and financial decisions differ from each other with reference to the industrial sector in which a company performs.

In the empirical study, (Michaelas, Chittenden and Poutziouris, 1999) state that financial needs, preferences or choice of a company operating in manufacturing or construction and a company operating in the service sector are different. Michaelas et al. study with 3.500 randomly selected small and medium size enterprises from ten different industries in the United Kingdom. As a result, they emphasize that sector or industry have important effects on the financial behaviors of SMEs, especially in terms of short-term and long-term debt.

Also, there is some paper about the capital structure of small and medium size enterprises and sector classification. For instance, (Abor, 2007) state that small and medium size enterprises in agriculture sector prefer to use more long-term debts to short-term debts when it compared to small and medium size enterprises in manufacturing businesses. On the other hand, (Abor, 2007) says that financing instruments like short-term credit are more preferred by companies operating as wholesale and retail when it is compared to small and medium size enterprises operating as manufacturing, construction, and tourism. (Abor, 2007) also, state that this kind of businesses uses more long-term financing instruments in contrast with short-term instruments.

Collateral issues have great importance for small and medium size enterprises in terms of credit availability. Collateral requirements by banks dominate the financial behaviors of SMEs. Businesses with a higher good financial status that have more fixed assets are more lucky to borrow from banks rather than the companies less fixed assets.

(Bradley, Jarrell, & Kim, 1984) emphasize that there is a positive relationship between “more fixed assets” and utilizing higher financial leverage for small and medium size enterprises in their research papers.

On the other hand, (Coco, 2000) state that there is a positive correlation between fixed assets possible to use as collateral and chance of borrowing at lower interest rates. (Coco, 2000) describe collateral as loaner’s second line of defense in the article.

At the same time, we found some research paper about collateral or personal guarantees and credit availability. (Ono & Uesugi, 2009) analyze the relationship between using collateral or personal guarantees and access to external financing funds. They try to examine the correlation between to use collateral and personal guarantees and strength of debt/credit relationship. Finally, (Ono & Uesugi, 2009) state that there is a positive correlation between using collateral and access to external financing funds for small and medium size enterprises.

(Odit and Gobardhun, 2011) found similar results and they state that the debt ratio and asset structure of firms affect debt finance. In addition to that, Odit and Gobardhun emphasized that small and medium size enterprises with a poor portion of tangible assets have less chance to find external financing funds from financial institutions.

As a result, we conclude that there is no any study similar to our research topic which tries to explain the choice of factoring for SMEs in Turkey after the literature research. In this respect, we hope that this paper contributes to the literature.

In the next section, we will give some information about testable hypotheses and its details.

### CHAPTER 3: TESTABLE HYPOTHESES

In order to explain the relationship between the demographic characteristics of firms and factoring use, hypotheses are used. Firms' size in terms of turnover, firms' age, ownership type of firms and sector operating in the firms in the population are used to analyze the effects on factoring use as alternative financing option against to banks.

On the other hand, availability of credit, collateral requirements by banks and financial difficulty are analyzed to examine the effects on the use of factoring of firms in terms of financing preferences.

From this point of view, the hypotheses is generated to test. The total number of the hypotheses is 7. The hypotheses is tested by means of logistic regression and logit model. We will give detail information about it in the next sections.

The hypothesizes below are used for analyses.

- H1: Small size businesses measured by turnover use more factoring services
- H2: Factoring services concentrate firms relatively younger (firms of 1-5 years old)
- H3: Factoring services strongly concentrate upon private companies and limited companies
- H4: The firms are operating in manufacturing and whole/retail sector use more factoring services
- H5: The higher usage of factoring in case of the less availability of credit by banks
- H6: The higher usage of factoring in the case of the higher value of collateral requested by banks

H7: The higher usage of factoring in the case of the greater the financial difficulty the business is facing

The evidence and findings related to the hypotheses above are explained in detail in the section of Findings and its subtitles.

In the next part, we will give detail information about data and the methodology that is used in the study.

#### **CHAPTER 4: DATA AND METHODOLOGY**

Our research and analysis based on a comprehensive survey that performed with the owner and authorized manager of enterprises in Turkey. The survey of our study has been performed in 21 different cities in Turkey. And, we share the survey with 1000 firms. The number of the survey answered is 444. The number of response rations is % 44.

The main target of the survey in our study in terms of respondents was small and medium size enterprises (SMEs). We ask the following questions to the participant in the first part of our survey.

Q1: What is the subject of activity in your business? (Sector?)

Q2: How many employees do you have?

Q3: What is legal ownership of your company?

Q4: How old is your company?

Q5: What is the turnover of your company in 2017?

Q6: Are you working with a bank? (If Yes, what is the value of total debt and collateral)

Q7: Are you working with factoring companies? (If Yes, what is the value of total debt and collateral)

The following questions also have been asked in the multiple-choice question part. The respondents of the survey answered to these questions.

Q8: The availability of credit by the banks of my company is limited

Q9: I prefer factoring companies in the face of the unrealistic collateral requirements by bank

Q10: I prefer factoring companies in the face of the high value of collateral requirements by banks

Q11: I prefer factoring companies when experiencing financial distress

After the study of the survey, the data has been generated. And, the data constituted from the survey has been used to test the hypotheses by means of logit method.

In our empirical study, we use statistical methods in order to analyze the factoring choice of businesses. The logistic regression model is used as a statistical method to test the hypothesis and in order to analyze the relationship between factoring choice and firms demographics characteristics.

Below, we will try to give some information and explanations about the logistic regression that is used in our analysis as a statistical method.

#### **4.1 REGRESSION ANALYSIS**

The regression analysis as a statistical method has been used for the study based on the choice of factoring for small and medium size enterprises, as we mentioned. The hypotheses generated in order to understand the tendency of SMEs in the use of factoring has been tested by means of logistic regression models.

Within this framework, we focus on the details of logistic regression in detail. At the same time, the difference between the linear regression model and the logistic regression model are explained while working with dichotomous (binary) dependent variables.

#### **4.1.1 Linear Regression Model vs Logistic Regression Model**

In this part of our study, we try to explain logistic regression. And, logistic regression is explained in detail as an optimal method for the regression analysis of dichotomous dependent variables. A major part of variables is dichotomous in the social sciences such as, guilty or not guilty, married or unmarried, use factoring or not use factoring. It is not surprising that the researchers and scientists in the area of social sciences try to estimate models in which their dependent variable is a binary.

On the other hand, there are some problematic issues when using ordinary linear regression for dichotomous dependent variables. In these circumstances, using logistic regression or probit regression is a better option (Allison, 2012).

Although there are many similarities between logistic regression and linear regression, we should focus on why ordinary regression analysis cause some problems when studying with a dependent variable that is dichotomous.

#### **4.1.2. Problems with Linear Regression**

Ordinary least squares (OLS) linear regression was the main method to examine dichotomous dependent variables in the recent past. Many researchers had used OLS linear regression in their papers. But now, logistic regression tools are available in every major statistical program and software. So, there is no excuse to use the logistic regression model in the researches and papers.

Indeed, the result of the most application of ordinary linear regression and the result obtained by logistic regression are very similar to each other quantitatively. There are expectations, but it does not mean there is no need for logistic regression. However, ordinary linear regression gives a good result when using the approximate method.

Here, the question is what are the assumptions underlying ordinary linear regression. The standard assumptions are listed below when analyzing with a single

independent variable,  $x$ . On the other hand,  $x$  is fixed here. And,  $i$  differentiate different members of the sample.

Assumptions of the Linear Regression Model;

1.  $y_i = \alpha + \beta x_i + \varepsilon_i$
2.  $E(\varepsilon_i) = 0$
3.  $var(\varepsilon_i) = \sigma^2$
4.  $cov(\varepsilon_i, \varepsilon_j)$
5.  $\varepsilon_i \sim Normal$

The first assumption declared that  $y$  is a linear function of  $x$  when there is a random disturbance  $\varepsilon$  for all variables in the sample. The other assumptions refers to some issues about distribution of  $\varepsilon$ .

The most important thing about the assumption 2 is that  $E(\varepsilon_i)$  (expected value of  $\varepsilon$ ) does not change with  $x$ . At the same time, it indicate that there is not correlation between  $x$  and  $\varepsilon$ .

On the other hand, assumption 3 generally is named the homoscedasticity one. For all observation, the variance of  $\varepsilon$  is same according to assumption 3.

Assumption 4 refers that there is no correlation between the random disturbance for one observation in the sample and the random disturbance for any other observation in the sample.

Assumption 5 indicates that the random disturbance is normally distributed. Finally, we can say that ordinary least squares estimates of  $\alpha$  and  $\beta$  are unbiased. At the same time, ordinary least squares estimates of  $\alpha$  and  $\beta$  have mininum sampling variance.

Here, if we suppose that  $y$  is a dichotomy with values of 1 and 0. This means that Assumptions 1, Assumption 2 and Assumption 4 can be true. In response to Assumption 3 and Assumption 5 are false when Assumption 1 and Assumption 2 are true for a dichotomy.

As we mentioned one of the most important and fundamental problems of the linear regression model, there are some issues about it. If it is not necessary to give much more technical details, the issues about linear regression models can be summarized as below;

- Linear regression is limited to linear relationships
- Linear regression focus on only the mean of the dependent variable
- Linear regression is sensitive to outliers

The problems in linear regression that we gave brief information above led researchers and statisticians to alternative methods and approaches in order to get better statistical results. The most popular method as an alternative is the logistic regression approach (estimation by maximum likelihood).

In the next part, we give some information about the logistic regression model and its fundamentals.

#### **4.1.3. The Logistic Regression Model**

In this part, we try to give some information about the fundamentals of logistic regression. Logistic regression is also named as the logit model. As we mentioned above, the most important issue about the linear models is that probabilities are bounded by 0 and 1 although linear functions are unbounded by its nature.

Converting the probability to an odds removes the upper bound. If the logarithm of the odds is taken, it provides to remove the lower bound. It has been reached to the logistic model when we configure the result according to explanatory variables (equal) allied with a linear function.

If it is necessary to explain and show as formula, the model seems like (k=explanatory variables, i=1, ..., n individuals);

$$\log\left(\frac{p_i}{1-p_i}\right) = \alpha + \beta_1 x_{i1} + \beta_2 x_{i2} + \dots + \beta_k x_{ik}$$

The logit that also is named as log-odds refers to the expression on the left-hand side of the formula. On the other hand,  $x$  could be any quantitative variable or dummy as indicator variables in ordinary linear regression.

Random disturbance term is no discussed in the equation for the logistic regression model in contrast with the ordinary linear regression model. At the same time, we can say that the model is still deterministic under favor of the probabilistic relationship between  $p_i$  and  $y_i$  in terms of random variation. But still, there are some problems if the unobserved heterogeneity occur in the sample.

$$p_i = \frac{\exp(\alpha + \beta_1 x_{i1} + \beta_2 x_{i2} + \dots + \beta_k x_{ik})}{1 + \exp(\alpha + \beta_1 x_{i1} + \beta_2 x_{i2} + \dots + \beta_k x_{ik})}$$

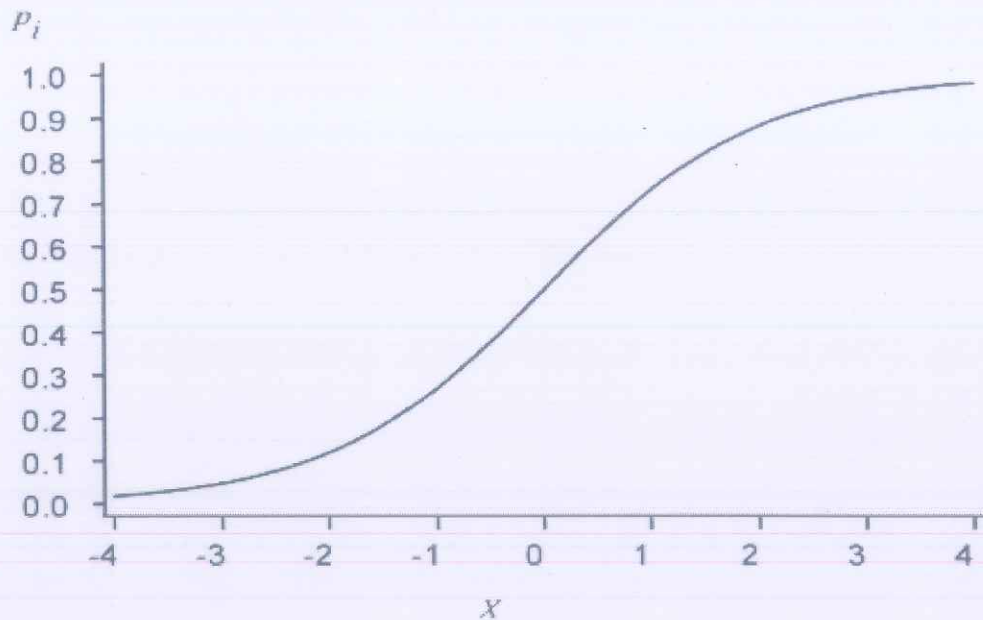
As you see, it is possible to overcome this problem and we can solve the logit equation.

$\exp(x)$  is accepted as equivalent to  $e^x$  that is the exponential function. Accordingly,  $e$  that is equal to 2.71828 is shown as exponential constant. So, we can show the equality like that  $\log(e^x) = x$ . We can derive this equation basicly by dividing the numerator and denominator by the numerator itself.

$$p_i = \frac{1}{1 + \exp(-\alpha - \beta_1 x_{i1} - \beta_2 x_{i2} - \dots - \beta_k x_{ik})}$$

As a result,  $p_i$  is going to be between 0 and 1 permanantly according to the equation above. When  $\alpha = 0$  and  $\beta = 1$  and if there is one single variable of  $x$ , it is possible to show the equation in the graph by means of a S-shaped curve like below.  $x$  can not be equal to 1 or 0 absolutely, but if  $x$  get large or small,  $p$  starts to get close to 0 or 1. However,  $x$  is never equal to the limits.

Figure 4.1 Graph of the Logistic Model for a Single Explanatory Variable



Source: Allison, 2012

When we look at the graph above, it is possible to see the impact of a unit change in  $x$  that depends on the point where you start. For instance, if  $p$  is close to 0.5, the impact is going to be large when  $p$  is close to 0 or 1, the impact will be small. If it is necessary to explain in details, the slope of the curve is given by the derivative of  $p_i$  with respect to the covariate  $x_i$ .

$$\frac{\partial p_i}{\partial x_i} = \beta p_i(1 - p_i)$$

As you will guess, this is also known as the marginal effect. So, it can be shown as the marginal effect of  $x$  in terms of probability. Clearly, a unit change of  $x$  (1 unit increase) causes an increase of 0.25 in the probability if  $\beta$  equal to 1 and  $p$  equal to 0.5.

On the other hand, if  $\beta$  becomes larger, the slope of the S-shaped curve (when  $p$  equal to 0.5) start to be steeper. At the same time, If  $\beta$  is negative, the curve is flipped. With the effect of flipping horizontally,  $p$  is close to 1 when  $x$  is small and close to 0.

There are some alternative model and methods instead of using S-shaped curves. Probit model or complementary log-log models that are similar to the S-shaped model is most known and major methods.

As a result, the logistic model is a very reasonable method for statistical analysis. At this point, we try to give brief information about the advantages and benefits of logistic regression or the other name, logit models. The logistic regression model is very popular, because:

- The coefficients in the model have a simple interpretation in the sense of odds ratios
- There is a very close relationship between the logistic regression and log-linear model and these approaches are related to each other
- As we mentioned above, the logistic model refers to covetable sampling characteristics
- The model can be composed quite easily for allowing multiple functions and unordered categories for the dependent variable.

#### **4.1.4 The Explanation of Dependent and Independent Variables**

We mentioned the detail about the generated hypotheses in Chapter 3. Also, we summarize and give information in the logit model that used as a statistical tool. Below, we will explain how the dependent and independent variables constitute, and also the dummy variables.

There are 7 independent variables and 1 dependent variable in our analysis that have been generated in order to test the hypotheses. In the scope of the empirical study, we have tested 7 different hypotheses by means of dummy variables that determined as independent variables. Below, the structure of the hypotheses and the dummy variables that are generated can be seen;

- *Hypothesis 1 – Factoring and Business Size*

Dummy Variable (Dsize)=1, If the turnover of the company is under 1.000.000 TL,

Dummy Variable (Dsize)=0, If the turnover of the company is over 1.000.000 TL.

Hypothesis 1 is generated in order to examine the correlation between the size of firms and factoring use.

- *Hypothesis 2 – Firm's Age and Factoring*

Dummy Variable (Dage)=1, If the company is 0-1 or 1-5 years old,

Dummy Variable (Dage)=0, If not.

Hypothesis 2 refers to the age of small and medium size enterprises and choice of factoring.

- *Hypothesis 3 – Firm's Ownership and Factoring*

Dummy Variable (Downership)=1, If the company is “private company” or “limited company”,

Dummy Variable (Downership)=0, If not.

Hypothesis 3 is generated to Show the relationship between the type of ownership and factoring use.

- *Hypothesis 4 – The Demand For Factoring By Sector*

Dummy Variable (Dsector)=1, If the sector of the company is manufacturing or wholesale/retail,

Dummy Variable (Dsector)=0, If not.

Hypothesis 4 is used to analyze the relationship between sector of SMEs operating and factoring use.

- *Hypothesis 5 – The Credit Availability and Factoring Use*

Dummy Variable (Dcredit)=1, If there is less availability of credit by banks,

Dummy Variable (Dcredit)=0, If not.

Hypothesis 5 is used to see the correlation between credit availability and factoring choice of small and medium size enterprises.

- *Hypothesis 6 – Collateral Requirements by Banks and Factoring Use*

Dummy Variable ( $D_{\text{collateral}}$ )=1, If the company prefer factoring in the face of the higher value of collateral requested by the bank,

Dummy Variable ( $D_{\text{collateral}}$ )=0, If not.

Hypothesis 6 refers to the estimation of the relationship between factoring use and collateral requirements by banks.

- *Hypothesis 7 – Financial Difficulty and Factoring Use*

Dummy Variable ( $D_{\text{financing}}$ )=1, If the company prefer factoring in the situation of financial difficulty,

Dummy Variable ( $D_{\text{financing}}$ )=0, If not.

Hypothesis 7 is generated in order to analyze the factoring choice of small and medium size enterprises having financial difficulties.

- *Dependent Variable ( $Y_{\text{factoring}}$ )*

Dependent Variable ( $Y_{\text{factoring}}$ )=1, If the company use factoring as a financing source,

Dependent Variable ( $Y_{\text{factoring}}$ )=0, If the company do not use factoring

On the other hand, we have one dependent variable ( $Y$ ) that refer to using factoring service or not. So,  $Y_{\text{factoring}}=1$  if the company make factoring transactions.  $Y_{\text{factoring}}=0$  if the company does not make factoring transactions.

As a result, there are 7 different independent variables and there is one dependent variable in our empirical analysis. We have made the test of hypotheses in order to explain the relations by means of these dummy and independent variables.

#### **4.2 SAMPLE CHARACTERISTICS**

The analysis has been made by means of the survey that has been performed with 444 respondent firms. The survey was shared with 1000 firms that evaluated as

small and medium size enterprises. As a result of the study, the number of the response survey is 444.

From this point of view, the population of our analysis consists of 444 businesses. The number of firms using factoring services as a financing source is 198. On the other hand, the number of firms in the population that do not work with factoring companies is 246.

So, % 45 of the total number of firms that answer to survey make factoring transactions when % 55 of companies in the population do not prefer to make factoring transactions.

**Table 4.1 Distribution of Respondent Firms by Working With Banks and Factoring Companies**

	<b>Working With Banks</b>	<b>%</b>	<b>Working With Factoring Companies</b>	<b>%</b>
# of say "Yes"	274	61,7%	198	44,6%
# of say "No"	170	38,3%	246	55,4%
Total	444	100%	444	100%

On the industry side, % 69,8 of the total population consists of the firms operating in the construction, wholesale/retail and manufacturing when we analyze the data in terms of the sector.

**Table 4.2 Distribution of Respondent Firms by Sector**

<b>Sector</b>	<b>Number of Firms</b>	<b>%</b>
Construction	110	24,8%
Wholesale/Retail	106	23,9%
Manufacturing	94	21,2%
Services	44	9,9%
Electric/Electronic	30	6,8%
Logistic/Transport/Communication	27	6,1%
Agriculture/Stock Raising	17	3,8%

Sector	Number of Firms	%
Mining	16	3,6%
Total	444	100,0%

If it is necessary to consider the population in terms of size, we can say that % 46 of total firms have higher than 1.000.000 TL turnover in 2017.

On the other hand, % 54 of all firms have lower than 1.000.000 TL in 2017 in terms of turnover. Distribution of turnover can be seen in the table below.

**Table 4.3 Distribution of Respondent Firms by Size**

Size-Turnover (TL)	Number of Firms	%
0.19.999	22	5,00%
20.000-49.999	5	1,10%
50.000-149.999	11	2,50%
150.000-249.999	25	5,60%
250.000-499.999	58	13,10%
500.000-749.999	25	5,60%
750.000-999.999	93	20,90%
1.000.000-2.999.999	141	31,80%
3.000.000+	64	14,40%
Total	444	100%

When we evaluate the firms in terms of age, % 43 of all firms are younger than 6 years. % 57 of all firms in the population is also bigger than 5 years. The distribution of age of firms is shown below.

**Table 4.4 Distribution of Respondent Firms by Age**

Firm's Age	Number of Firms	%
1-5	160	36,0%
6-10	139	31,3%
11-15	80	18,0%
15+	34	7,7%

<b>Firm's Age</b>	<b>Number of Firms</b>	<b>%</b>
0-1	31	7,0%
Toplam	444	100%

Here, we would like to show the distribution of firms in terms of the number of employees. The number of employees is one of the most important variables in the study because of big potential effects on choice of factoring.

As you can see the table below, 35,6 % of the total population consists of the firms that have 1-5 employees when 26,8 % of them consist of the firms that have 6-10 employees. Not surprisingly, we have only 1 firm has over than 100 employees.

**Table 4.5 Distribution of Respondent Firms by Number of Employees**

<b>Number of Employees</b>	<b>Number of Firms</b>	<b>%</b>
1-5	158	35,6%
11-50	157	35,4%
6-10	119	26,8%
51-100	9	2,0%
100+	1	0,2%
Total	444	100%

In the table below, the distribution of ownership types of firms in the population can be seen. If it is necessary to summarize, the major part of the firms in the population consists of limited companies (% 60,6) when 32,9 % of the population consists of private companies. This means that 93,5 % of the total population consists of limited and private companies.

**Table 4.6 Distribution of Respondent Firms by Ownership Type**

<b>Ownership Type</b>	<b>Number of Firms</b>	<b>%</b>
Limited Companies	269	60,6%
Private Companies	146	32,9%
Incorporated Companies	28	6,3%

<b>Ownership Type</b>	<b>Number of Firms</b>	<b>%</b>
Ordinary Partnership	1	0,2%
Total	444	100,0%

The situation here is not a surprise. Because establishing a private company or limited company is less sophisticated when it is compared to incorporated companies. Because establishing a private or limited company is easier than establishing incorporated companies, the distribution is the population in terms ownership type is not strange. On the other hand, there is only 1 firm having an ordinary partnership type. Clearly, the ordinary partnership is not very common ownership type and it is not preferred much by the owners in Turkey.

At this part, we try to show the distribution of the respondents to the question that refers to credit availability by banks.

**Table 4.7 Distribution of Respondent Firms by Answers – Credit Availability**

<b>Response</b>	<b>Number of Firms</b>	<b>%</b>
Absolutely Agree	53	11,9%
Agress	71	16,0%
Undecided	56	12,6%
Disagree	149	33,6%
Absolutely Disagree	115	25,9%
Total	444	100%

As it can be shown in the table below, only 11,9 % of total respondents answered the question as “ absolutely agree” when 16 % answered as “agree”. On the other hand, 59,9 % of the respondents consist of “disagree” and “absolutely disagree”. This situation may be surprising because of the findings funds and availability of credit problems as we mentioned in previous parts of the study. Although small and medium size enterprises are faced with financing problems and difficulties about availability to credit, the owners and managers of them answered to the question as

“ I have no any problems about working with banks and can easily reach to bank credit as financing sources.”

Some psychological effects come to exist here related to the approach, thinking, and behaviors of the owners and managers of the small and medium size enterprises. And, we are going to explain these effects in detail that affects the answers of responders in the part of the findings.

At the table below, we try to show the distribution of the respondent firms to the question that refers to the preference of working with factoring companies in the face of the high value of collateral requirements by banks.

**Table 4.8 Distribution of Respondent Firms by Answers – Collateral**

<b>Response</b>	<b>Number of Firms</b>	<b>%</b>
Absolutely Agree	52	11,7%
Agress	107	24,1%
Undecided	90	20,3%
Disagree	137	30,9%
Absolutely Disagree	58	13,1%
Total	444	100%

As we mentioned before, collateral requirements by banks make hard to find credit for the firms that evaluated as small and medium size. From this point of view, the collateral requests of banks from the firms is one of the most important variables in term of choice of factoring. Also, we will discuss the case in depth in the section of findings.

Finally, it can be seen the distribution of the answers of respondents that owners or managers of the firms attended in our survey about the choice of factoring in the facing of experiencing financial difficulties.

**Table 4.9 Distribution of Respondent Firms by Answers – Financial Difficulty**

<b>Response</b>	<b>Number of Firms</b>	<b>%</b>
1	81	18,2%
2	92	20,7%
3	59	13,3%
4	130	29,3%
5	82	18,5%
Total	444	100%

## **CHAPTER 5: FINDINGS**

In this section of the study, we show the result of the hypotheses that tested in order to explain the relationship between types of firms and factoring use. The results of the regression analysis can be seen in Table 5.1.

**Table 5.1 The Results of Logistic Regression Analysis**

<b>Explanatory Variable</b>	<b>Coefficient</b>	<b>t-Test</b>
Size	0.586234**	2.059546
Age	0.976736***	3.314030
Ownership	1.270184*	1.933531
Sector	0.379324	1.319061
Credit Availability	-0.319836	-0.897185
Financial Difficulty	3.281871***	8.986420
Collateral	0.773571**	2.005431
Constant	-3.773648	-5.164149
R-squared	0.449768	

\*In the table “\*\*\*”, “\*\*” and “\*” indicate significance at 1%, 5% and 10%, respectively.

After our statistical test, we show that Age and Financial Difficulty are significant at the level of % 1, % 5 and % 10 when Size and Collateral are significant at the

level of % 5 and % 10. At the same time, Ownership is significant at the level of %10.

As a result, the hypotheses related to the firm's age, size of the firm, ownership type of enterprises, collateral requirements by banks and experiencing financial difficulty are fail to reject.

On the other hand, we have determined Credit Availability is insignificant. Also, we have been seen that Sector is insignificant after our empirical analysis. Thus, the hypotheses related to the sector of enterprises and credit availability are rejected.

As we said in the previous part of the paper, the hypothesizes are tested by means of Binary Logit Method. MacFadden R-squared is 0.449. From this point of view, we can say that the explanatoriness of the model is well enough when it is taken into account MacFadden R-squared (0.449) is bigger than 0.3 in our empirical analysis.

In the following sections, we will explain the tested hypotheses one by one. Clearly, the detail of the relationship between the dependent variable and independent variables will be expressed statistically.

### **5.1 FACTORING AND BUSINESS SIZE**

(Soufani, 1999) determined that the major part of factoring services has been consisted of the businesses having the turnover of fewer than 1 million pounds as a result of the analysis of factoring service suppliers. The evidence gained from the analysis shows that relatively small firms tend to apply more factoring services when it is compared to relatively bigger ones.

This relationship also complies with the theory that relatively smaller and younger firms with the business cycle on the basis of the low level of business activity prefer factoring services. Because of factoring services are based on a low level of potential factoring requirements.

Differently, relatively bigger and older firms prefer more sophisticated financial alternative as a result of the complexity of their business activity, experience, and financing needs.

It is determined that there is a significant positive relationship between turnover of firms and choice of factoring. So, it can be said that demand for factoring is higher the enterprises with a turnover of less than 1 million Turkish Liras.

The findings are also compatible with the theory that refers to small and newly-established firms have some problems and difficulties about surviving, growing and finding external financing sources.

These findings, theory, and comments are supported with table 2 in the appendix (APPENDIX 2).

As a result, Size is significant at the level of % 5 and % 10. From this point of view, we can see the positive relationship between the size of firms in terms of turnover and factoring choice. In summarize, the evidence obtained from the empirical study shows that there is a significant positive relationship between the firm's turnover and demand for factoring. So, we fail to reject H1, H1 is accepted.

## **5.2 FIRM'S AGE AND FACTORING SERVICES**

The relationship between factoring use and age of enterprises are supported by the evidence obtained from the analysis of the hypothesis. It is determined that relatively younger firms that 1-5 years old demand more factoring services when we compared to relatively bigger firms that older than 5 years old.

The finding complies with the theory related to younger firms with a low level of experience prefer searching for a found from factoring companies because of low requirements of these companies. When we compared to the collateral and other requirements by banks, factoring services look like a good alternative for this kind of businesses.

Factoring services are also an alternative financing option for businesses younger than 5 years old. Because relatively younger firms have some difficulties in terms

of management of cash flow and their payment system. On the other hand, surviving, raising and managing of finance gap is a fundamental and vital issue for relatively small firms. Also, the evidence obtained to support these suggestions underlined.

As a result, Age is significant at the level of % 1, % 5 and also % 10. From this point of view, we observe that there is a strong positive correlation between firms' age and demand for factoring services. The firms that 1-5 years old demand more factoring services compared to relatively older enterprises. Hence, H2 also fails to reject and H2 is accepted.

### **5.3 FIRM'S OWNERSHIP AND FACTORING**

There is a strong judgment toward private companies and limited companies use more factoring services. Generally, incorporated companies are evaluated as more sophisticated in terms of business process and financial needs when compared to private and limited ones.

As we mentioned, incorporated companies have complex management process when limited companies consist of rarely owner-manager companies. Private companies are already an owner-manager type of businesses.

It has been shown that the relationship between the type of ownership and factoring use of firms is just significant at the level of % 10 when seeing table 2 in Appendix section (APPENDIX 2). Even if a not strong correlation between the type of ownership and factoring use, private companies and limited companies are more likely to demand factoring services according to evidence obtained from the empirical analysis. As a result, We fail to reject H3 and H3 is accepted.

### **5.4 THE DEMAND FOR FACTORING BY SECTOR**

The evidence obtained from our analysis shows that there is not a strong and significant relationship between sector and demand for factoring. We conclude that there is no significant positive correlation between the companies operating in manufacturing and wholesale or retail and factoring use.

After the literature review about the relationship between the type of firms including sector and factoring use, we saw some researches and paper that conclude a significant relationship between sector and factoring choice.

For instance, (Soufani, 2001) emphasize that factoring services concentrate on the firms operating in manufacturing businesses as consequences of customer base and invoicing procedures. Also, findings obtained from the empirical study support their theory.

In addition to that, they find that firms operating in construction, mining, retail, financial services, and profession are less likely to use factoring as a financing alternative.

At the same time, (Blink & Ennew, 1992, 1994, 1996) state that the firms operating in manufacturing or distribution may be much more faced with delay payment and some difficulties about collateral requirements. So, this kind of firms demands more for factoring services than other companies operating different sectors like mining or transportation.

Although there are few study and paper that concludes the positive and Significant relationship between high demand for factoring services and sector such as manufacturing, whole/retail, the evidence obtained from our analysis shows that sector has not to influence on the choice of factoring. According to our findings, the sector is not significant at the level of % 1, % 5 or % 10. So, we reject to hypothesis refer to the firms are operating in manufacturing and whole/retail use more factoring services.

Showing up different findings and conclusion, the structure of firms operating different countries and regions and special characteristics of Turkish Economy may be the reason at this point.

On the other hand, information of the sector is not frequently used in the scoring system when analyzing credibility by banks and financial companies in Turkey. The sector is an important indicator for evaluating a company of course. But, it is not considered as key and direct effective factor in case of evaluating credibility.

As a result, we reject the H4 refers to a positive relationship between demand for factoring and sector such as manufacturing and whole/retail.

### **5.5 CREDIT AVAILABILITY AND FACTORING USE**

In this part of the paper, we explain the correlation between credit availability and factoring use. And, it is determined that the demand for factoring services increase if the firms have poor credit availability.

The question in the survey was generated to rank from 1 to 5 that refers to very poor credit availability and very good credit availability. Attendees in the survey have answered to the question as selecting 1 if the firms have big problems availability to credit from banks. On the opposite side, the attendees have answered the question as selecting 5 if the firms have not any difficulties in terms of find credit from banks.

As a result, the hypothesis (H5) about credit availability has been rejected and findings show that there is no significant positive relationship between poor credit availability and demand for factoring. According to empirical result, the firms with poor credit availability do not prefer factoring services much more than relatively high credible companies.

(Soufani, 2002) state that there are significant relationship credit availability and factoring use in the study made with the survey method. In the study, it is said that firms with poor financial status demand more for factoring services. According to Soufani, small businesses have some difficulties related to credit rationing and borrow from banks.

The theory about the relationship between credit availability and factoring use is logical. It makes sense and this idea is compatible with the reality and practices of financial markets.

The major factor in our study that refers to having no positive significant collaboration between credit availability and factoring use comes from psychological issues of the firm's owner's behaviors who attended in our survey. For instance, an owner of a firm with very poor credit availability may answer the

question in the survey as “we have no difficulties borrow from banks”. After generation of a profile of firms in our population, we saw lots of firms answers the question as “we have no any problem borrow from banks”, although this kind firms in the survey are very young enterprises or the companies with the 1-5 employee. In summarize, the probability of answering the question as rank 5 (very good credit availability) is very high because of psychological reasons.

When we determine this topic in terms of banks, the small and medium size enterprises with poor financial status and credit availability rate is hard to borrow from banks. Because banks use very complicated and sophisticated risk assessment methods and tools. It is very hard to say that this kind of firms have a good and efficient relationship with bank and subsidiaries when we take into account the credit rationing process.

#### **5.6 COLLATERAL REQUIREMENT AND FACTORING USE**

Collateral requirements by banks are one of the most popular difficulties for small and medium size enterprises. In order to examine the relationship between collateral requirements and the use of factoring, we generate and test hypothesis 6.

To test the hypothesis, the question in the survey was generated providing to attendees to answer from 1 to 5. If an attendee answers the question as 1, it means that the firm has very difficulties borrow from banks because of the collateral requirements of banks. In return, if attendees answers the question as 5, it means that firms have not any problems in relation to the banks in terms of collateral issues.

It is expected that small and medium size enterprises prefer alternative financing options against the high level of collateral requirements by banks. There are a few study and papers support the theory of high level of collateral causing searching for different financing sources.

For instance, (Binks et al, 1992) stated that seeking alternative and different financing sources for firms in the face with a high level of collateral requirements.

On the other hand, (Soufani, 2002) in the study emphasized that there is no significant relationship between collateral requirement by banks and the factoring use. But, They found a positive and significant relationship between the value of bank collateral and use of factoring.

When we consider our empirical analysis, we can say that firms evaluated as small and medium size enterprises prefer factoring services against the high level of collateral requirement. In summarize, it is determined that there is a positive correlation between collateral requirement by banks and demand for factoring services as an alternative financing option.

At the same time, collateral is significant at the level of % 5 and % 10. Finally, we stated that H6 is accepted.

### **5.7 FINANCIAL DIFFICULTY AND FACTORING USE**

In the last hypothesis tested is generated in order to explain the relationship between having financial difficulty and use of factoring. We test the hypothesis that refers to in the case of experiencing financial difficulty causing an increasing demand for factoring services.

The question has been formed in order to understand the level of having financial difficulties of a firm in the survey. Answers from 1 to 5 has been ranked. If attendees in the survey have answered the question as ranked 1, it means that the firms have a high level of financial difficulties. In return, if the attendees have answered the question as rank 5, it refers that the firms have not any significant financial distress.

Financial difficulties such as cash flow problems and cash shortage block healthy relation with banks for firms. As we state this, cash flow problems having by small and medium size enterprises lead to demand for factoring services as an alternative financing source.

On the supply side of factoring services, factoring companies focus on the enterprises with cash shortage in financial management.

As a result of our analysis, Financial Difficulty is significant at the level of % 1, % 5 and % 10 when we consider p-value. This means that we fail to reject this hypothesis.

When we look at the findings obtained from empirical analysis, there is a strong and positive and significant relationship between having financial difficulties and factoring use of firms. This means that the small and medium size enterprises that experience financial difficulties such as cash shortage or cash flow management prefer strongly factoring services.

Finally, according to evidence obtained from the analysis, we can state that H7 is accepted.

## CONCLUSION

The study has been performed in order to explain the relationship between factoring use and characteristics of firms. Age, turnover, industry, and type of legal ownership are used to generating a profile for the firms in the sampling.

On the other hand, we aimed to examine the effects of credit availability, the collateral requirement by banks and experiencing financial difficulty on the choice of factoring in the demand side.

This research can be important because small and medium size enterprises have huge importance for any economy, especially for the Turkish economy. For instance, small and medium size enterprises constitute % 99,8 of total firms in Turkey according to Statistics Small and Medium Size Enterprises in 2015. SMEs contribute to the economy by forming %74,2 of total employment in the Turkish Economy (Statistic Small and Medium Size Enterprises, 2015). In addition to that, % 63 of all companies in Turkey employed fewer than three people according to statistics of Social Security Administration.

On the other side of the table, small and medium size enterprises have lots of problems with financing in their operations. This situation in financial problems is similar and parallel in Turkey and the rest of the world. Relatively small firms are faced with some difficulties in finding external financing sources. At the same time, it is hard to meet the financial requirements by the help of equity capital for this kind of firms. When we consider that SMEs in operating under competitive market conditions need cash and the high level of working capital, they seek external financing sources.

Although bank loans are the major tool and good source to find financing for the firms, relatively small businesses have not a healthy relationship with banks. Because of the risk assessment processes of banks and similar financial institutions, small and medium size enterprises are faced with the problem to reach to credit.

If it is necessary to summarize, finance gap and credit rationing is a very big problem for the firms determined as small and medium size enterprises. Under this circumstance, these firms and businesses seek alternative financing option in order to survive and grow.

Here, factoring services get involved. Factoring services by factoring companies and banks' subsidiaries are a very reasonable option for the firms that experiencing financial problems such as finance gap or credit rationing.

In the literature review part of our study, we search previous studies, research, and papers about factoring choice of small and medium size enterprises as a financing option, and SMEs financing characteristics.

As a result, we have found lots of papers and studies which analyze the financing choice of small and medium size enterprises. Some of them focus on directly factoring choice of small and medium size enterprises. On the other hand, we see that there is no study which aims to explain the choice of factoring for SMEs in Turkey after the literature research.

In order to examine the relationship between demographic characteristics of firms and factoring use, we constitute hypotheses. Turnover, age, type of legal ownership and sector are used to make analysis and test hypotheses.

In addition to that, availability of credit, collateral requirements by banks and experiencing financial difficulties are analyzed in order to examine the effects of its on factoring use of firms.

By the way, our research is based on a comprehensive survey. The survey was performed with the owner and authorized manager of enterprises in Turkey. We share the survey with 1000 firms. The number of the survey answered is 444. Also, the response ratio is % 44,4.

In the empirical analysis, the logistic regression analysis (logit model) is used as a statistical method. The hypothesis generated in order to understand the tendency of SMEs in the use of factoring has been tested by means of logistic regression models.

If it is necessary to talk about findings of our empirical analysis, the evidence shows that relatively small firms in terms of turnover tend to use more factoring services when it is compared to relatively bigger firms. In light of the analysis, there is a significant positive relationship between factoring use and turnover.

This also complies with the theory that smaller and younger firms prefer factoring services when relatively bigger and older firms prefer more sophisticated financial alternative as a result of the complexity of their business activity, experience, and financing needs.

Also, the evidence support that relatively younger firms (1-5 years old) demand more factoring services when we compared to relatively bigger ones (older than 5 years old). This result was expected that younger firms with a low level of experience prefer searching for a found from factoring companies because of low requirements of these companies.

Another important thing is here, factoring is a reasonable option for younger firms because of the difficulties in terms of management of cash flow and their payment system.

When we consider the relationship between ownership type and choice of factoring, the evidence shows that private companies and limited companies use more factoring services compared to the other firms.

After our empirical study, the correlation of ownership type and factoring choice is significant at the level of %10. As a result, we can say that private companies and limited companies are more likely to demand for factoring services to other types of ownership.

So, what is the situation for the sector? The sector is not a strong and significant determinant of choice of factoring according to our analysis. We conclude that there is no positive correlation between the sector and the use of factoring.

Although we have seen a few studies that show the positive correlation between high demand for factoring services and sector such as manufacturing, whole/retail, the evidence in our study determined that sector has no significant effects on choice of factoring.

The hypothesis in the paper that refers to credit availability has been rejected and the evidence shows that there is no significant positive relationship between credit availability and factoring use. The result obtained from evidence may be a surprise. Because our expectations are parallel to the other studies that show the positive relationship between credit availability and factoring choice.

Psychological effects become the main topic of conversation here. Tell openly, an owner of a firm with very poor credit availability may answer the question in the survey as "we have no difficulties borrow from banks". As a result, we think that this psychological effect has an influence on the result.

According to evidence about collateral requirements by banks, we see that small and medium size enterprises prefer factoring services against the high level of

collateral requirements by banks. So, there is a positive correlation between collateral requirement by banks and factoring use.

Finally, the findings obtained from empirical analysis about experiencing financial difficulties shows that there is a strong and positive and significant relationship between financial difficulties and factoring use of firms. Relatively small and medium size enterprises experiencing financial difficulties such as cash shortage or cash flow management demand more factoring services.

As a result, we can say that factoring services are an important financial option for firms in Turkey, especially small and medium size enterprises. Once for all, more specific studies and researchers may be performed about the topic. We hope this paper has been contributed to the literature.

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## APPENDIX

### APPENDIX 1 – Descriptive Statistics of Respondent Firms

Size-Turnover (TL)	# of Firms in Sample	%	# of Firms Using Factoring	%
0.19.999	22	5,0%	18	9,1%
20.000-49.999	5	1,1%	4	2,0%
50.000-149.999	11	2,5%	7	3,5%
150.000-249.999	25	5,6%	21	10,6%
250.000-499.999	58	13,1%	30	15,2%
500.000-749.999	25	5,6%	14	7,1%
750.000-999.999	93	20,9%	34	17,2%
1.000.000-2.999.999	141	31,8%	45	22,7%
3.000.000+	64	14,4%	25	12,6%

Age	# of Firms in Sample	%	# of Firms Using Factoring	%
0-1	31	7,0%	15	7,6%
1-5	160	36,0%	100	50,5%
6-10	139	31,3%	57	28,8%
11-15	80	18,0%	13	6,6%
15+	34	7,7%	13	6,6%

Ownership	# of Firms in Sample	%	# of Firms Using Factoring	%
Private Companies	146	32,9%	108	54,5%
Limited Companies	269	60,6%	82	41,4%
Incorporated Companies	28	6,3%	7	3,5%
Ordinary Partnership	1	0,2%	1	0,5%

Sector	# of Firms in Sample	%	# of Firms Using Factoring	%
Agriculture/Stock Raising	17	3,8%	10	5,1%
Construction	110	24,8%	47	23,7%
Electric/Electronic	30	6,8%	19	9,6%
Logistic/Transport/Comm.	27	6,1%	10	5,1%
Manufacturing	94	21,2%	46	23,2%
Mining	16	3,6%	6	3,0%
Services	44	9,9%	16	8,1%
Wholesale/Retail	106	23,9%	44	22,2%

**ETİK KURUL DEĞERLENDİRME SONUCU/RESULT OF EVALUATION BY  
THE ETHICS COMMITTEE**

(Bu bölüm İstanbul Bilgi Üniversitesi İnsan Araştırmaları Etik Kurul tarafından  
doldurulacaktır /This section to be completed by the Committee on Ethics in research  
on Humans)

**Başvuru Sahibi / Applicant:** Onur Şencanbaz

**Proje Başlığı / Project Title:** Factoring as a Financial Option: Evidence from Turkey

**Proje No. / Project Number:** 2019-20622-38

1.	Herhangi bir değişikliğe gerek yoktur / There is no need for revision	XX
2.	Ret/ Application Rejected Reddin gerekçesi / Reason for Rejection	

Değerlendirme Tarihi / Date of Evaluation: 7 Mart 2019

Kurul Başkanı / Committee Chair

Doç. Dr. İtir Erhart



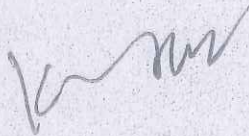
Üye / Committee Member

Prof. Dr. Turgut Tarhanlı



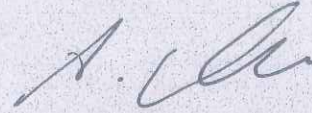
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