

**THE REPUBLIC OF TURKEY
BAHCESEHIR UNIVERSITY**

**AN APPLICATION OF DISRUPTIVE INNOVATION
THEORY WITH AN EXAMPLE FROM TURKISH
AIRLINE INDUSTRY**

Master's Thesis

EVİRİM ÇARK GEMİCİ

ISTANBUL, 2014

**THE REPUBLIC OF TURKEY
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MARKETING**

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Supervisor: PROF. DR. LUTFİHAK ALPKAN

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ABSTRACT

AN APPLICATION OF DISRUPTIVE INNOVATION THEORY WITH AN EXAMPLE FROM TURKISH AIRLINE INDUSTRY

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This thesis investigates how a Turkish incumbent operating in the airline industry responded to disruptive innovation and which factors affected the decision in embracing a new business model. This line of business was studied since the airline industry has possessed the characteristic of disruption by allowing both low-end and new market creation approach of disruptive innovation theory.

Low cost carrier model is considered one of the most illustrative examples of disruptive phenomena due to being the subject to change the basis of competition. Low-cost carriers has transformed the air transportation market and helped to stimulate domestic passenger growth in Turkey since the deregulation. In the literature, even though the incumbents are often being constrained by and trapped in the existing customer and their own value network, Turkish Airlines succeeded to embrace disruptive innovation, wisely.

Through an in-depth interviews and historical case study of both the incumbent and its sub-brand, this study intended to reveal the particular characteristics of Turkish airline market and the way of Turkish incumbent adopting the disruptive innovation by choosing two different strategic positions, simultaneously.

In the face of disruptive innovation, incumbents frequently encounter substantial difficulties in adopting this change. This research contributes to the literature by investigating in how and why a Turkish giant decided to adopt disruptive innovation and could not simply ignore the disruption process although it holds the market leader position.

Keywords: innovation, disruptive innovation, incumbent’s response, low-cost carrier

ÖZET

TÜRK HAVA TAŞIMACILIĞI SEKTÖRÜNDEN BİR ÖRNEK İLE YIKICI YENİLİK TEORİSİ ÜZERİNE BİR UYGULAMA

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Pazarlama

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Bu tez havayolu taşımacılığı sektöründe faaliyet gösteren pazar lideri bir firmanın yıkıcı yeniliğe nasıl cevap verdiğini ve hangi faktörlerin bu cevabı etkilediğini araştırmaktadır. Hava taşımacılığı sektörünün incelenmesinin ana nedeni; bu sektördeki yeniliğin hem alt pazar hem de yeni pazarların oluşturulması şeklindeki her iki yıkıcı yenilik yaklaşımının karakterini taşımasıdır.

Düşük maliyetli taşıyıcı modeli rekabetin bazını değiştirmesi nedeniyle yıkıcı yeniliğin en önemli örneklerinden biri olarak düşünülmektedir. Düşük maliyetli taşıyıcılar Türkiye’de de kısıtlayıcı düzenlemelerin kaldırılması ile birlikte özellikle yurt içi havayolu yolcu sayısının artmasında önemli rol oynamışlar ve pazardaki dinamikleri değiştirmişlerdir. Pazarda hâkim durumdaki firma statüsünde bulunan Türk Hava Yolları bu dönüşüme son derece akıllıca bir hamle ile karşılık vermiştir.

Bu çalışma hem Türk Hava Yolları hem de yeni alt markası Anadolu Jet ile yapılan derinlemesine görüşmeler ve Türk hava taşımacılığı endüstrinin evrimsel incelenmesi neticesinde pazarın kendine özgü dinamiklerini ve pazar liderinin iki farklı stratejik konumu aynı anda yürütme teşebbüsünü incelemektedir.

Literatürde, yıkıcı yenilik karşısında genellikle pazarda hâkim durumda bulunan firmaların bu yeniliği benimsemek konusunda bazı güçlüklerle karşılaştıkları görülmektedir. Bu araştırma pazar lideri konumunda bulunan dev bir Türk firmasının yıkıcı yeniliği benimsemeye nasıl ve neden karar verdiğini tartışmaktadır.

Anahtar Kelimeler: yenilik, yıkıcı yenilik, pazar liderinin cevabı, düşük maliyetli taşıyıcı

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ABBREVIATIONS

ATAG	:	Air Transport Action Group
BRJ	:	Bora Jet
CAI	:	Corendon Airlines
EFB	:	Electronic Flight Bag
FHY	:	Free Bird
FSC	:	Full-service Carrier
GDP	:	Gross Domestic Product
IATA	:	International Air Transport Association
ICAO	:	Elliptic Curve Cryptography
KKK	:	Atlas Jet
LCC	:	Low-cost Carrier
OECD	:	Organisation for Economic Co-operation and Development
OHY	:	Onur Airlines
PGT	:	Pegasus Airlines
RPK	:	Revenue Passenger Kilometer
RPV	:	Resource, Process, Value
SXS	:	Sun Express
THT	:	Turkish Air Transportation Incorporation
THY	:	Türk Hava Yolları (Turkish Airlines)
TOBB	:	Türkiye Odalar ve Borsalar Birliği
TWI	:	Tailwind

1. INTRODUCTION

1.1 THE NEED FOR INNOVATION

Various explanations of innovation have been proposed until this time. Due to the fact that the explanations have strongly influenced the understanding of innovation of both practitioners and the organizations over time, recognizing the definitions gives useful insights in order to make use of the innovation journey, thoroughly. Furthermore, as the world has been changing than ever before and new approaches have been experiencing continuously, the need for innovation reproduces new meanings to make organizations survive and prosper in current fast-changing business environment. According to The Oslo Manual¹ published by OECD, which is the universal guideline of gathering information and analyzing the data on innovation activities, “an innovation is the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or new organizational method in business practices, workplace organization or external relations”. Michael E. Porter, Professor of Business Administration at the Harvard Business School defined innovation as the ultimate way of gaining competitive advantage including both new technologies and new ways of doing things. It can consist of introducing a new product design, applying a new production process, a new approach executed in business or a new way of conducting training (Porter 1990). The most comprehensive definition still belongs to Austrian economist Joseph Schumpeter although it was developed in 1934. He defined the innovation as the driving forces of development for the first time and pointed out five different aspects of innovation. Introduction of a new product, new methods in production, the opening of new markets, new sources of supply used and a new form of organization that reconstructs of an industry can be considered as one of the phenomenon of innovation (Schumpeter 1934). Although the outcome and impacts vary at the end of innovation process, the “newness” is required of expressing innovative task.

¹ OECD/Eurostat, 2005. Oslo manual: Guidelines for collecting and interpreting innovation data. Issue no: 3. Paris: OECD Publishing.

Basically, four main factors drive and create the need for innovation. Since technological advances both has an influence and potential to transform the existing market, companies need to keep track of new technologies, constantly. Changing customers and needs are the drivers of the need for innovation in terms of the diversified products or services which demand in the market. Finally, changing business environment and intensified competition are forcing companies to put the innovation work in order to survive, what is more, to grow.

Innovation has undoubtedly a crucial role in providing market share, revenue, growth and profit at the organizational level. Therefore, innovation strategy is considered as the key element of corporations' overall strategy. Strategy which is defined by Michael E. Porter is to form unique and valuable position by involving a different set of activities while integrating company's activities so that they complement one another and avoid incompatible ones. Difference is in the heart of strategy in order to hold an entirely idiosyncratic position while meeting the needs of market. The essence of strategy stems from the activities which are performed differently or perform different activities than rivals (Porter 1996). Strategy gives the corporations a clear direction over the long term. Nevertheless, once strategic positioning is identified, sustaining strategic position requires relentless set of activities. In this respect, innovation determines where and when it is needed and what type of innovation is required to implement. In that manner, common approach tells the business leaders to listen to their best customer and direct investments in products which target attractive profit margin. However, this approach ends up in ignoring emergence of disruptive forces and finally, causes the demise of the companies.

This thesis investigates how a Turkish incumbent operating in the airline industry responded to disruptive innovation and which factors affected the decision in embracing a new business model and ultimately, in meeting this strategic decision. Through an in-depth interviews and historical case study of both the incumbent and its sub-brand, this study intended to reveal the particular characteristics of Turkish airline market and the way of Turkish incumbent in adopting the disruptive innovation by choosing two different strategic positions, simultaneously. In order to explain these issues, firstly,

Turkish airline industry and its players were analyzed and in-depth historical case study of Turkish incumbent was performed.

The major focus of this research is to investigate the determinants of embracing disruptive innovation by an incumbent, by setting up an example from airline industry in Turkey. This study started from “disruptive innovation theory”. For this purpose, in the first part of this thesis, disruptive innovation theory has been researched intensively in the literature and the background of the theory has been tried to introduce in detail. Furthermore, disruptive innovation model and the types of disruptive innovation have been presented. Literature review part has explained the development of theory, its critics and the previous related studies. The subsequent section contains a description of methods applied in this study. Research and findings part starts with a brief history and current situation in air transportation industry in the world, by supporting with facts and figures. In this part, Turkish Airline Industry and its milestone have also been investigated, comprehensively. Based on the information collected from historical case study and in-depth interviews, Turkish incumbent’s involvement in disruptive innovation and the factors leading to a response have been tried to reveal, thoroughly. Final part provides discussion and conclusion regarding to embracing disruptive innovation by an incumbent.

In the face of disruptive innovation, incumbents frequently encounter substantial difficulties in adopting this change. This research contributes to the literature by investigating in how and why a Turkish giant decided to adopt disruptive innovation and could not simply ignore the disruption process although it holds the market leader position.

1.2 DISRUPTIVE INNOVATION THEORY

Disruptive innovation was firstly introduced as disruptive technology by Christensen (1997). Disruptive technology was a product and technology oriented approach and concentrated mostly on new technologies in its first presentation. Later on, the term was widened as disruptive innovation by including not only reflecting technological approach but also services and business model innovations.

Disruptive Innovation Theory is based on the fact that the factors that lead to a firm's success can also play a significant role on its failure. Listening and staying close to their customers and investing in the technologies that satisfy their current customers' need keep companies out of the wave of change, subsequently (Christensen 1997).

When technologies and market change, established companies are always ahead of their industries in leading both incremental and radical innovations that address the future needs of their existing customers. However, the same companies fail in commercializing new technologies that don't meet their customer's need. These technological changes originally take attention only in small and emerging markets. They typically offer different attributes that are not valued by current customer of established companies. However, the performance attributes of new technology improve themselves and the new technology invades the established markets, eventually (Christensen and Bower 1996).

1.3 FAILURE OF THE COMMON VIEWPOINT IN BUSINESSES

The concept of disruptive innovation explains the failure of established companies when they encounter certain changes in the market. The underlying reason of the failure of established companies is the way of decision-making and perceptual deficiencies seen in organizations. Basically, three main factors play a significant role in leading companies to failure. This failure stems from the methodological difference in pursuing sustaining and disruptive technologies, the rate of improvement that customers can utilize or absorb in the market and the revenue and cost structure of established companies (Christensen 1997).

1.3.1 Sustaining and Disruptive Technologies

Defining innovation as either incremental or radical is the most prevailing way in classifying innovation activities. While incremental innovation introduces small changes to the current product and helps maintain the dominance of established companies, radical innovation is fundamentally different from incremental innovation. It creates totally significant changes in processes, products or services and generally transforms existing market or opens up new markets.

Earlier scholars have also argued that established companies falter when they encounter technological changes.

In their study, Tushman and Anderson (1986) showed that the periods of incremental changes interrupted by discontinuous changes as competence-enhancing and competence-destroying changes. Competence destroying innovations which make the current knowledge obsolete are generally initiated by new entrants and met with great resistance by established companies.

Afterwards, Henderson and Clark (1990) introduced to the literature architectural innovation concept in 1990. Architectural innovation defines minor changes on architecture of a product without changing its components. While the core design concept of a product is intact, changing the way in which the components of a product work together describes architectural innovation. This minor innovation has great consequences and is able to shape the industry all over again.

However, Christensen and Bower (1996) define that those kinds of innovations are sustaining in character. They seek improved performance and satisfy the needs of mainstream customers in existing market. Sustaining innovations take the current dimensions of established products into account and try to increase the product performance and bring out the better products into the market.

Conversely, disruptive innovation serves a very different value proposition into the market. At the beginning of its introduction, disruptive technologies underperform the existing products in the mainstream market. However, they have other attributes which (generally) new customers value. The common characteristics of disruptive technologies are to be cheaper, simpler and smaller, and having ease of use” (Danneels 2004).

When disruptive technologies emerge, many leading firms that are successful in excelling at sustaining innovation, found themselves on the threshold of a new and harsh competition which is unfamiliar to them.

1.3.2 The Rate of Technological Progress

Christensen (1997) argues that technological progress is faster than the market demand. Since the rate of improvement that customers can utilize or absorb is lower than the presented performance, the suppliers mostly overshoot the market. On the other hand, disruptive technology which has lower performance in characteristic today intercepts the demand of the tomorrow's market because of the improvement on given disruptive technology itself.

1.3.3 The Revenue and Cost Structure of Established Companies

Achieving and what is more, maintaining growth is the main aim of all organizations. However, how to generate growth is quite debatable subject of management. The revenue and cost structure of the companies play a significant role on how to perform technological innovations. At the first emergence of disruptive technology, profitability is generally not favorable for the desired growth in established companies. Besides, disruptive technologies emerge in small and insignificant markets so that the established companies which deal with their best and profitable customers show no interest to these least profitable customers in the market. Small markets are not able to meet big companies growth needs. For that reason, they wait until the new markets are robust and large enough to be interesting. Eventually, as the disruption takes place, it becomes too late to invest in (Christensen and Raynor 2003).

1.4 BACKGROUND OF THE DISRUPTIVE INNOVATION THEORY

1.4.1 The Impact of Technological Change

The concept of performance trajectories is a useful indicator in order to explain the impact of various technological innovations in an industry. Companies form a trajectory of performance on their products over time by sustaining established trajectories of performance improvement (Dosi 1982). Different types of innovation activities have an impact on performance trajectories in different ways (Christensen and Bower 1996). Therefore, as long as a new trajectory of improvement has been established, qualifying a product's performance relative to earlier product does not always give the right answer in order to evaluate it.

Technological paradigm and technological trajectories approaches were firstly introduced to the literature by Dosi (1982) as given below.

Technological paradigm is "... 'model' and a 'pattern' of solution of selected technological problems, based on selected principles derived from natural sciences and on selected material technologies".

Technological trajectories are "... 'the pattern of normal problem solving activity on the ground of a technological paradigm"

Continuous changes are defined within the border of progress along a technological trajectory defined by a technological paradigm while discontinues changes are a part of an appearance of a new paradigm.

Thus, sustaining technologies contribute to the rate of improvement in terms of giving customers more or better performance. However, disruptive technologies introduce other benefits and offer different attributes which appeal to small and emerging markets (Christensen and Bower 1996).

Consequently, technological paradigms define a new set of problems after the appearance of new technologies and in this respect, are strictly related to the reason of the failure of established companies.

In line with the new performance trajectories, two types of technology change have an impact on industries. When these two types of technology which are sustaining and disruptive in character change, established companies are likely to develop and adopt sustaining technologies whereas new entrants as those new to the industry are successful in practicing disruptive technologies (Christensen 1997).

1.4.2 The Impact of Sustaining Technological Changes

Technological discontinuous are the concept that determines the new set of rules on the given industry or create wholly new ones. Technology evolves through incremental change which is punctuated by breakthroughs either enhancing or destroying current competencies in the industry. According to Tushman and Anderson (1986), both competence-enhancing and competence-destroying discontinuities open up a new

ferment period until the dominant design emerges. While competence-enhancing discontinuous are built on existing know-how and knowledge, competence-destroying discontinuous entails completely new skills. Furthermore, although competence-destroying discontinuous are initiated by new entrants, competence-enhancing discontinuous are achieved by established companies.

All sustaining technological changes lead the companies increase the rate of performance improvements along with the customer's expectation. Therefore, established companies are capable of giving customer's better products and in this manner, they succeeded in sustaining innovations, not in the disruptive technologies (Christensen 1997).

1.4.3 The Impact of Value Networks

Another explanation for failure of established companies is related to the organizational problems. Due to the fact that evolutionary process has very deep significance for the types of knowledge in order to develop a product in an organization, organization's knowledge and its capabilities are formed by its recurrent task performed. Since organizations are locked to learn extremely about the dominant design rather than learning other possible designs, architectural knowledge is only extracted from the practices and procedures of organizations. In their study, Henderson and Clark (1990) have explained the importance of communication channels, information filters and problem-solving strategies in managing architectural knowledge since architectural knowledge becomes implicit in the organization once the dominant design is accepted.

They, then conclude that established companies have great difficulties in adapting architectural innovation. Firstly because, architectural innovation is often confused with radical innovation and recognizing architectural innovation can be problematic for established companies. And secondly, applying to architectural innovation effectively requires new mode of learning, in addition, abandoning old architectural knowledge. On the other hand, new entrants reveal their potential excellently since they are not trapped by the irrelevant architectural knowledge (Henderson and Clark 1990).

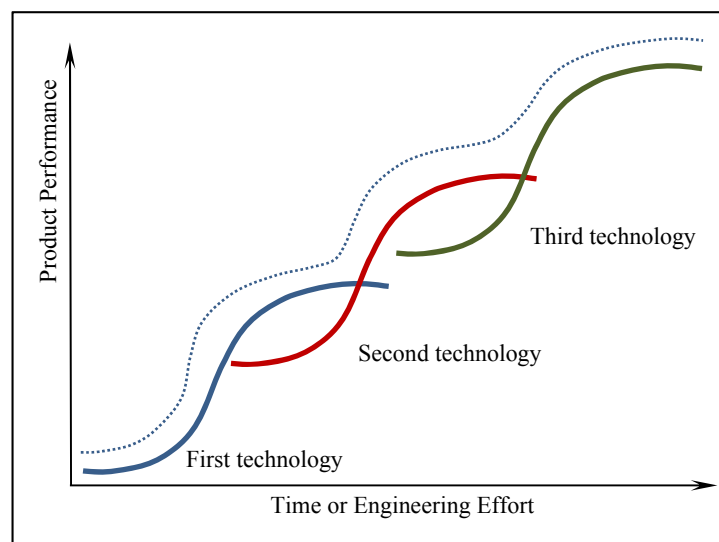
Tushman and Anderson (1986) also found that established companies failed when they confronted a competence-destroying change which embraces a new technological approach.

Value networks comprise of the integration of upstream suppliers, downstream channels to market, and ancillary providers that support a common business model within an industry. The concept of value networks determines a firm's strategy and in turn, responses to the market within certain perceptions (Christensen and Rosenbloom 1995). These perceptions manifest themselves as innovations whether sustaining or disruptive. As firms have an experience on a certain network, they tend to develop capabilities in accordance with their network's requirements. As a value's distinctive requirements change one from another, cost structures are also characterized within a given value network. Therefore, whereas a cost structure is viewed as profitable in a given network, it can be considered not to worth investing in some networks (Christensen 1997).

1.4.4 Technology S Curves Approach and Disruptive Innovation

S-Curves are generally referred to explain the technology life cycles. S-Curve forms suggest that the magnitude of a product's performance improvement in a certain time period or due to the engineering effort spent is likely to accelerate as technology matures and better understood.

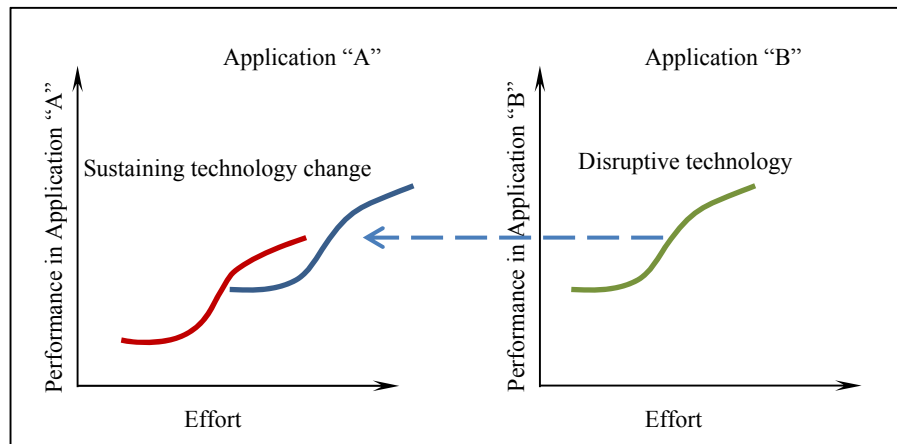
Figure 1.1: The Conventional Technology S-Curves



Christensen (1997)

However, disruptive innovation cannot make sense in the same S-Curve figure because the attributes of product performance are totally different from the product performance of sustaining technology (Figure 1.1). Disruptive technology follows its own path and for that reason, it does not provide a solution for the established companies in predicting the following technology (Figure 1.2).

Figure 1.2: Disruptive Technology S-Curve



Christensen (1997)

Disruptive technologies address the market that is unknown in advance. Many companies are very skillful at managing sustaining technologies by analyzing and planning actions. Conversely, disruptive technologies cannot be predicted with the same methodology.

In established companies, the decisions are shaped within a value network which addresses the needs of companies' most powerful customers.

Since value networks suggest which companies can and cannot do with their S-Curves, S-Curve framework which is the predictor of sustaining technology doesn't help the companies assess the disruptive technology.

1.4.5 Migrating Towards High-end Markets and Resource Allocation Process

Migrating towards high-end market and searching for the improved profitability seem to be very attractive in leading companies. The main reason of this intrinsic behavior is due to the resource dependence and resource allocation processes that direct the resources to promising higher margins.

Resource Dependence means that organizations need critical resources that enable them to survive. Resource Dependence Theory suggests that how external sources such as external customers and investors affect organizational behavior (Pfeffer and Salancik 1978).

Resource Dependence has a power to control on which and how resources should be allocated to innovation. Consistent with the Theory of Resources Dependence, customers and investors always direct companies to investments that satisfy their own needs. It is very difficult to invest in technologies which meet their tomorrow's needs right away. On the other hand, moving down-market is in contradiction with that perspective (Christensen 1997).

Within the resource allocation process approach, Joseph Bower (1970) firstly stated that innovative ideas come from the bottom, thus, middle managers play a very crucial role in viewing and shaping these ideas (Bower 1970).

Therefore, projects that target at the need of current customer, explicitly always win over the projects for the market which does not exist. Best resource allocation process is defined to eliminate the ideas that do not serve to the needs of current market. Consequently, disruptive ideas never supply a significant share of resources and grow. Listening too carefully to customers and directing resources in order to bring higher-performance into the market and higher-profit to the organization are the main reasons of why great companies fail when they confront with disruptive technology (Christensen and Bower 1996).

1.4.6 Company Size and Leadership in Disruptive Innovation

There is no relation between developing sustaining innovations and holding the first-mover advantage to become competitive (Christensen 1997). In fact, most sustaining innovations are highly risky and expensive from both technological and financial point of view. However, they address the needs of current customers well and the cost structure of company help supplying resources to sustaining innovations. Although these innovators retain their current customers, there is also no evidence that they gained a significant market share by investing in sustaining innovations (Christensen

and Bower 1996). On the other hand, literature strongly supports that early entrants which execute disruptive innovation have strong returns. Despite these significant evidence, great companies face the problem in introducing disruptive technologies since the small markets don't solve the near-term growth needs of large companies. In fact, the problem is not an issue of technological competence, but it is mostly an issue of changing strategy and investment (Christensen and Bower 1996).

1.4.7 Organizational Capabilities

The organizational capability has been explained with core competencies of an organization framework since it was introduced to the literature for last decade. Core competencies are considered as one of the main elements of innovativeness of the organization. The word "Core competence" was firstly put forward in 1990 (Prahalad and Hamel 1990).

According to Prahalad and Hamel (1990), the core competencies of company are the integration of various resources and skills that differentiate a firm in competitive environment. Core competencies are based on taking advantages of collective learning in the organization. They take long time to build and are the result of continuous improvement and enhancement. Core competencies are likely to broaden the scope of innovation in the organization. Exploiting existing core competencies lead to create new products and new ways of doing things.

When an organization confronts with a technology change, determining whether it is competent or incompetent, three factors are able to affect the capabilities of organization; resources, processes and values (Christensen 1997).

Resources are the most visible factors such as people, technology, brands and cash. Since resources are the factors which create different outcomes, processes and values are most likely to affect the organizational capabilities compared to resources.

Organizations create value as a result of transformation of resources into products or services. Processes are the whole interaction, coordination, communication and decision-making in order to achieve a result (Garvin 1998). They create the culture of an organization and define a capability structure. A process defines a capability in

executing a certain task (Dorothy 1992). On the other hand, processes delimit the organization in terms of performing a different task. Therefore, inflexible processes carry serious disabilities in change (Christensen 1997).

The third factor that affects organizational capability is its values. Values reflect the priorities in an organization but at the same time it reflects companies' cost structure or its business model. Every company is established to gain money and reach acceptable gross margin. As the company improves its product performance, it adds additional cost on the products as well. Therefore, while gross margin is acceptable in one point, it cannot be sustainable in latter points. Eventually, the values of company come to change. Another value change is observed while maintaining a constant rate of growth. Big companies always pursue a growth rate that enables them to grow, steadily. An opportunity can be found very attractive by a small company but a large organization shows no interest because of not meeting its growth needs (Christensen 1997).

Consequently, the processes and values are the factors constitute disabilities in achieving disruptive innovation as well.

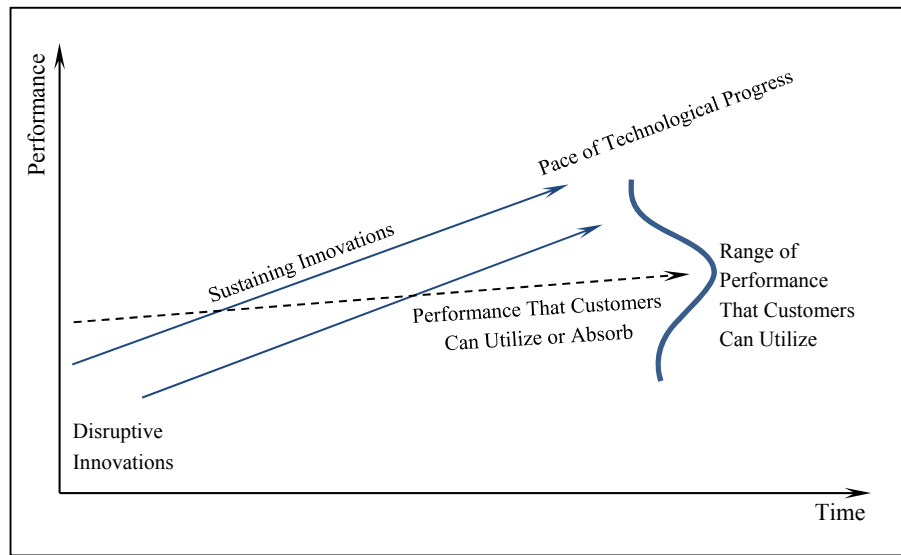
1.5 DISRUPTIVE INNOVATION MODEL

Three important elements of disruption have been proposed in order to comprehend the process of disruption (Christensen and Raynor 2003). These are explained below and depicted in Figure 1.3.

Firstly, there is a rate of improvement that customers can utilize or absorb in every market. In the figure, the dotted line represents the technology which is average around the good enough to serve and satisfies customers' needs.

Secondly, there is a different trajectory of improvement while introducing new or improved product by innovative companies. This technological progress always goes beyond the ability of customers to use or absorb it. Therefore, the products which are positioned to satisfy mainstream customers' needs overshoot the same customers' needs in the future since the companies keep attempting to make better products.

Figure 1.3: Disruptive Innovation Model



Christensen and Raynor (2003)

Last element is the distinction between sustaining and disruptive innovation. The target of sustaining innovations is to reach demanding and high-end customers by serving better performance whereas disruptive innovations don't attempt to better products in existing market (Christensen and Raynor 2003).

Disruptive innovation involves products, services or approaches that transform existing market or create new ones by trading off raw performance in the name of simplicity, convenience, affordability or accessibility. The main aim of disruptive innovations is not to bring the best performance product or service to current customers. Conversely, the aim is to bring lower performance products or services to market by introducing other benefits such as being cheaper, having ease of use for current and/or new customers.

Once the disruptive innovation emerges in new or low-end market, the improvement progress starts to work out and since the pace of technological progress goes beyond the customer's ability, it intersects with the needs of more demanding customers. This is the point that where the disruptor starts to override the incumbents.

There are two main preconditions for a market to be subject to disruption. There must be a performance overshoot on mainstream market and an asymmetric incentive between two businesses which are subject to change (Yu and Hang 2009).

1.5.1 Principles of Disruptive Innovation

Disruptive Innovation is a relative term that changes one business to another. An idea could be disruptive to one business while it presents sustaining improvements for others (Christensen and Raynor 2003).

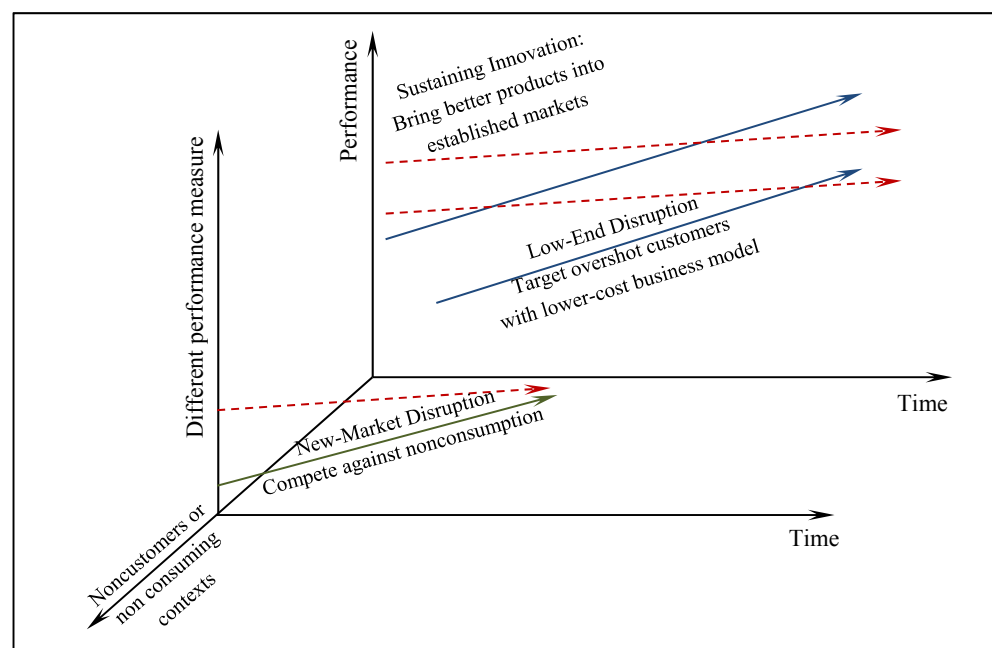
Disruptive Innovation does not anticipate that emerging disruptive business will send the incumbents off. It means that an incumbent can maintain its business by focusing on its most demanding customers. Therefore, existing business with high-end technologies can survive and keep satisfying least price-sensitive customers.

Disruptive innovation is totally different from destructive innovation that offers superior performance and has a low-cost structure. Disruptive Innovation Theory is based on initially low-cost model but at the same time lower performance attributes (Yu and Hang 2009).

1.5.2 Types of Disruptive Innovation

Disruptive Innovation model introduces third dimension depicted in Figure 1.4 in addition to the previous model.

Figure 1.4: Third Dimension of the Disruptive Innovation



Christensen and Raynor (2003)

In original model, while the horizontal axis represents time, performance is shown on the vertical axis. They both define a specific market that has customer currently purchasing and using products or services.

Within a formerly presented value network framework, a firm establishes a cost structure and process and responds to the needs of its customers, accordingly. With regard to its value network, a firm determines its perception of innovation as sustaining or disruptive.

Third dimension in the Figure 1.4 represents a totally new value network. These are the customers who previously lacked the money or skills and were not able to use the product or service or the customers attracted by the introduction of new attributes such as simplicity, flexibility or product cost (Christensen and Raynor 2003).

1.5.2.1 New-market disruption

The main aim of new-market disruption is to create distinctively a new value network and compete against non-consumption. These products or services are generally easy-to-use and more convenient. Although new market disruption target non-consumption, they attract more customers into their own value network as the performance improves. As a result, mainstream customers depart from their own value network and migrate to disruptive product or service. Due to the characteristic in competing against non-consumption, incumbents do not feel any threat to their business until disruption reaches significance and gets to its final point.

1.5.2.2 Low-end disruption

Low-end disruption does not create a new market. Conversely, it creates low-cost business model which targets the least attractive customer of established companies.

The difference between low-end and new-market disruption in terms of the response given is that while new-market disruptors are ignored by the established companies, low-end disruption encourages the incumbents to flee the attack.

Many disruptions are hybrid in nature. They create both new-markets and offer low-end approach (Christensen and Raynor 2003).

2. LITERATURE REVIEW

The literature received numerous attentions in order to explain the effects of innovation on organizations, industries and competitive environment before the emergence of The Disruptive Innovation Theory. Each study as given below also attempted to explain the new entrants and incumbents role in responding to different types of innovation.

One of the remarkable contribution to the literature is the study which investigates the relationship between innovation and competitive environment by Abernathy and Clark (1985). They highly concentrated on categorizing the innovation in terms of competitive significance and analyzed the role that they play in competition, accordingly. The success or the failure of the innovating company in competitive environment was evaluated with regard to the implications of innovation.

They developed a model to illustrate and manage a company's existing and future strategy on innovation. Innovation was divided into two dimensions and mapped a matrix of four cells, calling it transilience map which shows how different product innovations affect the competitive situation in a particular industry, by conserving or destroying or by entrenching in or making obsolete the technology.

Abernathy and Clark (1985) also linked the types of innovation to different kinds of organizational requirements. The transition from one phase to another creates a big change for established companies. Yet it needs to examine the market along with the market structure as well as managing the internal sources.

Another important study which investigates Technological Discontinuous and Organizational Environments was proposed by Tushman and Anderson (1986). In this study, they suggested a model in which the periods of incremental changes interrupted by discontinuous changes. These discontinuous changes were divided into two categories as competence-enhancing and competence-destroying change.

Competence enhancing innovations are built on company's existing knowledge and strengthened the position of established companies. On the other hand, a competence destroying innovation makes current know-how obsolete and generally is initiated by

new firms and is faced with great resistance by established companies (Tushman and Anderson 1986).

The subsequent work which contributes to the literature in this context is the architectural innovation concept and its relationship with the competitive environment.

The concept of architectural innovation was firstly stated and explained as the technology which departed from the rooted system of production and in turn, opened up new relationship with market and users. Architectural innovation finds its meaning by adapting and applying latent technologies which are not previously articulated by users (Abernathy and Clark 1985).

Later on, Henderson and Clark (1990) stated that the categorization of innovation as incremental and radical was not enough to explain how and why companies achieve success through innovation activities. Then, they investigated why some incumbents fail to develop something as seen straightforward. Consequently, architectural innovation which refers to knowledge of the linkage between components was introduced. In this type of innovation, the knowledge of the component remains the same while the linkage of components is subject to change.

The companies which ignored the architectural knowledge simply failed in spite of having strong competences in component technologies.

Architectural innovation was an attempt to answer anomalies which arose from the categorization of competence-destroying and competence-enhancing. Since established companies who are successful in competence-destroying innovations were an anomaly to this generalization (Christensen 2006).

It was the era that Disruptive Innovation Theory was developed and attempted to answer why great companies fail.

Disruptive Innovation Theory has been the subject of considerable debate both in practice and within academia since it was introduced. The debates generally revolve around the precise definition of disruptive innovation, predictive power of the theory,

various responding methods to disruptive innovation and practical implications of the theory.

The early critics to “Disruptive Innovation Theory” came from Markides (1997) who introduced strategic innovation approach to the literature. In his early study, he found that the companies greatly succeeded in some industries in attacking established companies. However, they did it without the help of radical technological innovation. The success behind them was termed as strategic innovation. Strategic innovation approach allowed companies to change the rules of game they involved in. They were successful not because of that they played the game better than its competitors, but they identified the gaps in the industry, filled them and those gaps turned to a new mass market.

In his later work, he criticized the disruptive innovation theory under the two main headings. Firstly, he addressed the disruptive innovation in the light of different types of innovation as business model innovation, radical product innovations and disruptive technologic innovation.

He stated that disruptive technological innovation is fundamentally different from business model innovation and they should be studied as distinctive phenomena. Business Model Innovation, as referred to Strategic Innovation in his early study, does not bring a new product or service into the market. They simply redefine an existing product or service. Business model innovation emphasizes different dimensions of a product or service and it creates new market and carves out a new customer group (Markides 2006). At this point, he recognizes that new business models improve and ultimately, are able to deliver the performance as sufficient as provided by established company. At a certain point, the leading companies cannot ignore this new way of doing business and try to respond it somehow. On the other hand, radical product innovations are new-to-the world products those are both disruptive to producers and customers. The mechanism of radical product innovations is quite different and they mostly shape as a result of supply-push process, not driven by demand (Klepper and Simons 1997).

As stated by Markides and Geroski (2005) disruptive technological innovations are the example of basically scaling up a niche market into a mass market process. As a matter of course this process, numerous new entrants invade the market and scale the product up to the mass market from little niches. Established companies do not need to attempt to involve in disruptive technological innovations since they mostly concentrate on what they are good at. Due to the fact that the main concern of Markides about disruptive innovation is that not all disruptive innovations are the same in nature (Markides 2006).

Second criticism is related to responding to disruptive innovation. Charitou and Markides (2003) state that responding to disruptive innovation can vary from industry to industry or from market to market. They determine five ways of responding to disruptive strategic innovation. Response one suggests that focusing on and investing in traditional business. Main idea behind this response is that the new way of business will not necessarily capture the whole market. Therefore, improving value proposition for already targeted market could be the best way in responding to disruptive innovation. Second way of responding is to ignore the disruptive innovation since it has different value proposition and targets different customer segment. Therefore, it is not a part of established competitor's business. In this response, established companies don't see disruptive innovation as a threat. Response three proposes that disrupting the disruptor by playing a totally different game from both established companies and disruptive companies. This response includes emphasizing totally different product attribute and instead of embracing the disruptive innovation, disrupting the disruptor company. Response four is to adopt the new way of business by being in two conflicting position at the same time. In this sense, setting a separate organizational unit which has its autonomy is seen as common approach. Fifth way of responding to disruptive innovation is to completely embrace the new way of doing business and scale it up into the mass market.

The other dimension of this discussion was shaped around establishing a distinct organization in order to manage disruptive innovation. There are two main logic of setting a separate business unit in order to enable putting the disruptive technologies into work; resource allocation process which directs resources to sustaining innovations and refrains from disruptive technologies and resources, processes and values of the

mainstream organization that do not fit with the disruptive technologies (Christensen 1997). Later on, Christensen and Raynor (2003) revised his attitude towards setting up a spin-off company and he stated that spin-off is necessary only in case of a different cost structure and when the current size of the opportunity does not match the growth needs of mainstream organization. On the other hand, Porter earlier argued that operating in the same market with two different strategies is impossible because strategic positioning needs trade-offs. Otherwise, the companies found themselves in paying huge straddling costs and destroyed the value of their current structure (Porter 1996).

The main question of whether it is achievable to manage the incompatible activities within established companies was tried to be answered from different scholars. In their study regarding to competing with dual strategy, Charitou and Markides (2004) found that competing in two conflicting strategic positions in the same industry is possible even if there is no separate division. The main concern must be emphasizing different dimension of product or service attributes and attracting different customers. Besides, the market with its own key success factors must come out. Then, it is crucial to determine the conflicts between two businesses and how they are strategically similar to each other. Once it is done, separation can be subject to issue. On the other hand, even if separation is necessary, the company must still find a way to exploit its current strengths in the separate division. They also found that separate division does not secure the success. The key success factors are to look at the new business model as an opportunity and to embrace the new model in a creative way. Consequently, they suggested that competing effectively in two conflicting position is achievable in the same organization.

From a complementary point of view, Henderson (2006) argued that organizational competence can be a central explanation for failure of established companies in order to catch up with disruptive innovation. Embedded organizational competence is a key to understand to explain why so difficult in responding to disruptive innovation. Established routines of incumbents make it difficult to realize and act upon these kinds of shifts in the market. Reconstructing an organization to take advantage of new opportunities and investing in disruptive innovation is extremely difficult and requires major behavioral changes (Danneels 2002). Understanding the different market's

consumer and shifts in demand might call customer-facing competence. Many companies find this process irrational and continue to search for opportunities around their existing market (Henderson 2006).

The other argument was also put forward from the consumer and market view. Adner (2002) examined demand-side factors and explained the demand conditions that allow disruptive technologies emerge by investigating how consumers evaluate the technology. As technology improves and consumer requirements are met and then, exceeded, consumer's willingness to pay for each improvement decreases and disruptive technologies start to capture these consumers. Demand-based approach investigated how firm's offers evaluated in the market and found that the relationship between consumer preferences and consumer's willingness to pay for performance improvements. These are the main reasons of attention to disruptive technologies.

Christensen and Raynor (2003) put emphasize on this view from offering new value propositions and emphasizing different dimension of product or service and affordable prices as well.

Strategic orientation is the direction to which firms wants to go. In terms of determining innovation activities according to its strategic orientation, Slater and Mohr (2006) propound that developing and commercializing disruptive innovation is strictly related to the interaction among a firm's strategic orientation, its target market it selects and its market orientation. Firms develop skills in line with their specific strategy types. Firms which are more likely to develop sustaining technologies are successful in satisfying mainstream customer whereas firms possess the resources and capabilities to develop disruptive innovations are successful at reaching innovator and early adopter segment. Nevertheless, as much as market strategy, another factor which determines a firm's ability in developing technological innovation is to understand both current and potential customer needs. They conclude that developing and commercializing disruptive innovations successfully depend on in reaching more than just a niche market of innovators and early adopters.

Christensen has been frequently criticized for developing an argument against customer-orientation. According to Christensen and Bower (1996), the explanation of missing

disruptive opportunities was due to the fact that established companies held captive by their customers. Nevertheless, the argument has involved in some misinterpretation, the literature which underpins this view gives useful insights. For example, Chandy and Tellis (1998) found that companies which serve not only their current customer but at the same time also focus on future customers have greater chance to succeed at radical product innovations. Slater and Narver (1998) also revealed the difference being customer-led and market-oriented. Market orientation goes simply beyond satisfying the current needs of customer and explores the latent needs of customer. Market orientation gives much more long term approach to firms. Christensen (2006) answered these criticisms that customers rarely lead the companies to develop products that cannot use. Lead customers give direction to sustaining innovations and they are quite different from customers for disruptive innovations.

Govindarajan and et al. (2011) made a valuable contribution to the literature by investigating the difference between mainstream and emerging customer segments in terms of its effects on innovation. They concluded that mainstream customer orientation is positively related to radical innovations but has negative impact on introducing disruptive innovation. On the other hand, emerging customer orientation has a positive effect on disruptive innovation but negative impact on radical product innovations. The findings of this study refer that firms which just focus on serving their existing customer are not successful in introducing disruptive innovation. However, a firm can achieve through focusing both types of segments and is able to introduce both disruptive and radical innovations.

One of the most comprehensive critiques to disruptive innovation theory was formed by Danneels (2004) by suggesting a research agenda as well. In his study, he questioned that there is no clear-cut definition of what disruptive innovation is and how can it be distinguished from sustaining technologies. Although disruptive technology is seen as a specific technological change which has a specific mechanism and thereby, specific consequences, it was not known what makes a technology disruptive and what constitutes an exact criteria for describing disruptive technologies.

Regarding to the definition, Christensen and Raynor (2003) has stated that disruptiveness is a relative phenomenon and it depends on the perspective of the

companies that is subject to it. The technology is disruptive to some firms but may be sustaining to others depending on their existing business model.

Another critique in line with the realization of disruptiveness is that the unclear time period of those technologies becomes disruptive. Indeed, there is no exact point of time that disruptive technologies will be in operation in a given industry. However, Christensen (2006) states that disruption is a process, not an event.

Danneels (2004) emphasizes that the core of disruptive technology is to change the performance metrics along which firms compete. These performance metrics are generally tending to be simpler, cheaper, more reliable and more convenient than established technologies. Since disruptive technologies introduce different product attributes that were not valued before, they change the bases of competition and disruption occurs when the performance trajectories of disruptive technology intersect with the trajectory of performance in the mainstream market (Christensen and Raynor 2003).

However, it is still uncertain that whether disruptive technology always mature in a low-end segment or that whether mainstream customers never initially pay attention to disruptive technologies.

By investigating the diffusion process of the disruptive innovation, Schmidt and Druehl (2008) suggested a complementary framework and used the term “encroachment”. Encroachment defines a situation that the new product takes sales from the old product. Low-end encroachment is explained in the way that where the new product first displaces the old product in the low-end of the old product market and then diffuses upward. On the other hand, high-end encroachment starts at the high-end of the old product market. In the low-end market, customers are lowest willingness to pay, whereas high-end market’s customers are highest willingness to pay. High-end encroachment is consistent with the sustaining innovation activity in contrast with the low-end encroachment.

They outlined that both new market and low- end disruption, as they were defined by Christensen, result in the patterns suitable to low-end encroachment diffusion process.

The new product takes sales away from the old product either immediately which refers to low-end disruption or after opening up a new market which refers to new-market disruption.

Low-end disruption is divided into three categories; immediate low-end encroachment, fringe-market low-end encroachment and detached market low-end encroachment.

If the innovation starts to sell existing low-end market, it is called immediate low-end encroachment. If innovation opens up a new market and new market is on the fringe of the old market; it shows the pattern of fringe-market low-end encroachment which is the market's choice is slightly different from the old market's choice. Lastly, the new market can be detached from the old market and the preferences of the new market are so different from the old market.

Low-end encroachment theory is consistent with Disruptive Innovation Theory in terms of describing the alternate means of the phenomena. Additionally, they concluded that disruptive innovation does not need to totally displace the existing market although it has a great impact on the market (Schmidt and Druehl 2008).

Another raising question is that whether disruptive innovation theory is predictable. In this vein, Christensen and Raynor (2003) suggested that best method to identify the disruptive technology is to graph the trajectories of performance improvement demanded in the market and the performance improvement supplied by the existing technology. However, according to Danneels (2004), although it seems acceptable way of applying to ex post cases, making ex ante prediction which consists of what performance the market will demand and what performance levels technologies are able to supply are still unknown. Moreover, for emerging markets which are beyond recognition and which have little data exist, it seems very difficult to make predictions about the performance metrics which will be valued in the future.

Tellis (2006) has also proposed that disruptive innovation theory has lacked of predictive value when the definition of disruptive technology is kept in view. He stated that the premises of disruptive innovation which require improving in performance and meeting the standards of mainstream market and displacing the established companies

in the mainstream market do not have certain characteristics allowing a valuable prediction. On the other hand, waiting until the disruption occurs has no sense in terms of the predictive value of the theory.

Tellis (2006) also put forward the visionary leadership as a key determinant of firms' survival, success and growth instead of external technological forces. Visionary leaders are the leaders who focus future potential at the expense of cannibalizing their current assets. Success and failure come from the result of internal cultural aspects of the firm.

Tellis's view is highly contradicted with the view that technological evolution flows a distinct pattern and finds its presentation as S-Curves. Tellis (2006) suggests that technology follows a multistep function which randomly progress following long periods of dormancy. The path of technological change is very difficult to predict. On the other hand, he found that although the technology starts below the prior one in performance on the primary dimension, it is superior on secondary characteristics which are consistent with the Theory of Disruption. However, he stated that the secondary characteristic may not be price, size, convenience or simplicity.

Regarding to the value of the theory, Christensen (2006) stated that the model was constructed from histories but disruptiveness is a phenomenon which exists independent of the outcome.

The last critique to Disruptive Innovation Theory from Tellis (2006) is that large firms are also able to introduce successfully disruptive technologies as well as new entrants.

The literature has generally found that established firms have great difficulty in introducing radical technological innovations but new entrants are much successful in developing and commercializing discontinuous innovations (Tushman and Anderson (1986), Henderson and Clark (1990), Christensen (1997)).

The main opposition to Christensen's findings regarding the new entrants are more likely to introduce disruptive technologies and enter new market niches came from King and Tucci (2002). They concluded that incumbents are more likely to achieve in serving new market niches because of experiencing with prior technologies. In parallel with this study, Chesbrough (2001) investigated the impact of innovation upon

incumbent firms and found that incumbents are presumably to survive in the long run. However, Danneels (2004) stated that these studies did not address the shifts in industry by taking different transitions into account. In this vein, it can be considered that Christensen's hypothesis have not been tested so far. Nevertheless, there are many successful incumbents and it still needs to be addressed what characteristics led to fail.

Chandy and Tellis (2000) found that incumbent's curse which refers to failing to introduce radical product innovations can only be relate to older economic period but recently large firms are more likely to introduce radical innovations than small firms.

Tripsas and Gavetti (2000) investigated the adaptation of established firms to radical technological change from different point of view. They found that managerial cognition influenced the development of capabilities by restricting or directing technology development activities and ultimately affected the organizational adaptation of the firms.

Christensen argued that both the success and failure of the incumbents are strictly related to the two factors which are mentioned resource allocation mechanism and RPV framework (resources, processes and values). However, Danneels (2004) stated that any research did not address that how superior resource allocation made to meet disruptive technologies and therefore it could be a fruitful research question.

Sandström et al. (2009) have focused on the factors which influence incumbents' response to disruptive innovation. Contrary to treat established companies as one population, they investigated how particular characteristics of established companies influence their response to disruptive technology. In their study, particularly, how relatively small size of the firm and the strategy which is positioned operating in high-end market affected its response to disruptive technology. The case showed that the firm survived the disruption through collaborations and acquisitions.

Although the concept of disruptiveness of innovation was accepted by the most scholars, without a scale, identifying the causal mechanism of disruption was impossible. Govindarajan and Kopalle (2006) recognized this gap in the literature and developed a scale to measure the disruptiveness of innovation. The first indication of

disruptive innovation is that it has distinct characteristic compared to radical or competence-destroying innovation. In this manner, they redefined disruptive innovation by putting emphasize on its low-margin characteristic.

“A disruptive innovation introduces a different set of features and performance attributes relative to existing product and is offered at a lower price, a combination that is unattractive to mainstream customers at the time of product introduction due to inferior performance on the attributes that mainstream customers’ value”.

Govindarajan and Kopalle (2006) took also attention to the niche customer segment which finds disruptive innovation attractive is different from early adopters segment of innovation in two respects; the niche segment are not able to affect the opinion of mainstream customers and they are more price sensitive that the rest of the market.

Their work was a major study since their effort discovered the unnoticed side of the theory and the scale made possible to researchers to uncover causes of disruptive innovation.

3. DATA AND METHODOLOGY

This thesis investigates how and why an incumbent operating in the Turkish airline industry responded to disruptive innovation and the factors affecting the decision in embracing a new business model.

In this study, qualitative, case study methodology was selected since they are the most suitable method to explore “how” and “why” types of questions. On the other hand, when the research question is contemporary character and the process is continuing, case study is more appropriate research methodology. Case studies are able to reflect the complexity and richness of the phenomenon (Baxter and Jack 2008).

This research is based on an in-depth case study of how Turkish Airlines decided to respond to disruptive innovation which has emerged in Turkish aviation industry after 1983. This line of business was studied since the airline industry possesses the characteristic of disruption by allowing both low-end and new market creation approach of disruptive innovation theory. In addition, by taking a long term historical perspective, this study aims to give insights into the evolutionary process of strategic transformation of Turkish Airline Industry in the light of deregulation.

A combination of public data, company reports, related literature and interview data were collected regarding to both Turkish Airline Industry and the players in the market. This research has also in-depth interviews with top managers of Turkish Airlines and its sub-brand, Anadolu Jet. Interviews are comprised of open-ended questions, but based on a specific set of inquiries trying to comprehend strategic steps during the process of responding to disruptive innovation. Semi-structured questions used in interviews could be found in the Appendices Section. In order to ensure the accuracy of the collected information from the interviews, secondary data such as annual reports, related web sites, and media articles were applied to. On the other hand, although the scope of this study is limited with the domestic market of Turkish airline industry, the data regarding to total airline market were included where necessary because of evaluating the market, properly and giving the reader more comprehensive outlook.

This thesis discussed the case study from a single industry which succeeded in responding disruptive innovation in its business. Therefore, the generalizability of findings is limited when it is intended to apply into incumbents from other industries. However, the incumbent was chosen from the typical incumbent who has been holding the market leader position since its inception and the case study was investigated in detail and tried to minimize these limitations.

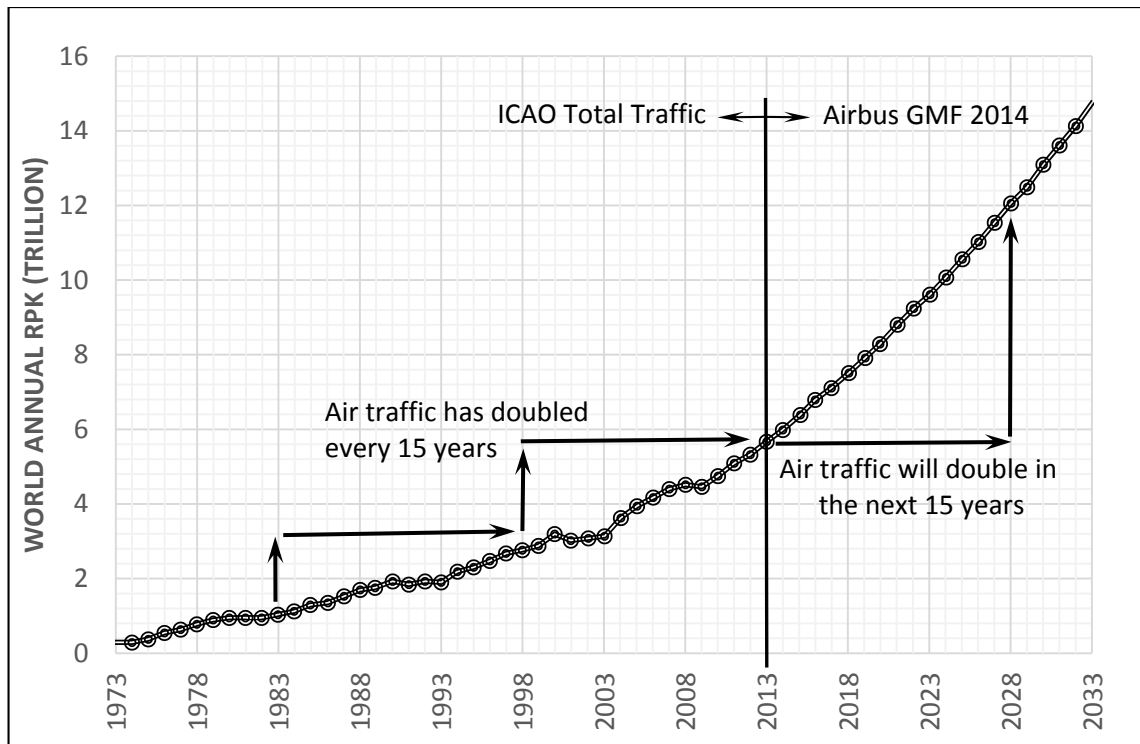
4. RESEARCH AND FINDINGS

4.1 AIRLINE INDUSTRY OVERVIEW

Airline industry is one the most important and the fastest growing industry in the world. Increasing globalization, urbanization and income level make air transportation one of the biggest industries in the world, by reaching turnover of \$ 708 billion in 2013.²

Today, the global airline industry achieves around 32 million commercial flights a year and transporting 3 billion passengers. Air passenger traffic, in terms of revenue passenger kilometers (RPKs), is ten times bigger compared to 40 years ago. Revenue passenger kilometers (RPKs) has almost doubled every 15 years and industry grew by 96 % from 1998 to 2013 (Figure 4.1).³

Figure 4.1: World Annual Revenue per Kilometer



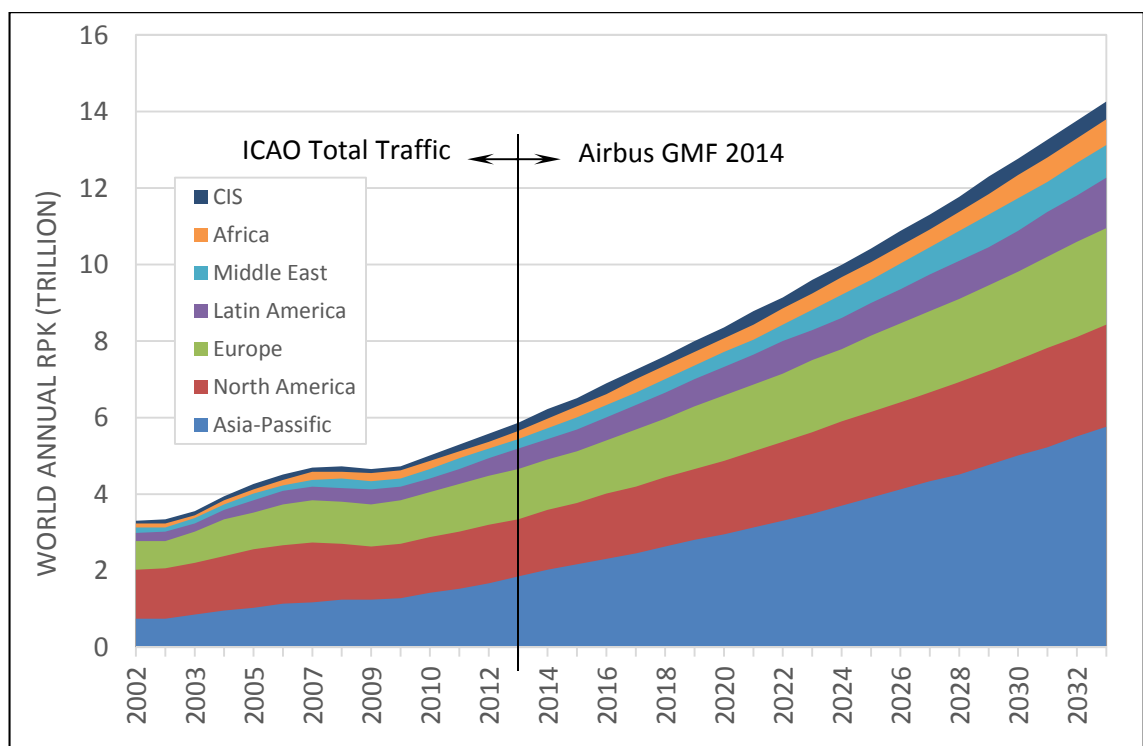
ICAO Air Transport Yearly Monitor, 2013

² IATA, Annual Review, 2014, <http://www.iata.org> [retrieval date: 10 September 2014].

³ ICAO, Air Transport Yearly Monitor, 2013, <http://www.icao.int> [retrieval date: 8 September 2014].

Air transportation makes also possible to access markets, people, capital, knowledge, skills, opportunity and resources. Therefore, it is essential to the globalization taking place in many other industries (Ishutkina 2009). In parallel with globalization process in the world, ATAG (Air Transport Action Group) has announced that the airline industry's global impact reaches \$ 2.4 trillion annually and whereas 8.7 million people work directly in the aviation industry, the sector provides employment for almost 60 million people with related activities.⁴

Figure 4.2: Total Traffic by Region



Airbus, Global Market Forecast 2014-2033, 2014

Emerging markets are the strong driver of air transportation demand, with its growing economies, growing middle-classes and large populations. Therefore, it is projected that almost two thirds of world traffic will be produced by emerging regions in 2033. Despite the slow growth of air transportation in maturing regions, Middle East, CIS, Africa and Asia-Pacific will be the main growth drivers of air transportation demand in

⁴ www.atag.org

the world. In the next twenty years, airline traffic growth rates are expected to 5.2 % over the 2013-2023 and 4.2 % 2023-2033 (Figure 4.2).⁵

4.2 BIRTH OF LOW-COST CARRIERS (LCCs) IN THE WORLD

One of the most important result of deregulation in airline industry is the rising of a new business model called low-cost carriers. In general, there are two main types of services in airline industry despite the different types of services which are provided by the carriers. Full service carriers (FSCs) operate based on differentiation strategy by utilizing hub and spoke system and primary airports, being a part of a strategic alliance to expand their network, generally executing frequent flyer program and using computerized reservation systems. On contrary, low cost carriers (LCCs) operate based on cost leadership and utilize point-to-point structure, use secondary airports, provide minimum service and try to maximize seat capacity (Barrett 2004).

Ryan Air, EasyJet and Southwest Airlines are three major airlines which offer a low-cost model to their customers, by minimizing operational cost with the aid of high aircraft utilization, quick turnaround times and offering much lower fares than full service carriers. LCCs offer no additional services such as meals, connecting flights, differentiated cabins etc. and mostly, charging for extras.

The model aims to create value for specifically targeted customer segment. On the other hand, some LCCs may offer some extra services for their customers and tailor their business. Therefore, although there is no single scope of LCCs, there are many common points taken account in operation.

With a new business model structure which focuses only on transportation activities and removes other additional services, low cost carriers played a significant role in stimulating air transportation demand in the world. After the domestic air transportation market has been deregulated in many countries in line with liberalization, LCCs have taken the advantage of this new opportunity and offered innovative services and created new demand in air transportation market.

⁵ Airbus, Global Market Forecast 2014-2033, 2014, <http://www.airbus.com> [retrieval date: 2 September 2014].

In the United States, following the deregulation of market and intent to decrease the government involvement in 1978, the airline industry started to prosper (Fu et al. 2010). The market was liberalized, the barriers lifted and many airlines became privatized. Southwest Airlines was the first airline which applied to low-cost business model and started its operation in 1971 in the United States. The liberalization process continued with the Europe. After the establishment of European Union, air transportation became a single market by deregulating. Many LCCs started to operate in the European Union and gained significant market share, rapidly (Ishutkina 2009).

The biggest challenge in the airline industry is to operate with high costs. The average net profit of whole airline industry is 1.8 % in 2013. It means that airlines made a profit an average \$4.13 on every passenger. On the other hand, LCCs have outperformed the FSCs in the sense of growth rates and operating margins. Ryan air had the strongest growth with 6.7 % in 2013, followed by British Airways with 3.6% and Lufthansa with 2.3%.⁶ Along with the strong growth rates, Ryan air also announced 11.6 % net margin whereas British Airways had net margin of 2.48 % in 2013.⁷

LCCs have successfully identified that what prospective airline customers value and accordingly, generated a new value proposition to them. LCCs have also understood that maintaining competitive advantage requires cutting cost and they focused on improvements in maximizing efficiency. Consequently, prices have decreased and more and more people have afforded flying.

For example, low cost carriers accounted 20 % of the seat capacity on scheduled domestic flight in the United States 10 years ago but in 2012 this capacity had grown to 31 %. Ryan air, EasyJet, and other European LCCs, along with the creation of a common aviation area in the European Union, have also captured 37% of the seat capacity on scheduled services as of 2012.⁸

⁶ ICAO, Air Transport Yearly Monitor, 2013.

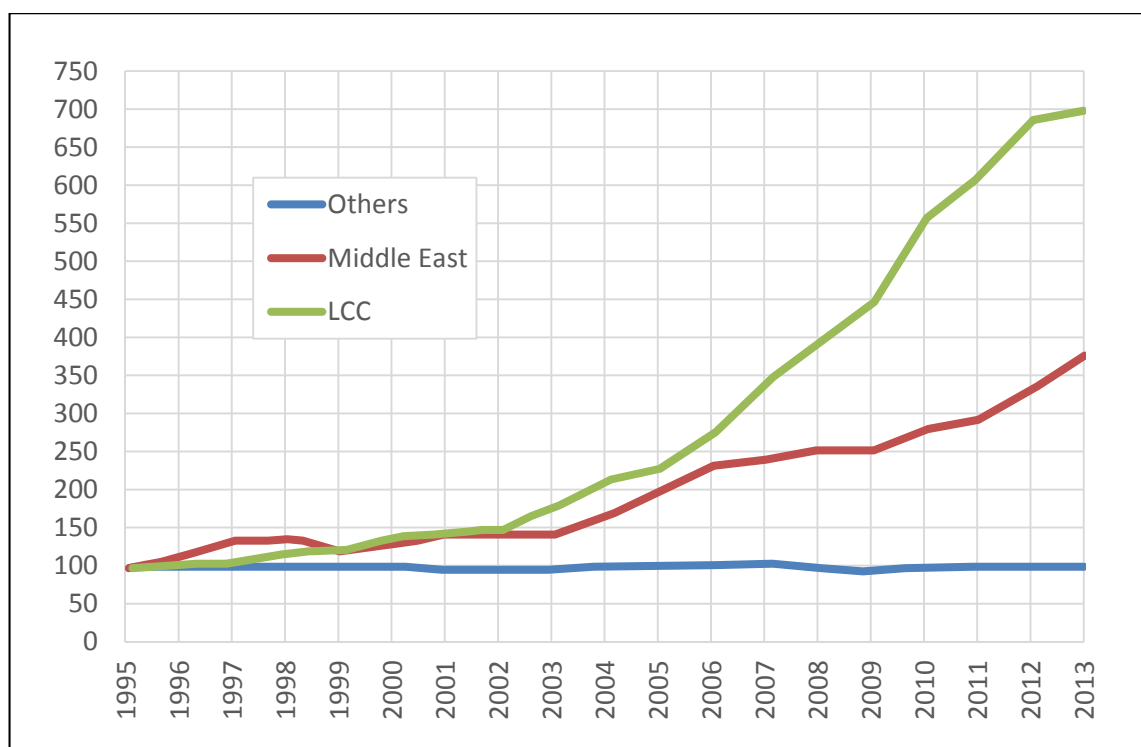
⁷ Rynair, Annual Report, 2013, <http://www.ryanair.com> [retrieval date: 11 September 2014] and British Airways, Annual Report, 2013, <http://www.es.iairgroup.com> [retrieval date: 10 September 2014].

⁸ ICAO, Air Transport Yearly Monitor, 2013.

On the other hand, in terms of customer segmentation, business segment has also taken advantage of low cost carriers due to the fact that 40 % of business travelers are considered as also price sensitive (Mason 2002).

LCCs have great impact in the market in terms of the evolution of the network. In general, LCCs and dynamic airlines of Middle East contributed to the past network growth and in the coming years, it is expected to continue to look for new opportunities and prepare for more growth in capacity and new routes (Figure 4.3).⁹

Figure 4.3: Evolution of number of routes, Index: 100 = 1995



Airbus, Global Market Forecast 2014-2033, 2014

The basic demand of airline passengers is to travel safely and to arrive to their destination without delays. Having met these basic premises, LCCs have served different value proposition to their customer other than FSCs and emphasized different attributes of the service in line with being defined by disruptive innovation theory.

When low-cost carriers introduced a major change in air transportation industry, most of the incumbents tended to ignore the new business model at first. After all, some years

⁹ Airbus, Global Market Forecast 2014-2033, 2014.

later, the continuing demand for LCCs and significant market share of the new model made the incumbents to take an action.

4.3 AIR TRANSPORTATION IN TURKEY

This chapter investigates the historical development of Turkish Airline Industry in the light of particularly after the deregulations occurred in 1983 and 2003. Before the deregulations, the only player in the market was Turkish Airlines owned by the state and which was both serving domestic and international transportation.

The basis of Turkish Airlines was the foundation of State Airlines Administration and Directorate General for State Airport Authority in 1933. The mission of these two institutions was to start air transportation and manage operations of aerodromes.¹⁰ The development of civil aviation in Turkey began after the Second World War. First step was to split up the functions in terms of air transportation and operation of aerodromes. Therefore, in 1956, General Directorate of State Airport Authority was reformed in order to manage airports, perform ground services at airports, air traffic control services, and maintain all activities at the level of modern aeronautics.¹¹ In the same year, in 1956, Turkish Airlines Inc. was established and started to operate under private law. The new structure of the company paved the way for opening up to the world. After this transformation, Turkish Airlines joined the International Air Transport Association (IATA) which is the trade association of world's airlines to support airlines activities and set up industry policy and standards.¹²

Until 1983, Turkish aviation sector was still being dominated by Turkish Airlines. Strict regulations and prohibitions in the legislation did not allow new entrance into the airline industry during this period of time. At the beginning of 1980, the liberalization progress started and Turkey's economy opened to the world. One of the steps was to deregulate civil aviation industry in order to make the industry more competitive and provide passengers lower fares. In 1983, Turkish Civil Aviation Act No.2920 was introduced and many private airlines were allowed to operate as a part of Turkish Air

¹⁰ General Directorate of State Airports (DHMI), Annual Report, 2004, <http://www.dhmi.gov.tr> [retrieval date: 2 October 2014].

¹¹ General Directorate of State Airports (DHMI), Annual Report, 2004.

¹² Turkish Airlines History, <http://www.thy.com.tr> [retrieval date: 188 September 2014].

Transportation Network. Despite these liberalization efforts, due to the capital shortages of companies, high taxes, inadequacy of maintenance and infrastructure, lack of qualified labor force and political instability, many of these companies who had started their operation yet failed and withdrew from the business. Besides, the business structure was still strictly regulated by the Ministry of Transportation and prices and timetables were under the control of this institution (Nergiz 2008).

On the other hand, in 1992, new arrangements were added to the legislation concerning the paid in capitals of airline companies and substantial number of airplanes. As a result, the rules which allowed to new entries in to the market were tightened and Turkish Airlines was protected from the competition. In 1996, Directorate General Civil Aviation reregulated the market and allowed private airlines to set up a flight only to the destination which Turkish Airlines did not have any scheduled flight or was not able to meet the demand. Therefore, many newly formed airlines which had license changed their strategic positioning and started to operate as charter airlines as part of increasing number of tourist coming to Turkey (Gerede 2010).

In 2001, Turkish Civil Aviation Law gave airlines to determine their price for domestic flights, freely. This decision was the major step in terms of liberalizing the market, completely.

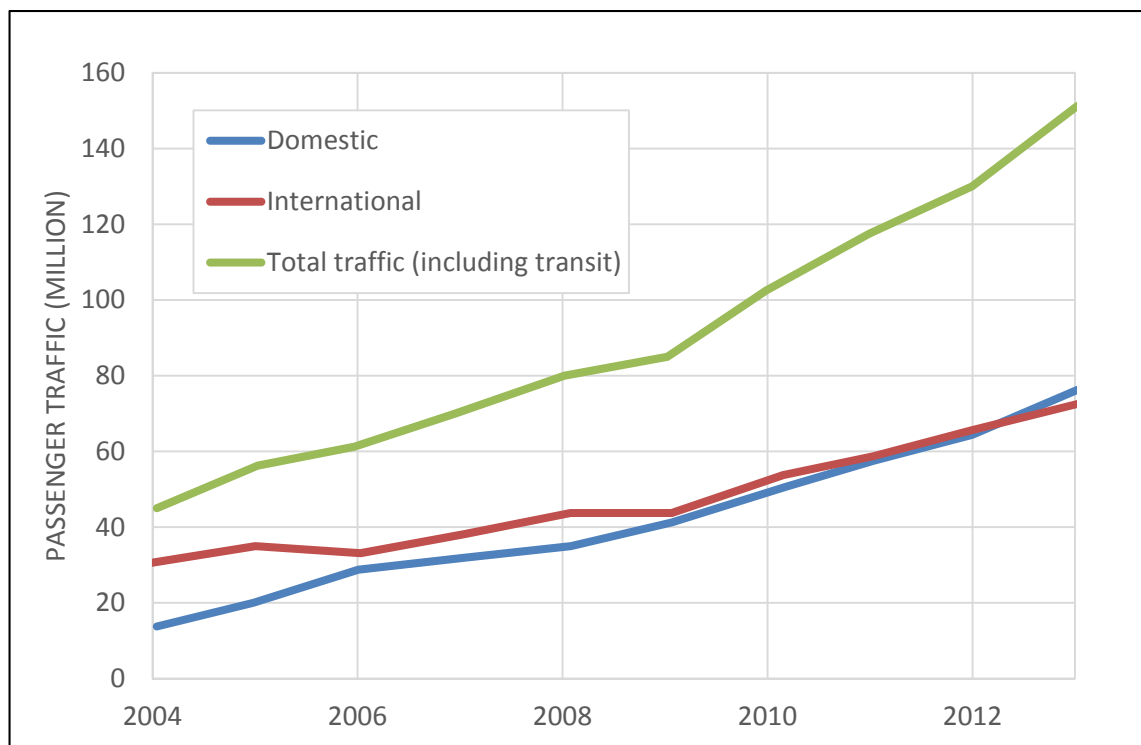
During this period of time, the privatization of Turkish Airlines had been raised time to time but this effort did not result in success. Although 1983 deregulation did not create sufficient supply for the development of the air transportation sector in Turkey, it had an impact on experiencing liberalization.

By the year 2003, the fully liberalized market trend began to manifest itself again as a part of state policy. New deregulations were introduced by The Ministry of Transportation. Airport rates and taxes were reduced, additional taxes were abolished and new market entries were encouraged. As a result of all these cost reduction, many new players entered into the air transportation market. At the end of 2003, starting with İstanbul Trabzon flight, Fly Airlines started to operate in domestic market in Turkey. The most notable impact of liberalization was the significant increase in number of passenger due to the huge reduction in ticket price.

Turkish aviation industry has experienced one of the highest growth rates in the world over the past decade. With the impact of deregulation occurred in 2003, the sector grew rapidly. The sector experienced a sudden increase in domestic airline passenger traffic and the passenger traffic increased by 58.1% in 2004, compared to previous year.¹³

In 2013, the total number of passengers' traffic amounted to 149,995,868 while it was just 10,745,444 in 2003. Domestic passenger traffic also increased 11.7 % in 2013, compared to 2012, by reaching 76,148,526 passengers (Figure 4.4).¹⁴

Figure 4.4: Total, Domestic and International Passenger Traffic in Turkey between years 2004-2013.



TOBB, Turkish Civil Aviation Assembly Sector Report, 2013

In Turkish civil aviation sector, 13 airlines have been operating, currently but 4 of them has been in cargo transportation business as of 2013 (Table 4.1).

¹³ General Directorate of State Airports (DHMI), Annual Report, 2004, <http://www.dhmi.gov.tr> [retrieval date: 2 October 2014].

¹⁴ TOBB, Turkish Civil Aviation Assembly Sector Report, 2013, <http://www.tobb.org.tr> [retrieval date: 13 October 2014]

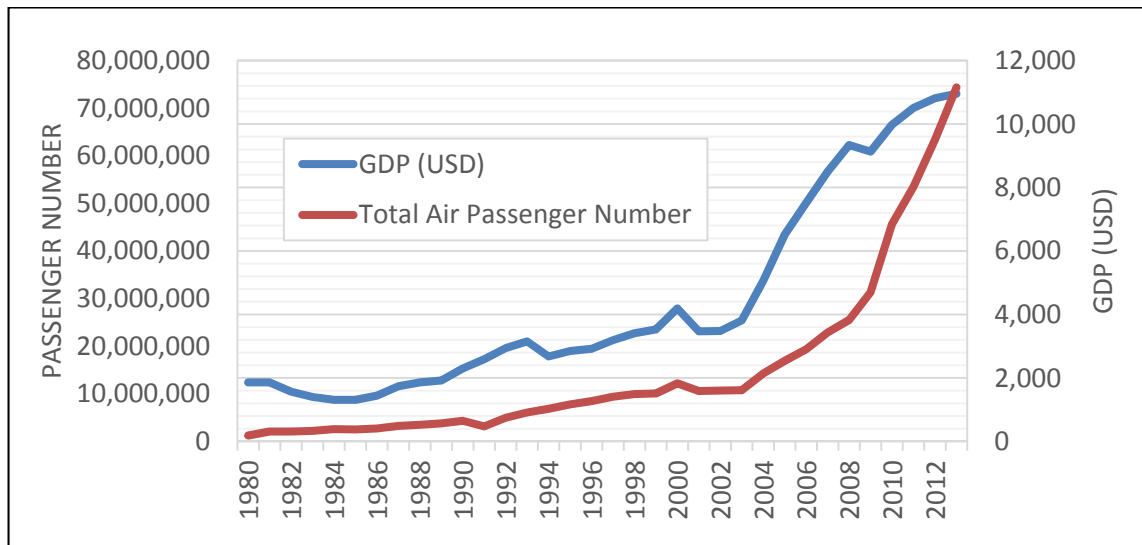
Table 4.1: Current Air Transportation Companies in Turkey as of 2013.

TC AIRLINE COMPANIES	ESTABLISHMENT YEAR	PASSENGER AIRCRAFT	SEAT CAPACITY
TURKISH AIRLINES	1933	189	35,866
ONUR AIR	1992	23	5,169
PEGASUS	1990	42	7,908
SUN EXPRESS	1989	53	9,387
ATLAS JET	2001	16	3,204
SIK-AYHT	2001	0	0
TURISTIK (CORENDON)	2004	8	1,471
HÜRKUŞ (FREE BIRD)	2001	8	1,520
İZAIR	2005	5	930
TAILWIND	2009	5	840
SAGA	2004	0	0
BORA JET	2008	6	344
MNG (CARGO)	1996		
ACT (CARCO)	2004/2011	-	-
ULS (CARGO)	2004/2009	-	-
TOTAL		355	66,639

TOBB, Turkish Civil Aviation Assembly Sector Report, 2013

Turkey was the fifth country in the ranking of European countries in terms of total air passenger number in 2013. When it is considered only domestic passenger number, Turkey is ranked as third after Spain and Germany.¹⁵

Figure 4.5: The change of GDP per capita and air passenger number in Turkey



www.worldbank.org

¹⁵ TOBB, Turkish Civil Aviation Assembly Sector Report, 2013

The country's per capita income has also contributed to this growth, by reaching 10,950 dollars in 2013.¹⁶ In the literature, GDP per capita growth and the increase in air passenger number are considered as being correlated to each other (Ishutkina 2009). In Turkey, this correlation can be seen in the graph above (Figure 4.5).

Although the growth rate of GDP per capita has been slowing down since 2008, total air passenger number has still been increasing, constantly.

4.3.1 The Establishment of Low-Cost Carriers in Turkey

With the deregulation occurred in Turkish aviation industry in 1983 and 2003, new entrepreneurs had the chance to operate in the domestic market in which only one airline was previously operating. Various companies have positioned themselves in a certain way and have tried to capture a market share from rapidly growing industry.

One of the main competitor companies of Turkish Airlines in aviation industry is Onur Air which was established in 1992, with one aircraft and by running only domestic scheduled flights. Onur Air experienced the charter airline before 2003. After deregulation, it acted on low cost carrier in the market and targeted the customers who had never experienced flying by offering lower fares than Turkish Airlines. The company also focused on reducing cost by maximizing efficiency with aircraft arrangement, choosing routes to the destination which has higher potential. On the other hand, like many LCCs, Onur Air offers no extra services free and charges for them. Onur Air has also received EN9110:2010 Quality Standardization Certificate from TUV Rheinland, Germany. It means that the company tries to both reducing costs and improving its quality standards, simultaneously.¹⁷ Onur Air operates from Atatürk Airport and it is considered that the company may encounter difficulties due to the traffic problems at Atatürk Airport in the future.

Atlas Jet is the first airline company which positioned itself to compete with national flag carrier, Turkish Airlines. The company became a member of IATA (International Air Transport Association) and benefited from global distribution system. Since its inception, Atlas Jet has focused on providing high quality service to its passengers by

¹⁶ www.worldbank.org

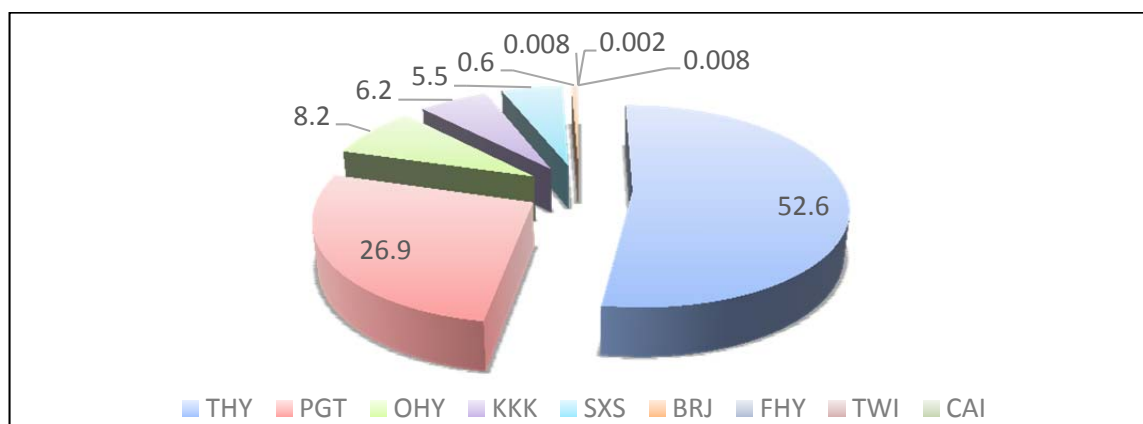
¹⁷ www.onurair.com

making investment to technology and infrastructure. The company has two classes as business and economy and generally executes loyalty programs for these two kinds of customer groups. On the contrary to the LCC structure, Atlas Jet offers free food and beverages to its passengers. With the technology which targets to minimize the delays, Atlas Jet has also introduced a new system called Electronic Flight Bag (EFB), recently.¹⁸

Sun Express was established as a partnership of Turkish Airlines and Lufthansa in 1989. Having started to operate from İzmir in domestic market, Sun Express's strategy is based on the principle that flying to the destination which have not been connected yet. Sun Express also started to utilize Sabiha Gökçen Airport and Antalya Airport as a hub.¹⁹

Pegasus Airlines is the first airline company which announces “performing low-cost model” in its mission. Low-cost model enables the company lower fares. By choosing Sabiha Gökçen Airport as a hub and taking advantage of passenger demand from Asian part of İstanbul, Pegasus gained very significant market share in short time. On the other hand, the company has a very standardized fleet and it gives significant cost advantage. Pegasus Airlines has no different classes on board and offers additional service with extra charges.²⁰

Figure 4.6: Domestic passenger traffic by airlines, 2013.



TOBB, Turkish Civil Aviation Assembly Sector Report, 2013

¹⁸ www.airporthaber.com

¹⁹ www.sunexpress.com

²⁰ Pegasus Airlines, Annual Report, 2013, <http://www.pegasusyatirimciiliskileri.com> [retrieval date: 2 October 2014].

Pegasus Airlines has 26.9 % of the domestic passenger market as of 2013. The domestic passenger number of Pegasus Airlines amounted to 10.23 million in 2013, with 23.3 % growth rate, compared to 2012 (Figure 4.6).

The company is the fastest growing airline in terms of the number of passengers between 2007 and 2013 with the 31 % growth rate.

The market share of Pegasus Airlines has increased, continuously, by gaining a 27 % share of total domestic passengers as of 2013 (Table 4.2).

Table 4.2: Pegasus Annual Market Share

Pegasus Market Share	2005	2006	2007	2008	2009	2010	2011	2012	2013
Domestic	1%	9%	15%	14%	17%	20%	23%	26%	27%
International	5%	4%	4%	4%	5%	7%	8%	8%	9%

Pegasus Airlines, Annual Report, 2013

Atlas Jet has 6.2 % of domestic market share as of 2013. The company has recently announced that the drop in fuel prices will be reflected to ticket prices and will discount 9 \$ per ticket.²¹

Among the other two big companies, Onur Air has 8.2 % market share and Sun Express gained 5.5 % of the domestic market as of 2013 (Figure 4.6).

A significant part of new passengers has been carried by low-cost carriers which were allowed after the deregulation. Although there are some different aspects which are applied in practice, low-cost carriers are operating based on lower price and they enable more customers to experience flying.

4.3.2 The Incumbent of Turkish Aviation Industry – Turkish Airlines

With the mission, “To become the preferred leading European air carrier with a global network of coverage thanks to its strict compliance with flight safety, reliability, product line, service quality and competitiveness, whilst maintaining its identity as the

²¹ www.airporthaber.com

flag carrier of the Republic of Turkey in the civil air transportation industry”, Turkish Airlines is one of the well-grounded companies of Turkey.²²

Turkish Airlines which operates consistent with the traditional airline model is the best known for its high service standards, flight safety, and wide network area in both Turkey and in the world. The company won many awards such as Sky Trax Award for the Best Airline in Southern Europe and Operational Excellence award from Airbus Co. and lastly, named the ‘Airline of the Year’ at 2013’s CAPA Aviation Awards for Excellence.²³

Before the deregulation, national flag carrier of Turkey, Turkish Airlines dominated the market by introducing to Turkish people flying from day to day.

The current status of Turkish Airlines was defined a number of privatization efforts between the years 1984 and 2006. After the establishment of Turkish Airlines Incorporation in 1956, Turkish Airlines was firstly counted “State Economic Enterprise” in 1984 and included within the scope of privatization. But until 2004, only 1.82 % of Turkish Airlines was privatized due to the high strategic importance attached to the aviation industry by the state in Turkey. In 2004, the share of 23 % of Turkish Airlines was offered to the public and 24.82 % of Turkish Airlines’ share started to trade at Istanbul Stock Exchange. The rest of the shares was still under the control of the Privatization Administration at those days. By the year 2006, with the additional shares offering to public again, the share of Prime Ministry Privatization Administration, which represents the state, reduced to 49.12 % (Gerede 2010).

Turkish Airlines has experienced the fastest growing rates among airlines in the world since its inception.

In 2003, whereas the total passenger number of Turkish Airlines was 10.4 million, this number almost increased five times by reaching 48.3 million passengers in 2013 (Table 4.3). The airlines increased its total passenger numbers by 23.6 % in 2013, compared to the previous year and kept growing rate constant. Domestic passenger numbers of

²² Turkish Airlines, Annual Report, 2013

²³ Turkish Airlines, Annual Report, 2013, <http://investor.turkishairlines.com> [retrieval date: 23 September 2014].

Turkish Airlines amounted to 20.1 million in 2013, with the growth rate of 26.1 % compared to 2012.²⁴ Domestic passenger numbers were only 5 million in 2003, just after the second deregulation process.²⁵

Table 4.3: Total and Domestic Passenger Numbers of Turkish Airlines

	Total Passenger	Growth Rate	Domestic Passenger	Growth Rate
2001	10.277		5.189	
2002	10.383	1%	4.970	-4%
2003	10.420	0,4%	5.031	1%
2004	11.991	15%	5.850	16%
2005	14.134	18%	7.197	23%
2006	16.947	20%	8.906	24%
2007	19.636	16%	9.984	12%
2008	22.597	15%	11.063	11%
2009	25.102	11%	11.692	6%
2010	29.119	16%	13.645	17%
2011	32.648	12%	14.488	6%
2012	39.045	20%	15.906	10%
2013	48.270	24%	20.053	26%

With these figures, Turkish Airlines was the second airline which carries the most number of passengers in Europe in 2013.

4.3.3 The Response to Low-Cost Carriers by Turkish Airlines

Turkish Airlines was the only player before the deregulation in Turkish aviation industry. Particularly, after the second deregulation, along with numerous private airlines which came into the stage, Turkish Airlines started to lose the entire market which used to belong to itself 100 %, previously.

Although it has maintained its strong position in Turkish Airline Industry since its inception, Turkish Airlines tried to reposition itself to take advantage of growing Turkish aviation market after the deregulation which accelerates this momentum with various players. As well as the competition, growing number of population with

²⁴ Turkish Airlines, Annual Report, 2013.

²⁵ Turkish Airlines, Annual Report, 2004, <http://investor.turkishairlines.com> [retrieval date: 23 September 2014].

increasing income level and strategic position of Turkey between east and west played a significant role in this repositioning.

The first attempt was to establish a sub-brand called Turkish Air Transportation Inc. (THT) in 1989. The main aim of the new company was to carry out regional air transportation activities. THT was formed as a spin-off company of Turkish Airlines. Nevertheless, due to the inadequacy of airports which was open to public civil transportation and failure to provide required efficiency in domestic flights at those days, THT project failed. Another factor which led to failure was to operate with small aircrafts which had turboprop motors. At that time, Turkish people was not experienced with flying and these kind of aircrafts aroused fear and had caused them stand away from flying. Despite being a very important movement for Turkish Airlines, the company was not able to perform necessary infrastructural investments to support THT due to being owned by the state. Because of all these reasons, THT only operated between the years 1989 and 1993 and put an end to its activities.

Although Turkish Airlines recognized the future importance of low-cost carriers at an early point, the cumbersome structure of the company did not allow acting, easily.

Until 2008, Turkish Airlines had no answer to the transformation in the Turkish aviation industry and kept increasing its quality standards, service level and tried to widen its network, both globally and locally. In this perspective, Turkish Airlines strongly paid attention to its customers and invested in the projects that its customers value. To satisfy its existing customers is still the key determinant of the company while taking any action.

By the year 2008, Turkish Airlines decided to form a new sub-brand called Anadolu Jet. By choosing Ankara Esenboğa Airport as a hub, Anadolu Jet was established in order to connect Ankara and Anatolia with more efficient and economic flight network. The new structure was shaped as a low cost model and simplified some additional services by removing food and beverage service or differentiated cabins.

The main aim of the company was announced that introducing flying experience to wider public of Turkey and making flying one of the essential needs of Turkish people especially in Anatolia.²⁶

Instead of gaining a share from existing market, Anadolu Jet was designed to create a new market by expanding air transportation in Turkey, especially by spreading it to Anatolia. This strategy manifested itself with setting up the destinations which have not been flown before, frequently and reviving the destinations which have lower frequency.

As a matter of fact, one of the main reasons for this late response was due to the fact that Turkish Airlines did not know the type of the carriers which would start to operate in Turkish market in 2003. Turkish Airlines could not foresee that LCCs' upcoming. After low cost carriers came into the stage, Turkish air transportation market started to evolve. At that time, Turkish Airlines was also taking advantage of this movement due to the expansion of air transportation market. As the increasing number of people started to prefer air transportation, high-end customers preferred Turkish Airlines. Nevertheless, on one hand, Turkish Airlines which serves as full network carrier was not able to reach every segment of people with its business model. On the other hand, the company was not aware of the customer preferences and realized it after the growth of LCCs in Turkey. Therefore, it took much time to respond to this transformation. Another reason of late responding was that Turkish Airlines feels secure owing to being the state-supported national carrier. In line with this positioning, regardless of profitability, Turkish Airlines always believed that it had to fly to all destinations.

Eventually, in 2008, Turkish Airlines has decided to respond to the transformation of Turkish air transportation market with not exactly operating as the same model as the other low cost carriers. Therefore, Ankara was chosen as a hub since the strategic importance of Ankara to Turkish people and the model was designed to connect Ankara and the other Anatolian cities. In addition, the structure was formed to dominate the passengers in transit and distribute the passengers who come from international destinations.

²⁶ Turkish Airlines, Annual Report, 2008, <http://investor.turkishairlines.com> [retrieval date: 23 September 2014].

After the motto of Pegasus Airlines, “we enable people to fly cheap”, Turkish Airlines has responded to it with “everybody will fly” campaign by Anadolu Jet. In line with the slogan of Anadolu Jet, one of the main aims of the company is to break the resistance of Anatolian people against flying. Accordingly, the new company has started to offer some value added services in order to facilitate flying.

Having established in order to cater to Turkish market, completely, Anadolu Jet began to rapidly penetrate to Turkish air transportation market and amounted to 7.7 million domestic passenger by 2013 (Table 4.4).

Table 4.4: Annual Growth of Anadolu Jet

	2008	2009	2010	2011	2012	2013
Domestic Passenger Number	1,716	2,812	4,705	5,300	5,317	7,697
Domestic Passenger Growth Rate		64%	67%	13%	0.3%	45%

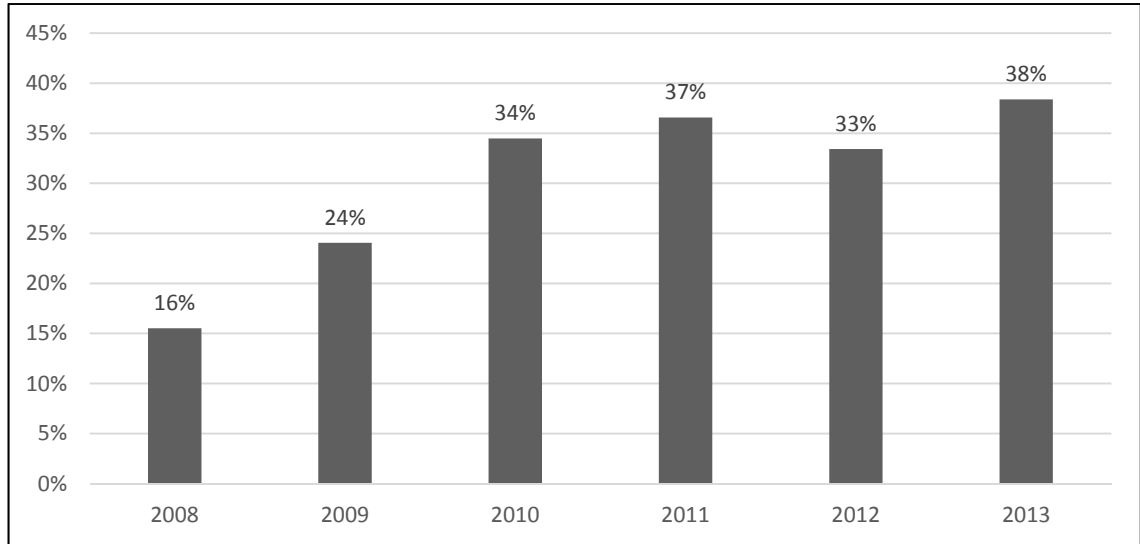
After Anadolu Jet brand has been created, Turkish Airlines has positioned itself as a global player in every aspects and targeted high-end customers in Turkey. The company shifted its focus to international operations and took a strong part as a transit carrier between Europe and Asia (Ishutkina 2009).

Even though it has remained a strong player in domestic market since its inception, Turkish Airlines had to respond somehow this transformation in Turkish Airline Industry. By taking the new business model into consideration, Turkish Airlines formed a new strategy against its competitors. In parallel with this strategy, the response of Turkish Airlines was shaped around growing the pie in Turkish airline industry. Despite the fact that the other low-cost carriers pay strong attention to their operation and look for high profit destinations, Turkish Airlines, with its sub-brand, started to create its own market by not involving in direct competition with them.

Although Anadolu Jet which has chosen Ankara as a hub targeted different market from Turkish Airlines, Turkish Airlines has also let its market to Anadolu Jet. However, Turkish Airlines is willing to cannibalize its customer base. Both companies try to give

impression to Turkish people that they are under the same roof and fly either Turkish Airlines or Anadolu Jet (Figure 4.7).

Figure 4.7: The percentage of Anadolu Jet Passengers in Total Domestic Passengers of Turkish Airlines



Anadolu Jet has been operating under Turkish Airlines Inc. since 2008. Turkish Airlines may likely have some negative effects of holding two brands which have conflicting strategies at the same time. However, it is possible to overcome the consequences of this situation by raising the awareness of passenger in time. Furthermore, whereas Turkish Airlines emphasizes the attributes in accordance with its full service carriers, Anadolu Jet provides the passenger with the freedom of choice in terms of the services offered with extra charge.

After the establishment of Anadolu Jet, along with the strong emergence of LCCs, the airline market has been reshaped (Table 4.5).

Table 4.5: Domestic market share by airlines

	2008	2009	2010	2011	2012	2013
Turkish Airlines	55%	50%	38%	34%	33%	33%
Pegasus Airlines	14%	17%	20%	23%	26%	27%
Anadolu Jet	11%	16%	19%	20%	16%	20%
Other Airlines	20%	17%	23%	23%	25%	20%

5. DISCUSSION AND CONCLUSION

This study is aimed to investigate the factors affected the decision-making of an incumbent regarding to responding disruptive innovation. The study of Turkish Airlines can be regarded as a considerable example of how disruptive innovation has powerful effect on transforming its business.

Low cost carrier model is considered one of the most illustrative examples of disruptive phenomena due to being the subject to change the basis of competition. LCCs served different value propositions than full service carriers and attracted many existing passengers and created new demand for air travel. The primary benefit of low-cost carriers is the lower price compared to the full service carriers and they are considered as hybrid disruption in nature with both carrying the characteristic of low end and new market disruption because of targeting both the incumbents airlines passenger and non-air passengers.

Low-cost carriers has transformed the air transportation market and helped to stimulate domestic passenger growth in Turkey since the deregulation. Particularly, growing consumer demand and reduced ticket price provided by the low-cost carriers enabled rapid growth of the domestic air transportation industry. Consequently, largest share of achieved traffic has been carried by the low-cost carriers.

The literature supports that low-end disruption encourage the other companies attack, immediately (Christensen and Raynor 2003). After the deregulation of Turkish air transportation market, despite Turkish Airlines recognized the threat of low cost carriers at much early point, the company encountered some difficulties in responding since it hold the market leader position at first. Resource dependence theory seems to provide another explanation for why such respond was late. Resource Dependence Theory explains that organizations need critical resources to survive. Customers and investors have a power to control on which and how resources should be allocated to innovation (Pfeffer and Salancik 1978). Customers and investors always direct companies to investments that satisfy their own needs. Therefore, it is very difficult to invest in

technologies which meet their tomorrow's needs right away. On the other hand, moving down-market is in contradiction with that perspective.

After all, even though the incumbents are often being constrained by and trapped in the existing customer and their own value network, Turkish Airlines succeeded to embrace disruptive innovation, wisely.

The biggest failure of huge companies is the notion of that small markets are not able to meet their big company's growth needs. On contrary, Turkish Airlines has decided to involve in a new business model by attempting to manage two conflicting situation.

Christensen and Raynor (2003) suggest that establishing a spin-off is necessary when the revenue and cost structure of the mainstream organization is different from a new organization. Nevertheless, although the previous attempt of Turkish Airlines was to establish a spin-off company, Anadolu Jet has been operating under Turkish Airlines Inc. but as a separate division. The consequences of this structure will be seen in future.

The factors which led Turkish Airlines respond to disruptive innovation could be divided into two categories; disruptive threat in Turkish market and macro-economic factors which make a new business model investment attractive in Turkey. Macro-economic factors which drove Turkish Airlines to this decision were the growth capacity of Turkish air transportation market, population growth and increase in income level. On the other hand, the appearance of LCCs and their increasing market share prompted Turkish Airlines to take an action. Accordingly, Turkish Airlines set up a sub-brand and triggered the demand by spreading its existence to Anatolia with its low-cost carrier.

Turkish Airlines has begun to pursue an expansion strategy as a transit carrier between Europe and Asia and decided to dominate the domestic market with Anadolu Jet.

One of the expectations of disruptive innovation theory is that the attributes of lower performance products or services will improve themselves. Regarding to other LCCs which operate in Turkish airline market, many of them try to improve their quality standards and target the market as a whole. Therefore, the indication of that lower

performance attributes of disruptive products or services will improve and intersect the needs of mainstream customer seems to be true.

Although the state partnership structure of Turkish Airlines was considered as a disadvantage at first, Turkish Airlines succeeded to respond the disruptive innovation, effectively with its low-cost attempt.

Having been established in 2008, Anadolu Jet seems to prove itself by the strategy of growing the pie in Turkish airline market. As a matter of course, the strong brand name of Turkish Airlines is one of the greatest assets of Anadolu Jet.

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APPENDICES

APPENDIX 1: SEMI-STRUCTURED INTERVIEW QUESTIONS

Does Turkish Airlines see low-cost airlines as a competitive threat?

In this perspective, what is the main purpose of establishment of Anadolu Jet?

When did Turkish Airlines decide to respond to low-cost business model for the first time?

Which steps has Turkish Airlines taken to implement this response?

Before the emergence of LCCs in Turkey, has Turkish Airlines ever considered to build a low-cost model?

What are the differences between Turkish Airlines and Anadolu Jet in terms of strategic priorities?

Does Anadolu Jet execute any projects as a full-service travel coordinator? And what is the heart of this strategy?

What kinds of operational efficiencies do Turkish Airlines and Anadolu Jet have?

What does Turkish Airlines think about the market size of low-cost carriers in Turkey?

Which steps has Turkish Airlines taken to get back this market from lost-cost carriers?

Has Turkish Airlines lost its own domestic market after establishing Anadolu Jet?

Does Turkish Airlines think that the low-cost image of Anadolu Jet would have negative effects on the high-quality image of Turkish Airlines?

In order to attract every customer segment, does Turkish Airlines think that it departs from its main focus?

As a leading company in Turkish Airline Industry, by establishing Anadolu Jet, does Turkish Airlines think that it confirmed the low-cost business model is a profitable and value-added model?

What are the market figures of Anadolu Jet?

What are the differences of Anadolu Jet, compared to its competitors?

How LCCs will be affected as a result of increasing customer expectation?