How Do Business Strategies Predict Firm Performance? An Investigation On Borsa Istanbul Index

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ABSTRACT

In this study it is aimed to verify Miles and Snow's strategy typology in Turkey and investigate how firms that conduct different business strategies, differ in firm performance considering ROA ratio. Research conducted with 190 firms listed in Borsa Istanbul Index. Firms classified under 3 strategy typology with cluster analysis. The impact of independent variables ; "firm strategy", "industry" and "firm size" on firm performance (ROA) were analysed by ANOVA and logistic regression. Results indicated that the best predictor of performance (ROA) is the interaction efffect of firm size and firm strategy.

Anahtar Kelimeler: *Business Strategies, Miles and Snow's Strategy Typology, ROA, Logistic Regression.*

JEL Sınıflandırması: *M10, M40.*

İşletme Performansının Açıklanmasında İşletme Stratejilerinin Etkisi: Borsa İstanbul Endeksinde Bir Araştırma

ÖZET

Bu çalışmada amaçlanan Miles ve Snow'un strateji tipolojisinin Türkiyede bir sınamasını gerçekleştirmek ve farklı stratejiler uygulayan firmaların ROA oranlarına göre firma performanları açısından nasıl farklılaştıklarını araştırmaktır. Çalışma Borsa İstanbul endeksinde listelenen 190 firma üzerinde gerçekleştirilmiştir. Firmalar kümeleme analizi yardımıyla 3 strateji tipolojisi altında gruplandırılmıştır. Bağımsız değişkenler olarak seçilen "Firma stratejisi", "firma büyüklüğü" ve "sektör"'ün "firma performansı (ROA) üzerindeki etkisi ANOVA ve Lojistik regresyon yöntemleri ile analiz edilmiştir. Sonuçlar firma performansının (ROA) en iyi açıklayıcısının "firma stratejisi" ve "firma büyüklüğünün" etkileşimi olduğuna dikkat çekmektedir.

Keywords: *İş Stratejisi, Miles ve Snow'un Strateji Tipolojisi, ROA, Lojistik Regresyon.*

Jel Classification*: M10, M40.*

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1. INTRODUCTION

The field of Strategic Management has a primary mission of providing information to understand the diversity of performance among firms (Levinthal, 1995: 19). Most of the researches in strategic management have based on theories and approaches that examine the relationships between strategic aims, processes, and content using a contingency framework, and by this way try to explain different firm performances.

Firstly, firm performance was considered in The Theory of Industrial Organization from a microeconomic perspective. According to this theory, firm's performance closely related with industry performance and mostly effected by some structural componenets like; price level, input costs, product diversification, collusions and etc. Also strategic management researches focused on industry factors in explaning firm performance like; market attractiveness, market concentration, market forces, market growth potential and costs (Porter,1980) and suggested that firms that operated in profitable industries would have bettter performance. However an unanswered question remained about why some firms perform better than the others although they are in same industry and under same conditions.(Karabağ, 2008:1). Thus firms strategic behaviors and resources (Porter, 1980; Barney, 1991) began to be considered as important factors that influence to performance. Further, some researches mentioned that strategic behaviors and resources are better predictor rather than industry factors (Karabağ, 2008:2).

A strategy can be considered a pattern in a stream of decisions (past or intended) that (a) guides the organization's ongoing alignment with its environment and (b) shapes internal policies and procedures (Hambrick, 1983:5) Organizations' strategies may differ even though they are in the same environmental context because they assess a set of issues, demands from stakeholders and potential solutions to solve problems differently.

Many previous studies examine the effect of business strategies on firm performance and use typologies to describe business strategies in an industry (Mintzberg, 1979, 1983; Ansoff, 1965; Miles and Snow, 1978; Miller and Friesen, 1978 Porter, 1980; and others). Miles and Snow's (1978) typology is one of the most important and popular typologies of strategy. It has been subjected to numerous tests of its validity in a wide array of settings, including hospitals, colleges, banking, industrial products, and life insurance (Hambrick, 2003:116). In addition, this typology is very suitable to the nature of studies in that it affords the use of archival data for a period of time (e.g., Ittner et al., 1997; Bentley et al., 2013), whereas other typologies require personal interviews with managers and surveys.

Given its wide usage and continued relevance, the Miles and Snow typology is particularly suitable as a context in which to investigate the relationship between business strategies and firm performance. In this study first we aimed to verify Miles and Snow Typology in Turkey and then investigate how firms that conduct different business strategies, different size and different industry differ in firm performance.

2. MİLES AND SNOW TYPOLOGY AND FİRM PERFORMANCE

The Miles and Snow (1978) typology views organizational patterns of strategic behavior as an 'adaptive cycle', characterizing behavior using three strategic 'problem and solution' sets: (1) entrepreneurial problems focusing on the product-market domain, (2) engineering problems centering on the choice of technologies, and (3) administrative problems involving structure and processes. According to these sets, the Miles and Snow typology defines four distinct strategic types: Defenders, Prospectors, Analyzers and Reactors. The key dimension determining the typology is the rate at which an organization changes its products or markets. ***Defenders*** are organizations that engage in little or no new product/market development. Often, such organizations control relatively secure niches within their industries, competing primarily on the basis of price, quality, delivery, and service. ***Prospectors*** attempt to be pioneers in product/market development. They tend to offer a frequently changing product line and compete primarily by stimulating and meeting new market opportunities. ***Analyzers*** are an intermediate type. They make fewer and slower product/market changes than prospectors but are less committed to stability and efficiency than defenders (Hambrick, 1983). By contrast, Reactors lack a consistent strategic approach to solving problems. As a result, the Reactor strategy type is generally considered unviable and is frequently omitted from studies.Because Reactors may vary their behavior at different times to exhibit the characteristics of a Defender, Analyzer or Prospector type, they are also difficult to characterize at a single point in time using objective approaches (Blackmore and Nesbitt, 2012:2). Most of the prior research in management and accounting has focused on prospectors and defenders in the analysis. (Bentley et al., 2013: 781) However in this study, we used three distinct strategies (prospector, defender and analyzer). A summary of the strategy types (Prospectors, analyzers and defenders) is shown in Table1.

As shown in Table 1, prospectors are organizations that generally identify new product/service market opportunities, quickly adapt to changes in the external environment, and follow a "first-to-market" strategy. They are flexible and tend to have a wide range of products. They have a decentralized and complex structure. By contrast, defenders are organizations that prosper through stability, reliability, and efficiency. They attempt to provide a stable set of products and services to a well-defined portion of the total market and focus on current operating. Defenders generally compete through efficiencies and lower cost. They are centralized, stable and less complex relative to prospectors As expected, analyzers have attributes that mixed those of defenders and prospectors (Hambrick, 1983:7)

Table 1: Characteristics of Strategy Types

Strategy Type	Entrepreneurial Characteristics	Engineering Solutions	Administrative Solutions
Defender	-Narrow and stable domain -Aggressive maintanance of domain -Tendency to ignore outside developments -Cautious and incremental growth primarily through market penetration. -Some product development but closely related to current goods or services.	-Cost efficient technology -Single core technology -Tendency towards vertical integration - Continous improvements in technology to maintain efficiency	-Financial and production experts most powerfull members of the dominant coalitions;limited environment scanning -Planning is intensive,cost oriented, and completed before action is taken. -High degree of formalization - Centralized control and long looped vertical information system. -Simple coordination mechanism, conflict resolved through hierarchical channels -Organizational performance measured againts previous years, -Reward system favoursproduction and finance.
Prospector	-Broad and continously developing domain - Monitors wide range environmental conditions and events -Creates change in the industry -Growth through product and market development -Growth may occur in spurts	-Flexible, Prototypical technologies -Multiple technologies. -Low degree of routinization and mechanization technology embedded in people	-Marketing and R&D experts most powerfull members of the coalition -Planning is comprehensive, problem oriented and can not finalized before action is taken -Low degree of formalization - Decentralized control and short looped horizontal information system -Complex coordination mechanism and conflict resolved through integrators. -Organzational performance measured against important competitors. -Reward Systems favours marketing and R&D.
Analyzer	Hybrid domain that is both stable and changing. - Surveillance mechanism mostly limited to marketing; some research and development. - Steady growth through market penetration and product-market development.	-Dual technological core (stable and flexible component). - Large and influential applied engineering group. - Moderate degree of technical rationality.	Marketing and engineering most influential members of dominant coalition, followed closely by production. - Intensive planning between marketing and production. - Matrix structure combining both functional divisions and product groups. - Centralized control system with vertical and horizontal feedback loops. - Extremely complex and expensive coordination mechanisms. - Performance appraisal based on both effectiveness and efficiency measures, most rewards to marketing and engineering.

Source: (Blackmore and Nesbitt (2012: 3)

According to the typology the three strategy types have equal effectiveness. Miles and Snow (1978), and Snow and Hrebiniak (1980) found that defenders, analyzers and prospectors performed equally well and were superior to reactors. However Hambrick (1983) found that Analyzers tended to outperform both Prospectors and Defenders on performance measures such as return on investment and market share and suggested that "in general the 'superior' strategy was neither of the two extreme strategies" (Hambrick, 1983: 18). Similarly, Kabanoff and Brown (2008) found that Analyzers performed relatively well in

profitability when compared with the other types. (Fiss, 2011:400). These studies suggest that taking a middle position that "combines the strengths of both the Prospector and the Defender into a single system" (Miles and Snow, 2003: 68) results in higher performance than taking either extreme position. On the other hand it is suggested that different environments favor certain strategies over others (Smith et al.,1983:45) For exampe Zajac and Shortell, (1989) found that Prospectors outperformed Defenders in the volatile healthcare industry (Desarbo et al.,2005: 48).

In addition to these it was also mentioned that there is a a significant interaction between strategy and size on organizational performance. The three strategies perform differently under different size conditions. Generally, defenders perform better than analyzers and prospectors as small firms, prospectors perform better than defenders and analyzers as medium to large size firms, and analyzers perform better as very large firms. (Smith et al., 1983:48)

Based on this literature review, it is considered that the three strategies may not perform equally well under different environment and industry and under different size conditions. Such authors have noted the fact that many research findings conflict with those predicted from Miles and Snow (1978). As DeSarbo et al. (2005: 50) pointed out, more research is thus needed on the topic of strategic type and performance and mentioned another unresolved aspect of the Miles and Snow typology relates to whether it is universally applicable across environments or is context dependent. Hambrick (1983: 7) noted that the generic character of the typology ignores industry and environmental peculiarities, and Zajac and Shortell similarly pointed out that Miles and Snow's notion of generic strategies tends to "assume that the various strategies are equally viable across environmental contexts and, by implication, across time" (1989: 413).

For these reasons we aimed to verify this typology in Turkey for all industries and investigate how firms that conduct different business strategies in different sizes, differ in firm performance. As known, this relationship between miles and snow typologies and firm performance hasn't been analysed with considering all industries in Turkish context yet. We assumed that:

H1: There is a significant difference in firm performance between small, medium and large firms.

H2: There is a significant difference in firm performance between prospectors, analyzers and defenders.

H3: Strategy is a better predictor of performance than size and industry.

H4: Interaction of "strategy" and "size" is a predictor of performance.

To test the hypothesis above, following methodology was conducted.

3. METHODOLOGY

3.1. Sample and Data

The sample covers 190 organizations which are listed on Borsa İstanbul between 2006 and 2011 in Turkey. The companies have operations in 8 different index groups of the Borsa Istanbul (12% in the food industry, 18% in the service industry, 13% in the chemical industry, 19% in the metal products and machinery industry, 11% in the forest industry, 3% in the technology industry, 10% in the textile industry, and 16% in the non-metallic mineral products industry). For each company, annual financial statements (balance sheet and income statements), audit reports, and related information were captured. Sixteen pieces of data were collected from 1140 (190x6) financial statements and audit reports released between 2006 and 2011. The annual financial reports and audit reports of the sampled companies were obtained through the Borsa İstanbul website (http://www.imkb.gov.tr/FinancialTables/companiesfinancialstatements.aspx) for the years 2006-2007 and the Public Disclosure Platform website (http://www.kap.gov.tr/yay/ek/index.aspx) for the years 2008-2011. The business strategies of 190 organizations were determined according to 6 objective measures for each year based on Miles and Snow's (1978) typology by cluster analysis. Since reactors do not have a clearly focused strategy, reactors were omitted from the study and hypothesis mentioned above, tested for prospectors, analyzers and defenders.

3.2. Measures

'Measuring Strategies': Selecting Objective Measures

There are several ways to measure business strategies. Snow and Hambrick (1980 : 532) introduced four main approaches: (1) the ***Investigator inference method***, which requires that the researcher uses all of the information available and assesses the organization's strategy, (2) the ***Self-typing method***, which allows the organization's managers (specifically, its top managers) to characterize the organization's strategy, (3) the ***External assessment method***, in which the organizational strategy is assessed by an expert panel, and finally (4) the ***Objective indicators method***, which involves measuring parameters that provide information on the strategic stance of an organization indirectly.

The Objective indicators method provides benefits over the other methods by providing objective data that do not depend on the assumptions of the researcher, manager or consultants and by allowing large, heterogeneous samples (Blackmore & Nesbitt, 2012: 4). Therefore, an assessment of relative strategic properties is generally possible. Additionally if data are available for a sufficient time period (usually five years or longer), this method allows differentiation between strategic changes and strategic adjustments and the capturing of realized strategies rather than intended strategies (Thomas & Ramaswamy, 1996: 255).

The nature of our study, which requires that large amounts of data be collected from different industries and different time periods, fits well with a measurement approach that is based on objective measures.

In the literature, there is a lack of commonly agreed upon objective measures to assess Miles and Snow's strategy types. Therefore, the authors selected the most appropriate findable measures to accompany the dimensions of Miles and Snow's typologies (Blackmore & Nesbitt 2012; Bentley et al.; 2013; Ittner et al.; 1997).

We used a set of measures used by Bentley et al. (2013): (1) the ratio of research and development to sales, (2) the ratio of employees to sales, (3) a historical growth measure (one-year percentage change in total sales), (4) the ratio of marketing to sales, (5) a measure of employee fluctuations (standard deviation of total employees) and (6) a measure of capital intensity net PPE scaled by total assets. We considered 3 important criteria when selecting these measures. As advised by several authors (Conant et al. 1990; Blackmore & Nesbitt, 2013), these six measures captured the appropriate characteristics and all of the dimensions (stability, efficiency, growth, product/service development research, marketing, and capital intensity) of Miles and Snow's Strategy typologies and were available for each of the companies and years in our sample. The relationship between the measures and dimensions of the Miles and Snow typology is shown below in Table 2.

Table 2: Measures and Dimensions of The Miles And Snow Typology

Measure	**Dimensions of Miles and Snow's Typology**		
	Entrepreneurial	**Engineering**	**Administrative**
The ratio of research and development to sales	x		
The ratio of employees to sales		x	
A historical growth measure (one-year percentage change in total sales)	x		
The ratio of marketing to sales	x		
A measure of employee fluctuations (standard deviation of total employees)	x		x
A measure of capital intensity (net PPE scaled by total assets)		x	

"The ratio of research and development to sales" and *"the ratio of marketing to sales"* cover the entrepreneurial dimension of the Miles and Snow typology. Because these measures are related to a firm's propensity to research for change with new products or new markets, which has been suggested as the most significant differentiator of the four strategy

types (Snow and Hambrick, 1980:536), Prospectors engage in greater amounts of innovative activity. Prospectors are expected to carry out more research and development and have greater marketing expenditures than defenders (Ittner, 1997: 241). *"A measure of employee fluctuations"* relates to organizational stability and covers both the entrepreneurial and administrative dimensions. Prospectors are expected to have higher turnovers than defenders. *"A measure of capital intensity"* (net PPE scaled by total assets) relates to a company's commitment to technological efficiency and covers the engineering dimension. Prospectors have low degrees of mechanization and routinization to avoid lengthy commitments to single technological processes, whereas defenders have high degrees of mechanization and routinization focusing on a single core cost-efficient technology. (Bentley et al, 2013: 783) "*The ratio of employees to sales*" also covers the engineering dimension and is related to a company's ability to produce and distribute products and services efficiently (Thomas et al., 1991: 255) Prospectors are expected to have a higher ratio of employees to sales than defenders. "*A historical growth measure*" covers the entrepreneurial dimension and is a proxy for a firm's growth or investment opportunities (Bentley et al., 2013: 787) with prospectors expected to have greater growth potential than defenders. These 6 objective measures were used to classify firms as prospectors, defenders or analyzers.

Organizational Size and Performance

Organizational size was measured by the number of full-time employees. Number of employees is one of the more common methods of measuring organizational size (Smith et al., 1983:46). Firm size was defined as small at fewer than 50 employees, medium as 50-250 employees, large as 250-1000 and extra large more than1000 employees.

In order to assess firm's performance, ROA data were collected for each 183 firm. These data generally use as performance indicator in researches (Blackmore&Nesbitt, 2012; Fiss, 2011; DeSarbo, 2005) It is an indicator of how profitable a company is relative to its total assets. ROA gives an idea as to how efficient management is at using its assets to generate earnings. It was calculated by dividing a company's annual earnings by its total assets, ROA was displayed as a percentage in ANOVA. However in logic regression ROA was turned to categorical variable. This ratio is highly depent on the industry thus avarege (5 year) ROA data of each firm is compaired with the avarage ROA of the Industry. Performance coded "0" as bad performance when *avarage ROA ratio of firm < avarage ROA of Industry* and performnace coded "1" as good performance when *avarage ROA ratio of firm > avarage ROA of Industry.*

4.3. Data Analysis

Determining Strategies: Cluster Analysis

The 6 objective measures that were used to measure strategy were collected from the financial statements of 193 firms for each year between 2006 and 2011. Consistent with Ittner et al. (1997) and Bentley et al. (2013), a 5-year average of each of the 6 measures was

calculated to eliminate environmental effects, and the data were analyzed using Hierarchical Cluster analysis. These techniques were also used by Thomas and Ramaswamy (1996) to determine the strategy types of firms with objective measures of the Miles and Snow typology.

In our hierarchical clustering method, we used Ward's minimum variance method, which joins clusters using the criteria of minimum variance within clusters. A Euclidean distance measure was used due to its wide acceptance and known robustness.

Clustering was conducted for each industry separately to eliminate the industry effect. An optimal number of clusters were determined based on the sharp variation in fusion coefficients and visual inspection of the dendrograms.

In this study, we accepted that firms' business strategies did not change in the period of time over which the research was conducted because companies' strategies should arguably be consistent over time (Miles and Snow 1978, Bentley et al., 2013: 32). To test the strategy consistency over the years, we also performed hierarchical cluster analysis for each year. Firms were again grouped in the same clusters in each year.

Analysis of variance (ANOVA) was used to find out if there is a significant difference in firm performance between small, medium and large firms and also between prospectors, defenders and analyzers (Hypothesis 1 and 2). The impact of independent variables; "strategy", "ındustry" and "strategy*size" on categorical dependent variable "firm performance", were analysed by Logistic Regression (Hypothesis 3 and 4).

5. FINDINGS

Three main clusters were determined for each industry. The two maximally different clusters in each industry were defined as prospectors (having high scores) and defenders (having low scores). (Thomas and Ramaswamy; 1996: 256) According to the cluster analysis results, 27 firms were classified as defender, and 25 firms were classified as prospectors 131 firms that were grouped into the third cluster called analyzer. 7 firms that were not grouped under any cluster were omitted from the data set. For the validation of cluster analysis, 4 academics that studied strategy management and were familiar with the Miles and Snow typology were asked to classify these firms; 90% of the results were found to be consistent with our classification. This high ratio may be accepted as sufficient to support the validity of our classification.

ANOVA is used to determine whether there are any significant differences between the means of performance in different firm size and different strategy type.

The ANOVA results for performance differences between small, medium, large and extra-large firms were showed below.

Table 3: Test of Homogeneity of Variances (Firm Size)

ROA			
Levene Statistic	df1	df2	Sig.
.527	3	179	.664

Table 4: ANOVA (Firm Size)

ROA					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1191.356	3	397.119	.675	.569
Within Groups	105341.671	179	588.501		
Total	106533.027	182			

ANOVA results indicated that there was not a significant effect of "Firm Size" on performance at the p<.05 level for the four conditions [F(3, 179) = 0,675, p = 0.569]. These results suggested that it is not possible to say any organizational size (small, medium, large, extra-large) would cause better perfomance, thus hypothesis 1 was rejected.

ANOVA was also conducted to compare the effect of strategy on Firm Performance. However similar results were realized. Results showed below in table 6, indicated that there was not a significant effect of "Firm Strategy" on performance at the p<.05 level for the three strategy types [F(2, 180) = 1,53 p = 0.218]. Hypothesis 2 was rejected.

Table 5: Test of Homogeneity of Variances (Firm Strategy)

ROA			
Levene Statistic	df1	df2	Sig.
.055	2	180	.946

Table 6: ANOVA (Firm Strategy)

ROA					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1790.448	2	895.224	1.538	.218
Within Groups	104742.580	180	581.903		
Total	106533.027	182			

A logistic regression analysis was conducted to predict firm performance for 183 firms using "Industry", "Firm Strategy" and ınteraction of Firm Size*Firm Strategy" as predictors. A test of the full model against a constant only model was statistically significant, indicating that the predictors as a set reliably distinguished between acceptors and decliners of the offer (chi square= 8,747 p< .05 with df =3).

Table 7: Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	8.747	3	.033
	Block	8.747	3	.033
	Model	8.747	3	.033

Nagelkerke's R2 of .105 indicated a relationship between prediction and grouping. Prediction success overall was 61,7 % (60,4 % for bad performance and 63 % for good performance . The Wald criterion below, demonstrated that only Interaction of "Firm Strategy and" Firm Size" made a significant contribution to prediction (p =.005). "Industry" and "Strategy" were not a significant predictor of performance.Thus, while hypothesis 3 was rejected, hypothesis 4 was accepted.

Table 8: Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Industry	.039	.068	.318	1	.573	1.039
	Strategy	-.643	.394	2.663	1	.103	.526
	Strategy*Size	.226	.080	7.874	1	.003	1.253
	Constant	-.184	.727	.064	1	.800	.832

a. Variable(s) entered on step 1: Industry, Strategy, Strategy*Size

EXP(B) value (in table8) indicates that interaction of Firm Strategy & Firm Size is raised by one unit the odds ratio is 1,25 as large and therefore firms are 1,25 more times likely to perform well

6. DISSCUSSION

The purpose of this study was to examine Miles and Snow's Strategy Typology in Turkey and investigated how "firm size", "industry" and "strategy" affect firm's performance. In this study we identify 6 objective measures that cover entrepreneurial, engineering and administrative dimensions described by Miles and Snow as defining strategy types. Cluster Analysis results indicated that Miles and Snow Typology is mostly work in Turkish context.

Firms were grouped under 3 significant groups in each industry. Results showed that most of the firms %68,9 in Turkey intent to be analyzer rather than prospector or defender. However it is not amazing because Turkish economic history also mentioned the same point. Because of the economic crisis and the turbulent conditions to date, it has been seen that firms generally conducted blended strategies like analyzer raher than pure strategies like prospector or defender. In order to reduce risks, firms have preferred differentiation during economic expansions and preferred cost oriented strategies during economic recession (Karabag, 2008:51). Besides of this, heterogen market structure in many industries also refers the blended strategies. For example, a tech firm, Arçelik, serves products in different brands for different customer groups and by this way have the opportunity to be differentiator and cost leader. Our cluster analysis results confirmed that Turkish firms generally continue to this aptitude.

Previous research on the relationship between Miles and Snow's typology of strategy and organizational performance has attempted to determine whether it is better to be a prospector, analyzer or defender. Hambrick (1983) found that Analyzers tended to outperform both Prospectors and Defenders on performance measures such as return on investment and market share and suggested that "in general the 'superior' strategy was neither of the two extreme strategies" (Hambrick, 1983: 18). Karabağ, (2008: 104) also has found that belended strategy is a better predictor of financial performance in Turkey. However our ANOVA results (table 6) showed that there is not a significant difference ([F(2, 180) = 1,53 p = 0.218]) in performance (ROA) between prospector, defender or analyzer. It may be interpreted as defenders, prospectors, and analyzers performed equally well. This finding is consistent with many researches. (Kabanoff and Brown, 2008; Smith et al., 1983; Miles and Snow, 1978) Smith et al., (1983:49) suggested that the important thing is not the strategy type but a consistent and purposeful strategy. In fact. Miles and Snow (1978) and Snow and Hrebiniak (1980) stressed that the various strategic types would perform equally well in any industry, providing that the strategy was well implemented (Hambrick 1983:7). This conflict in litrature maybe explain with other variables that affect the relationship between strategy and performance.

It is mentioned that other variables such as; firm size, industry classification and environmental factor may affect the the performance achieved by different strategic type (Zahra ve Pearce, 1990:760; Desarbo, 2005:51). In this study we also investigated that is there any difference in firm performance between different firm sizes. ANOVA results showed that just size variable has no affect on firm performance [F(3, 179) = 0,675, p = 0.569].

Our logic regression results clarified how "Industry", "Firm Strategy" and interaction of Firm Size*Firm Strategy" predict firm performance. Although firm size and strategy have no effect alone on performance, logic regression results indicated that interaction of firm size*firm strategy predicted performance significantly.This result is completely consistent

with Smith et al., (1983:48) argued that organizational size can explain differences in strategy and that the relationship between strategy and performance varies with organizational size.

Results of this study make a valuable contrubution to understand how Miles and Snow Typology work in Turkish context and how Miles and Snow strategy types differ in performance in Turkey. Rather than industry, interaction of size and strategy predict the firm performance. Further researches may clarify which combination of size and strategy perform well in several industries.

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