

# STRATEGIC SUPPLIER ALLIANCES IN THE GLOBAL NATURAL STONE SUPPLY CHAIN <sup>1</sup>

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## ÖZET

*Bu çalışmanın temel amaçları; (1) tedarik zincirinin performansını artırmak için stratejik tedarikçi işbirliklerinin önemi ve rolünü analiz etmek, (2) doğal taş sektöründeki yöneticilerin stratejik tedarikçi işbirliklerine yönelik tutum ve davranışlarını incelemek ve (3) doğal taş sektöründeki stratejik tedarikçi işbirliklerinin kurulması olasılığını ve şartlarını ortaya çıkarmak olarak sıralanabilir. Bu amaçlar doğrultusunda hem Türkiye hem de dünyada faaliyet gösteren doğal taş işletmelerinde araştırmalar yapılmıştır. Araştırma sonuçları stratejik tedarikçi işbirlikleri kurmak isteyen doğal taş üreticileri, ihracatçıları ve ithalatçılarının karar vermesi için destekleyici olacaktır.*

**Anahtar Kelimeler:** *Stratejik İşbirlikleri, Tedarik Zinciri Yönetimi, Stratejik Tedarikçi İşbirlikleri, Doğal Taş Sektörü*

## ABSTRACT

*The main objectives of this paper are to (1) analyze the importance and role of strategic supplier alliances for enhancing the performance of a supply chain, (2) reveal managers' attitudes and behaviors towards strategic supplier alliances in the natural stone industry and (3) bring out the conditions and possibilities of establishing strategic supplier alliances in the natural stone industry. Under the light of our objectives, a number of surveys in both in Turkish and global natural stone companies are performed. The research results will be supportive for natural stone quarries, exporters and importers' decisions to form strategic supplier alliances.*

**Keywords:** *Strategic Alliances, Supply Chain Management, Strategic Supplier Alliances, Natural Stone Industry*

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<sup>1</sup> The summaries of researchers were presented in 4<sup>th</sup> and 5<sup>th</sup> International Strategic Management Conference

## **1. INTRODUCTION**

In the highly competitive business environments, lower cost, higher quality, better information flows and less uncertainty etc. are very important for profitable companies, and suppliers have a large and direct impact on the quality and cost of products and services. Moreover, the trend to outsource more materials and services make companies more reliant on their sources of supply. This leads to a move towards increasingly collaborative supplier relationships and supply chain management systems (Stuart and McCutcheon, 2000). In order to emphasize core competencies and skills, companies assume narrow and specialized roles within supply chains while companies ally themselves with supply-chain partners and strategic supplier alliances for mutual benefits (Myhr and Spekman 2005). Many of today's companies are relearning how to compete more effectively, not only in domestic markets, but also in global markets. To accomplish this adaptation many of these companies are altering the strategies employed. They are now de-emphasizing autonomy in favor of alliances through cooperation, coordination, and corroboration of their competitive efforts (Pett and Dibrell, 2001).

Traditionally, the American, Japanese and European companies have used strategic alliances to gain competitive advantages in world markets. Many companies all over the world have started to understand the importance of employing strategic alliance to deal with foreign competition and to enter foreign markets. The emergence of truly global markets will only add to the number of companies who see strategic alliances as a means to compete in an ever more competitive world markets (Vyas et al., 1995). Moreover, in recent years strategic supplier alliances have become increasingly important to both buyers and suppliers striving to respond to heightened competitive pressures. They reflect recognition by alliance partners that a cooperative relationship may facilitate achieving mutual competitive advantage (Kannan and Tan, 2004). Nowadays, because of the global economic crisis and recession, the natural stone exporters need to turn suppliers and customers into partners willing to cooperate enthusiastically in supplying, marketing and distributing the natural stones. Therefore, in this study, the concepts of supplier alliances, supply chain management and strategic supplier alliances are explained, and the long-term prospects for the strategic supplier alliances in the natural stone industry are assessed by showing examples both from Turkish and global companies.

## **2. STRATEGIC ALLIANCES**

Though the term "strategic alliance" is not a new concept, it has become one of the most important managerial forms in modern society and is a well-known tool available to multinational business managers (Mockler, 2001). A few years ago strategic alliances were perceived as an option reserved only for corporate giants. Today, however, for many companies, a go-it-alone strategy no longer seems to be a viable alternative. Intensified foreign competition, shortened product life cycles, soaring cost of capital, including

the cost of research and development, and ever-growing demand for new technologies, alliances are become an attractive strategy for the future (Vyas et al., 1995). Historically, strategic alliances are an age-old practice designed to unite two or more entities for a common purpose, and royal families dating back centuries employed alliances to protect and enlarge their domains. In common business usage, an alliance is one of a group of strategic approaches in the "cooperative strategies" group. The benefits of an alliance, in theory, are relatively straightforward. Two or more entities combine their core competencies in order to provide a product or service that is superior to that which any of the parties could singularly provide. Ideally, the alliance partners will mutually benefit from the relationship by learning new skills and capabilities or gaining exposure to new markets. In the strategic alliances, the targeted outcome is a product or service that the alliance partners individually would otherwise be unable to offer customers (Dalton, 2009). Thus, the strategic alliances provide benefits to companies that cannot obtain alone, and these equations ( $1+1=3$  or  $2+2=5$ ) are realized.

Strategic alliances can be as simple as the case in which two companies share their technological and/or marketing resources. In contrast, they can be highly complex, such as involving several companies, located in different countries. Thus, the strategic alliances can be defined as (1) a long-term, explicit contractual agreement pertaining to an exchange and/or combination of some of a company's resources with one or more other company (Burgers et al., 1993), (2) an agreement between two or more partners to share knowledge or resources which could be beneficial to all parties involved (Vyas et al. 1995), or (3) a long-term cooperative arrangement between two or more independent companies that engages in business activities for mutual economic gains (Tsang, 1998). As the difficulty of definition indicates, the structure of strategic alliances identified in the literature runs the full gamut from R&D collaboration to licensing to joint ventures to complete mergers. Therefore, the most remarkable types of strategic alliances include joint ventures, licensing, franchising, equity ownership and marketing, distribution or logistics-based alliances. These types represent different managerial formations that seek to achieve business objectives through collaboration better than through competition (Knoke, 2005).

There were many strategic alliances in the world. Briefly, there were 37,538 strategic alliances in the USA, 9,417 strategic alliances in Japan and just 212 strategic alliances in Turkey between 1990 and 1999 among 30 OECD countries (Tekinay, 2004). Although, IBM alone had engaged in over 400 strategic alliances by 1995, some of the well-known successful examples in different industries were between Mercedes and Chrysler, GM and Toyota, Canon and Kodak, Siemens and Philips etc. Most of them were actually among global companies like Ford and Volkswagen for sharing a distribution and service center in South America and Ford and Nissan for building minivans in the USA (Griffin, 1999). Strategic alliances can be used by small and medium-sized companies to build on innovative capability and technological competence, and overcome weaknesses such as a poor

financial position or low levels of expertise in production, marketing and management (Jarratt, 1998).

There are several reasons to form the strategic alliances. The trend toward strategic alliance is clear; it is not a passing fad (Jarratt, 1998). The international business literature has already acknowledged a number of positive outcomes for companies actively engaged in strategic alliances, such as higher return on equity, better return on investment, and higher success rates (Knoke, 2005). Moreover, strategic alliances can assist organizations to acquire the means to compete within an ever complex and changing environment (Jarratt, 1998), and may be formed to enter new business, obtain new skills, share risks and resources, gain quick access to new markets, overcome trade barriers, absorb a key local competitor and avoid predatory competition (Inkpen et al., 1997; Hitt et al., 1995). Moreover, building stronger domestic and international business is a commercial necessity, and the emergence of regional trading blocs, the ease of technology transfer, and the internationalization of markets have prompted companies to look at each other in a different light – as allies rather than adversaries (Vyas et al. 1995). Furthermore, strategic alliances are formed as a mechanism for reducing uncertainty for parties of the alliances (Burgers et al., 1993). Many strategic alliances have created the greatest degree of mutual value, and thereby sustain a competitive advantage in the marketplace, and been most successful when the originating motives are positive, and the desire is to create new value, rather than an attempt to hide weaknesses, or merely exchange value, and the relationship provides a stream of follow-up opportunities (Day, 1995).

### **3. SUPPLY CHAIN MANAGEMENT**

Faced with the increasing pressure to improve responsiveness to the changing market needs rapidly, companies must respond to the challenge of how to improve supply reliability and quality, while simultaneously reducing costs (Kannan and Tan, 2004). As suppliers play very important role in the competitiveness of the companies, Chrysler and Ford changed their supplier management principles, contributed to dramatic improvement in financial performance of the company. They reduced its total number of suppliers, worked limited suppliers, and developed strategic supplier alliances in which the suppliers were asked to play an active role in product development and process improvement. After this, the total amount of work their suppliers performed effectively increased and the performance, innovation, competitiveness, and long-term survival of the members of the supply chain also improved (Lorincz, 1985; Dyer, 1996; Famuyiwa et al., 2008). Therefore, the supply chain management has been considered as the most popular operations strategy for improving organizational competitiveness in the twenty-first century, because this system incorporates the entire exchange of information and movement of products between suppliers and final customers, including manufacturers, distributors, retailers, and any other companies within the extended supply chain (Gunasekaran et al., 2008). The Global Supply Chain Forum defines Supply Chain Management as

the integration of key business processes from end user through original supplier that provides materials, products, services, and information that adds value for customers and other stakeholders (Lambert et al., 1998).

A recent movement in supplier management has been the increased development of closer ties with selected supplier companies, with broadened expectations about what both buyer and supplier receive through their ongoing relationship. Nowadays, the different standards for supplier relationships have been variously termed as supplier development, supply chain partnership, supplier partnerships, co-operative supplier relationships, supplier alliances and strategic supplier alliances. The next section gives detailed information about the strategic supplier alliances.

#### **4. STRATEGIC SUPPLIER ALLIANCES**

The trend to outsource more materials and services has made companies more reliant on their sources of supply. The raising supply quality and reliability have led to an increase in outsourcing and the adoption of supplier alliances with key suppliers, and led to a move towards increasingly collaborative supplier relationships, referred to as strategic supplier alliances (Stuart and McCutcheon, 1996; Kannan and Tan, 2004). The strategic supplier alliance is a relationship formed among companies in the supply chain to achieve specific objectives and benefits. A fundamental purpose of strategic supplier alliances is to enhance the long-term competitiveness of strategic partners in the supply chain. In order for strategic supplier alliances to be viewed as strategic, they must enable the cooperating companies to achieve some type of competitive advantage in the supply chain. This specific alliance is usually formed to increase operational performance of each member through reductions total production, inventory, and quality control costs, and increased shared information and profits. Theoretically within a strategic supplier alliance, traditional competitive barriers between supply chain members are mitigated to create mutually beneficial relationship, thus leading to increased information flows, reduced uncertainty, and a more profitable supply chain. Rather than concerning themselves only with price, manufactures are looking to suppliers to work cooperatively in providing improved service, innovations and product design (Maloni and Benton, 1997).

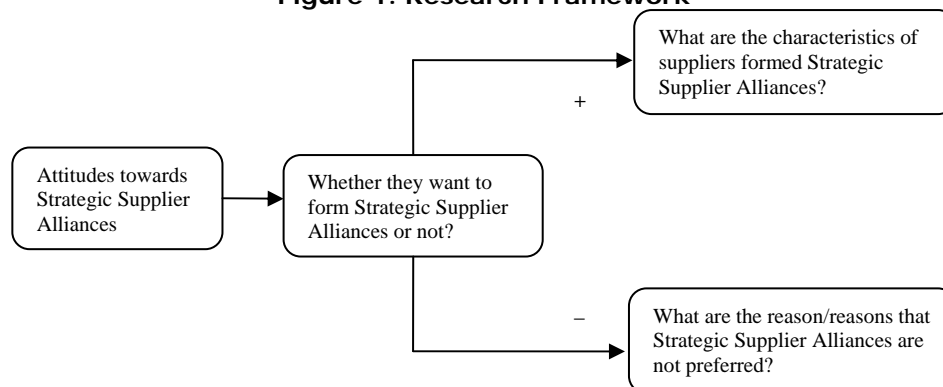
Specifically, a strategic supplier alliance is a relationship marked by mechanisms for buyer-supplier collaboration to solve problems and to share the benefits that are derived from quality or productivity gains that the joint efforts provide. Such alliances are intended to provide competitive advantage to the buyer through greater flexibility, more technical input from the supplier, quicker response and reduced total purchasing costs; the supplier gains through better planning information, greater demand security and, often, technical assistance from the buyer (Stuart and McCutcheon, 1996). Furthermore, the strategic supplier alliances emphasize a direct, long-term association, encouraging mutual planning, problem solving, improvement and success sharing. Mutual problem solving can result in a win-win solution among partners, because this can help to improve quality, performance,

reduce cost etc. after establishing strategic supplier alliances. Supply quality can be improved through forming strategic supplier alliances with key and few important suppliers (Maloni and Benton, 1997). For example, Kannan and Tan (2004) presented the results of a survey of supply management professionals that examines attitudes of adopters and non-adopters of supplier alliances to supplier and quality management, and indicated that significant differences in attitudes exist between alliance adopters and non-adopters. Alliance adopters attach greater importance than non-adopters to ensuring that suppliers have taken steps to ensure high levels of product quality. However, Stuart and McCutcheon (1996) found that as the alliance matured, the purchasing companies perceived some improvements in benefits from strategic supplier alliances, even though benefits changed significantly.

## 5. ATTITUDES TOWARDS STRATEGIC SUPPLIER ALLIANCES IN THE GLOBAL NATURAL STONE INDUSTRY

This section presents the results of surveys conducted both in Turkish and global companies. The main objectives of the researches are to reveal managers' attitudes towards strategic supplier alliances in Turkish and international companies from the distributors' perspectives in order to determine their attitudes and expectations from strategic supplier alliances. The framework of the research is presented in Figure 1. The first step is to learn whether the companies prefer strategic supplier alliances or not. Then, we try to investigate the characteristics of strategic supplier alliances if the answer of the first step is "yes". Under the answer of "no", we try to learn the reasons that strategic supplier alliances are not preferred.

**Figure 1. Research Framework**



In the following, we give some background information about the natural stone industry and global natural stone supply chain.

### **5.1 Natural Stone Industry and Global Natural Stone Supply Chain**

Traditionally, the natural stone is luxury architectural material, and natural stone industry is one of the oldest industries in the world. Companies running business in this industry are facing and will continue to face competition from numerous forces because natural stones and building materials are more popular than ever. Marble, Travertine, Slate, Granite and Onyx etc. are some of the natural stone's name. Main uses of natural stones are flooring, exterior and interior cladding, stairs, funeral arts in Turkey and in the world. Moreover, flooring in prestigious admin buildings, schools, airports, hospitals, banks, etc. is laid with elegant looking natural stones like Marble, Travertine or Granite. Therefore, natural stone industry is one of the potential profitable industries in the world. From demand perspectives, the developed countries like the United States of America (USA), Canada, England, Germany and some Arabic countries like the United Arab Emirates, Saudi Arabia etc. are very important buyers and users of natural stones. From supply perspectives, international competition is observed among limited countries like Italy, Spain, Turkey, Iran, India, Brazil, Mexico, Peru, Egypt and China which have had important progress in the global natural stone industry.

From global supply chain perspectives, the companies participated in a natural stone supply chain are inextricably connected together all through the entire sequence of events that extract of blocks from quarries through to the ultimate customer as processed natural stones. The natural stones go through several stages before reaching the end customers. There are many processes, suppliers and customers in the natural stone supply chain. Extraction of natural stone blocks from quarries, transportation to processing plants and block cutting are the main three stages. After cutting rough blocks, the processes of splitting, first honning, filling, second honning, polishing, sizing, packaging, stocking and loading activities are implemented. Moreover, architects are added in natural stone supply chain because of their influences to in the special construction projects. The most important stage is to take orders and distribute the processed natural stones to final customers (Barutçu, 2008).

Presently, Europe and the USA head into an inevitable economic recession during the last quarter of 2008 because global economic crisis began in 2007 with the unpaid mortgage credits. The root cause of this crisis is the real estate market, and it was blamed on bankers' excessive leveraging of assets. As with the current crisis, both of these involved real estate bubbles that ultimately burst. Losses from real estate ultimately deplete a bank's capital by depleting stockholders' equity (Udell, 2009). Although the financial industry in the US is one of the main reasons for global economic crisis, the economic recession could have shocking effects in any industry unrelated to the financial industry (Quelch, 2008). For this reason, the global economic recession hits many industries from automotive to construction industries. Nowadays, it has started to hit and force buyers, distributors and wholesalers to reduce their natural stone orders. As the USA construction industry has fallen, it has created a huge inventory overhang, both in new houses and

existing homes sales. This has created an inventory overhang for products that has had enormous implications on businesses serving construction market. Many companies in the United States were caught with too much inventory and significantly declining demand that has forced and is forcing many to declare bankruptcy. As these companies fail, there is a domino effect around the world as many exporters, importers, agents, and manufacturers fail as well (Booth, 2008). Consequently, in natural stone industry, natural stone demands for them in world's largest markets of the USA and Europe has been decreasing, many distributors and wholesalers have been geared totally to marketing to sell their stock goods, and many quarries throughout the world have come to stop their operations because of the decline in export since the crisis began in 2008.

At this time, the Turkish natural stone industry has been the scene of many downsizing and out of business activities since 2008, and some natural stone companies seek to enhance market share and develop their bottom lines with business synergies. As explained before, collaboration among supply chain members is necessary to improve their competitiveness in this natural stone supply chain. If they establish strategic supplier alliances in their supply chain, they will get very important competitive advantage in the highly competitive natural stone industry.

## **5.2. Research Methodology**

### **5.2.1. Turkey Case**

The strategic supplier alliances in the natural stone supply chain and industry are formal alliances of quarry owners, manufacturers, distributors, architects and retailers. Despite the importance of strategic supplier alliances in many industries, there are limited studies for natural stone industry. Thus, the purpose of this empirical study is to determine the probability, conditions, criteria and barriers of forming strategic supplier alliances in natural stone industry.

Under the highly competitive natural stone industry, Turkish companies are searching for new ways to improve their competitive positions in natural stone markets. Forming the strategic alliance among rivals or strategic supplier alliances among suppliers in a supply chain is one of the major ongoing interests in the strategic management literatures. Therefore, the natural stone exporters need to turn suppliers and customers into partners willing to cooperate enthusiastically in supplying, marketing and distributing the natural stones, because the emerging area of supply chain alliances or strategic supplier alliances have received considerable attention in the academic and managerial literatures (Monczka et al., 1998). For example, the Chamber's President of Industry and Commerce of Afyonkarahisar-Turkey declared that "Italy should have been our partners not rivals in the natural stone industry because not only Turkish but also Italian natural stone companies could not generate enough revenues and profits" (Gürel, 2008).



The data was collected from the managers of natural stone companies in several cities in Turkey and especially in Denizli, which is the one of the most important region for the quarrying natural stones such as travertine and marbles. There are 15 questions on three sections designed for the questionnaire. The four of them are the characteristics of respondents and companies. The two of them are about the future of natural stone industry in Turkey and in the world. The one of them is whether respondents wanted to form strategic supplier alliances or not. The one of them is what kinds of strategic supplier alliances are preferred. The rest of them are open-ended questions related to strategic supplier alliances in natural stone industry. Some of the open-ended questions are (1) what do they think about the future of natural stone industry in Turkey and in the world? (2) What do they think about strategic supplier alliances in natural stone industry? (3) Have you ever wanted to establish strategic supplier alliances with the members of natural stone supply chain? (4) What are the main characteristics of the companies that you want to form Strategic supplier alliances? (5) Do you want to for Strategic supplier alliances with Italy, Spain and China or other countries? etc.

Both face-to-face and online survey methodologies were used to collect primary data. The face to face surveys and many informal negotiations were conducted with the managers of natural stone companies from 8<sup>th</sup> - 12<sup>th</sup> April 2008 in Denizli-Turkey. In the online survey, the questionnaires were sent to several companies' e-mail addresses obtained from the list of marble exporter companies (General Secretariat of Istanbul Mineral and Metals Exporters' Association, 2008) and marbletrade@yahooogroups.com. In the sampling stage, the respondents are chosen with judgment sampling method. The data collection was completed in 15<sup>th</sup> April, 2008, and 32 completed questionnaires were returned. In data analysis stage, the frequencies of six questions used nominal scale are given, and the answers of nine open-ended questions coded and categorized for analysis purposes.

### **5.2.2. Research Findings**

As seen in Table 1, in terms of the respondents' positions, among the 32 respondents, 50% were general managers, and 28,13% were owners of natural stone companies. In terms of the year of the company foundation, 15 of them were found between 1996 and 2000, 8 of them were found between 1991 and 1995, and 5 of them were found before 1990. In terms of company sizes, there are 21 natural stone companies employed less than 100 workers, 7 companies employed between 101 and 200 workers. Among the 32 companies, 13 of them have between 4-6 quarries, and 4 of them have more than 10 quarries. To sum up, most of the respondents are general managers of companies, most of the natural stone companies have been found since 2000, employed less than 100 workers, and have less than 6 quarries. Therefore, the surveyed companies are mainly composed of small and medium sized companies (Table 1).

**Table 1: The Characteristics of Respondents and Natural Stone Companies**

<b>Variable</b>	<b>Frequency</b>	<b>%</b>	<b>Variable</b>	<b>Frequency</b>	<b>%</b>
<i>Respondent's Positions</i>			<i>The number of workers</i>		
Owners	9	28,13	Up to 100	21	65,63
General Manager	16	50,00	101-200	7	21,88
Marketing Manager	5	15,63	201-300	2	6,25
Others	2	6,25	301-400	2	6,25
<i>The year of foundation</i>			More than 401	-	-
Before 1990	5	15,63	<i>The number of quarries</i>		
1991-1995	8	25,00	1-3	8	25,00
1996-2000	15	46,88	4-6	13	40,63
2001-2005	4	12,50	7-9	7	21,88
After 2006	-	-	More than 10	4	12,50

According to the categorized answers of open-ended questions, some of the important points were given as following;

- The twenty-five respondents think that there is tremendous market potential in developed countries in spite of the economic impact of the mortgage crisis in developed countries like USA and England, and expect that the production growth rate will be more than consumption growth rate of the natural stones. They are just worried about the advantages of Chinese low cost production. Thus, most of the respondents see increased competition as a threat to decrease their profit margin and increase customers' expectations. At the same time, the twenty respondents anticipate extreme reductions in their profit margins due to decreasing natural stone prices down. Despite increased competition and decreased their profit margin, the manager and owner of companies are hopeful the future of the natural stone industry.
- The most of the respondents remain weak to the competition in global natural stone markets and want to increase their competitive advantages by decreasing their costs and getting incentives from the Turkish Government. Therefore, they expect that the Turkish government will increase financial and tax incentives, and solve their problems about transportations and logistics.
- The most of the respondents are increasingly aware that they need to work together with their suppliers and customers so as to best serve their customers. They have positive attitudes towards strategic supplier alliances, and hope to strengthen their competitive positions in the natural stone markets through the strategic supplier alliances. Consequently, they are ready for strategic supplier alliances in their natural stone supply chain.
- Twelve respondents are eager to establishing marketing-based strategic supplier alliances with distributors, wholesalers and retailers. The seven respondents are interested in forming strategic supplier alliances with companies supplied machines, diamonds and equipments for natural stone

production. The three companies formed Strategic supplier alliances with their distributors and retailers. In other word, there are nineteen respondents who are eager to establishing strategic supplier alliances.

- Most respondents featured the partner selection in the supply chain. They take into consideration financial power, recognized brands, quality, the number of customers and selling points for partner selection.

- In order to work together successfully in strategic supplier alliances, some respondents think that there should be the supports of owners and managers, open communication, trust, commitment, collaboration, cooperation, disposed of information sharing, joint problem solving, the same long-term strategic goals and strategic fit among partners. These characteristics are necessary to not only form strategic supplier alliances but also increase the success of strategic supplier alliances.

- In terms of alliances' forms, most respondents prefer informal structures. For example, twelve natural stone companies established alliances as increased relationship with partners, the seven companies formed as handshake agreements, and the two natural stone companies make formal agreements with logistics service providers for one year. The three companies that produce decorative dimensional stones formed Strategic supplier alliances with quarries. Therefore, there are twenty-four companies formed strategic supplier alliances. On the other hand, the alliances' forms of merger and create new partnerships are not preferred.

- A variety of reasons have been mentioned why they want to form Strategic supplier alliances. According to the survey results, the most cited reasons are to market and export their natural stones more easily, share the potential risk in new markets, work more reliable in highly competitive natural stone industry and enlarge their production capacities. The four respondents are interested to access new markets and form strategic supplier alliances with domestics and international companies keen on expanding the markets.

- The eleven respondents want to establish with Italian companies, eight respondents want to establish with Spanish companies, and just three respondents want to form with Chinese companies as production-based strategic supplier alliances. Therefore, the respondents are more enthusiastic to establish production-based strategic supplier alliances with Italian and Spanish companies than Chinese ones.

- According to informal negotiations with respondents, the some important points are come out as following. (1) The three respondents signify that some of their distributors and retailers do not form long-term strategic supplier alliances because they prefer to import natural stones from different countries or companies so as to decrease risk and get more discounts. (2) The one respondent indicates that a natural stone manufacturer should be a member of the natural stone supply chain in order to decrease the competition level. (3) Just two companies are submitted strategic supplier alliances proposals from their customers. (4) Two respondents indicate that the companies in natural stone industry should establish cost accounting systems for offering a price. (5) The five respondents indicate that the raw or unprocessed natural stone can not be exported and shipped to some countries like China and Italy because the unprocessed and rough natural stones exports are decreasing the international competitiveness of the

Turkish natural stone industry. (6) Two respondents claimed that many natural stone companies do not have effective cost management and accounting systems. The lack of cost accounting systems make them offering lower price and decreasing their profits.

As a result, most of the respondents want to establish production-based strategic supplier alliances with Italian and Spanish companies, and marketing-based strategic supplier alliances with many companies from all around the world. The respondents have some criteria for partner selections. The respondents who want to establish strategic supplier alliances need professional supports for formal agreements.

### **5.2.3. Global Case**

Similar to the surveys conducted in Turkish companies, we also used face-to-face and online survey methodologies to collect primary data. The online research was conducted worldwide -North America, Asia, Europe, Africa, Australia and the Middle East- among the natural stone distributors and/or wholesalers between March 25 and April 17, 2009 via e-mail from the managers of the global natural stone buyers and distributors in the several countries. The face to face research was conducted in MARBLE 2009 - 15th International Natural Stone and Technology Fair, between March 25 and 28, 2009 in Izmir, Turkey. The e-mail addresses of natural stone distributors and/or wholesalers were reached from the Internet ([www.google.com](http://www.google.com) and [www.superpages.com/yellowpages/C-Natural+Stone+Wholesale/](http://www.superpages.com/yellowpages/C-Natural+Stone+Wholesale/)). As a result, many questionnaires were sent to these e-mail addresses, and distributed in the fair. Finally, 48 questionnaires were responded and returned. The reliability of the questions used Likert scale was assessed by the Cronbach's Alpha reliability coefficient that is one of the tools for assessing the reliability of scales. Cronbach's alpha verifies the internal consistency or average correlation of items in a survey questions to gauge its reliability. Reliability value calculated 0,7583 for just 2 questions (26 items) for 27 questionnaires and exceeded the suggested value of 0,70.

The questionnaire were developed from the existing studies and self-created. In the questionnaire, there were 14 questions and 38 items in 4 sections. In the first section, there were 6 questions provided respondents' positions, profiles of the company (sizes and types) and countries that have operations and imported natural stones. In the second section, there are 2 questions and 8 items elicited attitudes towards strategic supplier alliances and whether respondents want to form strategic supplier alliances or not. In the third section, there were 5 questions and 18 items for partner selections. In the fourth section, there was 1 question elicited the reason/reasons that strategic supplier alliances are not preferred. SPSS 11.5 for Windows were used to analyze data. The frequencies of the answers used nominal scales, and mean and standard deviations of questions used in Likert scale were calculated for exposing their attitudes towards strategic supplier alliances.

#### 5.2.4. Research Findings

In terms of the respondents' positions, among the 48 respondents, 29,8% were marketing managers, 20,8% were general managers, and 18,8% purchasing managers of the natural stone companies. In terms of the type/types of the company, 52,1% was wholesalers, 25% distributors, and 20,8% are importer of natural stones. In terms of company sizes, there are 21 natural stone companies employed less than 10 workers, 13 companies employed between 11 and 51 workers, therefore, most of the companies are the small and medium sized. In terms of the year of the company foundation, among 48 companies, 20 of them were founded between 1981 and 2000, 14 of them were founded between 1961 and 1980, and 11 of them were founded after 2001. Most of the companies' origins are from European (Italy, Germany, England and Austria), North American (the United States of America and Canada), Asia (China) and Middle East (United Arab Emirates, Bahrain and Kuwait) countries.

**Table 2: The Characteristics of Respondents and Natural Stone Companies**

<i>Variable</i>	<i>N</i>	<i>%</i>	<i>Variable</i>	<i>N</i>	<i>%</i>
<i>Respondent's Position</i>			<i>The type/types of the company</i>		
President/CEO	7	14,6	Distributor	12	25,0
General Manager	10	20,8	Wholesaler	25	52,1
Marketing Manager	14	29,2	Dealer	8	16,7
Purchasing Manager	9	18,8	Importer	10	20,8
Import/Export Manager	6	12,5	Retailer	7	14,6
Others	2	4,2	Others		
<i>The number of worker</i>			<i>The year of company foundation</i>		
Up to 10	21	43,8	Before 1960	3	6,3
11-50	13	27,1	1961-1980	14	29,2
51-100	9	18,8	1981-2000	20	41,7
More than 101	5	10,4	After 2001	11	22,9
<i>The country / countries imported natural stones</i>			<i>The origin country /countries of the company</i>		
Italy	25	52,1	European Countries	23	47,9
Spain	5	10,4	Middle East Countries	8	16,7
Brazil	12	25,0	North American Countries	18	37,5
Turkey	37	77,1	Asian Countries	7	14,6
China	13	27,1			
Peru	8	16,7			
India	14	29,2			
Mexico	16	33,3			

Most of the respondents import natural stones from Turkey (77,1%), Italy (52,1), Mexico (33,3%), China (27,1) and India (29,2%). In a word, most of the respondents are marketing managers, and most of the natural stone companies are small and medium sized, founded between 1981 and 2000, are wholesalers and distributors, have operations in Europe and North

America, and imported natural stones from Turkey, Italy, and Mexico (Table 2.)

According to the eight attitude statements towards strategic supplier alliances in the natural stone industry, the respondents believe that "this industry is suitable for forming strategic supplier alliances" ( $\bar{x} = 4,2083$ ) and "the strategic supplier alliance is one of the most important competitive tools in the highly competitive natural stone markets" ( $\bar{x} = 3,9167$ ). The respondents are of the opinion that competitors' alliances will be in danger for them ( $\bar{x} = 3,8333$ ), and this strategy is a requirement for their competitiveness in global natural stone industry ( $\bar{x} = 3,7708$ ). Moreover, respondents consider that it is not early to establish strategic supplier alliances ( $\bar{x} = 2,4792$ ), and not difficult to found long lasting strategic supplier alliances ( $\bar{x} = 2,6042$ ). However, although respondents are willing to put more effort establishing strategic supplier alliances ( $\bar{x} = 3,5833$ ), the possibility of forming strategic supplier alliances with their suppliers is not high ( $\bar{x} = 3,1145$ ) (Table 3).

**Table 3. Descriptive statistics of attitude statements**

The attitude statements towards strategic supplier alliances	Mean	SD
We are willing to put more effort establishing strategic supplier alliances.	3,5833	,87113
We are likely to establish strategic supplier alliances with our suppliers.	3,1145	,49822
Our industry is suitable for such strategic supplier alliances.	4,2083	,74258
The strategic supplier alliance is one of the most important competitive tools in the highly competitive natural stone markets.	3,9167	1,06857
It seems too early to establish strategic supplier alliances in natural stone industry.	2,4792	,89893
I believe that strategic supplier alliances will be a prosperous strategy in global natural stone industry.	3,7708	,97281
It is difficult to establish long lasting strategic supplier alliances in natural stone industry.	2,6042	1,33272
If our competitors establish strategic supplier alliances, it will be threat of our businesses.	3,8333	,83369

\* Scale: A five-point Likert scale from 1.Strongly Disagree to 5. Strongly Agree

As seen in table 3, they have positive attitudes towards strategic supplier alliances, and find functional strategy in the natural stone industry. Nevertheless, respondents are asked whether to form strategic supplier alliances or not. Among 48 respondents, the 27 respondents (56,3%) want to establish strategic supplier alliances with their suppliers, 21 respondents (43,8%) do not prefer to form them. To maximize cooperation among the partners, the following criteria should be taken in consideration in partners' selection.

**Table 4. The importance of the factors considered partner selections**

The factors considered for partner selection*	Mean	SD
Trust between top management teams	4,5714	,50395
Partner's willingness to integrate natural stone supply chain	4,3929	,49735
Partner's production knowledge	4,3214	,47559
Reputation of supplier	4,2857	,53452
Capabilities to provide quality	4,2158	,46004
Current relationship with supplier	4,1429	,70523
Product variety of supplier	4,1357	,69293
Partner's response time to questions and problems	4,1225	,50395
Ability to meet delivery due dates	4,0287	,80343
Supplier's market share	3,9643	1,03574
Supplier's ability to make a decent profit	3,8571	,70523
The number of partners' quarries	3,2500	1,43049
Partner's financial power	3,2143	1,37051
Proximity to the market	3,1786	1,21879
Degree of favorable past experience with partner	3,0714	1,63137
Partner's international experience	2,9286	1,18411
Cultural match between the companies	2,8929	1,16553
Partner's firm size	2,5357	1,07090

\* Scale: A five-point Likert scale from 1. Not Important to 5. Very Important

Effective strategic supplier alliance management begins with selecting the right suppliers. According to 27 respondents who want to form strategic supplier alliances, trust between top management teams, partner's willingness to integrate natural stone supply chain, partner's production knowledge and reputation, capabilities to provide quality are some of the most important factors. On the other hand, partner's international experience, cultural match between the companies, and partner's firm size are less important factors to establish strategic supplier alliances (Table 4). While there are many critical factors to the long-term success of strategic supplier alliances; trust, willingness, knowledge and supplier quality are some of the most essential factors to form strategic supplier alliances.

As seen in Table 5, the company who wants to form strategic supplier alliances should have unique or rare natural stones quarries, and high supports of owners and managers. Beside, the managers of companies should be trusted and reliable.

**Table 5. The characteristic/characteristics of companies wanted to form strategic supplier alliances**

The characteristics of companies	N	%
Suppliers' unique or rare natural stones	25	92,6
The same long-term strategic goals	21	77,8
Open communication	15	55,6
Supports of owners and managers	14	51,9
Trusty and reliable managers	23	85,2
Joint problem solving	12	44,4
Similar approach to customer/market	11	40,7

Moreover, allied companies should have the same long-term strategic goals, joint problem solving, and similar approach to customers and/or markets. Therefore, there should be good fit between suppliers and companies. The same long-term strategic goal is one of the most important characteristics that each partner has (Table 5).

In terms of alliances' forms, 21 out of 27 respondents prefer long-term contractual arrangements, 17 respondents would rather increase relationship with partners, 14 respondents prefer creating new partnership in the natural stone industry. In contrast, non formal handshake or verbal agreements and merger are the least preferred alliances' forms (Table 6).

**Table 6. Preferred strategic supplier alliances form/forms**

The forms of strategic supplier alliances	N	%
Increased relationship with partners	17	63,0
Long-term contractual arrangements	21	77,8
Non formal handshake or verbal agreements	9	33,3
Joint venture	13	48,1
Merger	4	14,8
Create new partnerships	14	51,9

By the order of the most important expectations, the respondents obtain from successful strategic supplier alliances to share potential risk, improve their financial performance, work with more reliable suppliers, bring new opportunities, shorten delivery time, increase their competitiveness, maintain their competitive positions, add strategic value and increase integrity with their suppliers (Table 7).

**Table 7. The respondents' expectations from strategic supplier alliances**

Expectations from strategic supplier alliances	N	%
Share the potential risk	23	85,2
Improve firm performance	21	77,8
Work more reliable suppliers	20	74,1
Bring new opportunities	18	66,7
Offer lower price	17	63,0
Short lead times	15	55,6
Increase competitiveness	14	51,9
Maintain competitive position in existing market	14	51,9
Add strategic value	12	44,4
Increase integrity	11	40,7

Respondents ranked 8 countries with respect to one another to form their preference of strategic supplier alliances from the most-preferred to the least-preferred with an ordinal measurement scale. According to the answers of this question, Italian and Turkish natural companies are the first, Indian companies are second, and Chinese companies are third, and Peruvian companies are the last preferred to establish strategic supplier alliances in



the global natural stone supply chain. Therefore, Italian, Turkish, Indian and Chinese companies can have more chance than the others.

**Table 8. The reasons that strategic supplier alliances are not preferred by respondents**

The causes that strategic supplier alliances are not formed	N	%
Diminution of companies' independence	12	57,1
The loss of some suppliers	8	38,1
The loss of operational control	17	81,0
The loss of confidentiality customers' information	5	23,8
The clash of corporate cultures	11	52,4
The deprive companies of future opportunities	10	47,6
The distrust to suppliers	13	61,9
Other (Please specify .....)	-	-

It is important why some respondents are not interested in strategic supplier alliances. According to the research results, the most cited reasons are the loss of operational control, diminution of companies' independence, the distrust to suppliers, and the clash of corporate cultures. The least cited reasons are the loss of some suppliers and confidentiality of customers' information. Thus, they do not want to establish strategic supplier alliances because of keeping their companies' managerial and economic independences (Table 8).

## 5. CONCLUSION AND RECOMMENDATIONS

Individual businesses no longer compete as autonomous entities but rather joining to a supply chain alliance due to the highly competitive business situation. Therefore, suppliers, manufacturers, logistic service providers, distributors, wholesalers and retailers in the supply chain always call for stronger alliances, vertically or horizontally, to compete against other supply chains. The high level of interdependence existing among them leads to the creation of true strategic supplier alliances because companies coordinate their activities and help each other to achieve shared objectives (Lin and Chen, 2004; Lajara and Lillo, 2004).

Obviously, according to literature reviews, the competitiveness in global economy requires companies to focus on core competencies, reduce their number of suppliers and develop strong partnership with the suppliers. Supplier alliances, supply chain management and strategic supplier alliances are playing very important role for these requirements, and can prove highly beneficial to the partnering companies in a natural stone supply chain (Lorincz, 1985; Vyas et al., 1995; Stuart and McCutcheon, 1996; Dyer, 1996; Maloni and Benton, 1997; Kannan and Tan, 2004; Famuyiwa et al., 2008; Dalton, 2009 etc.). Undoubtedly, the strategic supplier alliances are not the best solution in many situations. However, the establishing global strategic supplier alliance is a critical strategy to stay competitive for today's business in natural stone industry (Barutçu, 2008). Thus, managers and strategists should shift their focus from strategic alliances among companies

or rivals towards strategic supplier alliances involving the owners of quarries, manufacturers, logistic service providers and distributors in the global natural stone supply chain.

Turkey has great reserves of various types of natural stones including marble, travertine and granite etc. Thus, the Turkish natural stone industry presents great opportunities for many companies. Many natural stone companies are searching ways to improve their competitiveness. For example, in order to increase their sales and profits, Turkish natural stone companies should prepare the effective marketing programs, use differentiation strategy instead of cost leadership, establish natural stone promotion group and apply relationship marketing, internet-based marketing and pull and push promotion strategies (Barutçu, 2007). Moreover, one of the ways is to establish strategic supplier alliances. Undoubtedly, the strategic supplier alliances are not the best solution in many situations. However, the establishing global strategic supplier alliance is a critical strategy to stay competitive for today's business in natural stone industry.

According to survey results for Turkey case, the owners and managers of Turkish natural stone companies are eager to establish strategic supplier alliances with Italian, Spain and Chinese companies in natural stone supply chain. Regarding the research results for the global case, although respondents have shown a positive attitude towards the strategic supplier alliances, it is important to note that 43,8% of the natural stone distributors or wholesalers are not eager to ally to the natural stone suppliers. The managers of natural stone quarries should work hard to develop strategic supplier alliances with wholesalers, distributors and importers in a global natural stone supply chain. Initially, all strategic supplier alliances should not be designed to achieve mutually beneficial outcomes for all partners. Natural stone companies should establish strategic supplier alliances cautiously and at lower-risk for learning the markets and exploring opportunities.

To sum up, effective strategic supplier alliance is one of the essential strategies for success in the highly competitive natural stone industry, and the natural stone companies should seek for establishing the strategic supplier alliances. Some recommendations can be addressed what and how the owners and managers of natural stone companies ought to do in natural stone industry. Firstly, the managers or owners of natural stone companies should be encouraged to come to strategic supplier alliances and enter into strategic supplier alliances within their supply chain members. Secondly, they need to help in forming alliances process to save both partners time and efforts. Thirdly, they should establish strategic supplier alliances, as a group or companies in a natural supply chain, produce and supply high quality natural stones. Fourthly, they should promote themselves across the world to increase interest and awareness of the retailers and final consumers. Finally, they should develop marketing program to increase the architect's understanding and appreciation for natural stones and form strategic supplier alliances.

In the further researches, how the number of strategic supplier alliances can be increased and how strategic supplier alliances are strengthened in the natural stone industry should be analyzed. Based on the survey results, the special programs should be prepared to increase strategic supplier alliances in the global natural stone supply chain.

## REFERENCES

BARUTÇU, S. (2007) "Porter's Five Force Analysis For Natural Stone Industry and Competitive Strategies", 3<sup>rd</sup> International Strategic Management Conference, July 21-23, Antalya-Turkey, 647-657.

BARUTÇU, S. (2008) "Strategic Supplier Alliances in the Natural Stone Industry: The case of Turkish Companies", 4<sup>th</sup> International Strategic Management Conference, June 19-21, Sarajevo, Bosnia-Herzegovina, 3-10.

BARUTÇU, S., TANYERI, M., and GÖREN, Ş. (2009) "Attitudes towards Strategic Supplier Alliances in the Natural Stone Supply Chain: The Case of Global Companies", 5<sup>th</sup> International Strategic Management Conference, July 2-3, Stellenbosch, South Africa, 147-157.

BOOTH, J. (2008) "The worst U.S. housing crisis since the great depression", Retrieved April 21, 2008 from <http://blog.builddirect.com/>

BURGERS, W.P., HILL, C.W.L., KIM, W.C. (1993), "A theory of global strategic alliances: the case of the global auto industry", *Strategic Management Journal*, 14(6): 419-432.

DALTON, C.M. (2009) "Strategic alliances: There are battles and there is the war", *Business Horizons*, 52 (2): 105-108.

DAY, G.S. (1995), "Advantageous alliances", *Journal of the Academy of Marketing Science*, 23(4): 297-300.

DYER, J. H., (1996) "How Chrysler Created an American Keiretsu," *Harvard Business Review*, July-August, 42-56.

FAMUYIWA, O., MONPLAISIR, L. and NEPAL, B. (2008) "An integrated fuzzy-goal-programming-based framework for selecting suppliers in strategic alliance formation", *International Journal of Production Economics*, 113 (2): 862-875.

LAJARA, B.M. and LILLO, F.G, (2004), SMEs and supplier alliance use: an empirical analysis, *Supply Chain Management: An international Journal*, 9 (1): 71-85.

GRIFFIN, R. W. (1999) Management, 6<sup>th</sup> Edition, Houghton Mifflin Company, MA, USA, p.83.

GUNASEKARAN, A. LAI, K. and CHENG, T.C.E. (2008) "Responsive supply chain: A competitive strategy in a networked economy", Omega, 36(4): 549-564.

GÜREL, C. (2008) İtalyanlar rakip değil partnerimiz olmalı (Italy should be our partners not rivals), Aerstone from Anatolia, 1 (4): 18.

HITT, M. A., IRELAND, R. D., HOSKISSON, R.E. (1995) Strategic Management Competitiveness and Globalization, West Publishing Company, USA.

INKPEN, A.C., BEAMISH, P.W. (1997), "Knowledge, bargaining power, and the instability of international joint ventures", Academy of Management Review, 22 (2): 177-202.

JARRATT, D. G., (1998) "A strategic classification of business alliances: a qualitative perspective built from a study of small and medium-sized enterprises", Qualitative Market Research: An International Journal, 1 (1): 39-49.

KANNAN, V.R., TAN, K. C. (2004) "Supplier alliances: differences in attitudes to supplier and quality management of adopters and non-adopters", Supply Chain Management: An International Journal, 9 (4): 279-286.

KNOKE, D. (2005) "Strategic alliances and models of collaboration", Management Decision, 43(1): 123-148.

LAMBERT, D. M., MARTHA C. C., JANUS D. P., (1998) "Supply Chain Management: Implementation Issues and Research Opportunities", The International Journal of Logistics Management, 9 (2): 1-19.

LIN, C.R., CHEN, H. S. (2004) "A fuzzy strategic alliance selection framework for supply chain partnering under limited evaluation resources", Computers in Industry, 55 (2): 159-179.

LORINCZ, J.A., (1985) "Job-One Is Being Done With Statistical Process Control", Purchasing World, September, 34-38.

MALONI, J.M., BENTON, W.C., (1997) "Supply Chain Partnership: Opportunities for operations research", European Journal of Operational Research, 101: 419-429.

MOCKLER, R.J. (2001), "Making decisions on enterprise-wide strategic alignment in multinational alliances", Management Decision, 39 (2): 90-98.

MONCZKA, R. M., PETERSEN, K. J., HANDFIELD, R. B., RAGATZ, G. L., (1998) "Success Factors in Strategic Supplier Alliances: The Buying Company Perspective", *Decision Sciences*, 29: 553-577.

MYHR, N., SPEKMAN, R.E. (2005) "Collaborative supply-chain partnerships built upon trust and electronically mediated exchange", *Journal of Business & Industrial Marketing*, 20 (4/5): 179-186.

PETT, T.L., DIBRELL, C. C. (2001) "A process model of global strategic alliance formation", *Business Process Management Journal*, 7 (4): 349-364.

QUELCH, J. (2008) "Marketing Your Way through a Recession", *Harvard Business Online*, Retrieved April 8, 2009 from <http://hbswk.hbs.edu/item/5878.html>

STUART, F. I., MCCUTCHEON, D. (1996) "Sustaining strategic supplier alliances", *International Journal of Operations & Production Management*, 16 (10): 5-22.

STUART, F., I., MCCUTCHEON, D.M., (2000) "The Manager's Guide to Supply Chain Management", *Business Horizons*, 43 (2): 35-44.

TEKINAY, A. N. (2004) "Nişanlılar artıyor- Alliances is increasing" *March, Capital, Istanbul*.

TSANG, W.K. (1998) "Motives for strategic alliance: A resource-based perspective", *Journal of Management*, 14 (3): 207-221.

UDELL, G. F. (2009) "Wall Street, Main Street, and a credit crunch: Thoughts on the current financial crisis", *Business Horizons*, 52: 117-125.

VYAS, N.M., SHELBURN, W.L., ROGERS, D.C. (1995) "An analysis of strategic alliances: forms, functions and framework", *Journal of Business & Industrial Marketing*, 10 (3): 47-60.