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CORUM

Executive Summary Economic Sectoral Review and Cluster Selection

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SME Networking Project

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Executive Summary

This report has been prepared as the economic and sectoral review of Corum to provide insight for selection of the sectors as well as the potential clusters to be worked with over the course of the Project.

Preparation of the report started with a desk research study where more than 20 publications and reports were reviewed about Corum. To understand current structure of the sectors and confirm the data received from the desk research, field research study has been completed and 18² interviews were hold with stakeholders and companies in Corum. Application of semi structured interviews benefited from Porter's Sector and Competitor Analysis Techniques.³

Corum is located centrally in the Black Sea Region. Its neighboring provinces are; Amasya to the east, Yozgat and Kırıkkale to the south, Sinop and Samsun to the north and Cankırı to the west. In accordance with its location, Corum provides a transit point between Black Sea and Central Anatolia Region in terms of landforms, climate and culture.

Corum in Numbers	
<i>Area</i>	12.796 km ²
<i>Population</i>	535.405 in 2010
<i>Employment</i>	13.871
<i>Development Performance</i>	46 th
<i>Value of Çorum's Exports</i>	113.954.000 USD in 2010
<i>Registered Trademarks</i>	876 (1995-2010)
<i>Registered Patents</i>	5 (1995-2010)
<i>Number of Companies¹</i>	3057
<i>Number of Manufacturers</i>	439

Corum has connections with other regions via high ways and two airports which are not in Corum. Ankara Esenboga and Merzifon airports connect Corum with its target markets. Lack of railway is one of the most important constraints and putting burden on logistics costs of companies.

Population of Corum is 535.405 which is below Turkey's average. Outbound migration levels are higher than inbound migration levels in Çorum with -25.699 net migrations between the years 2008 - 2010, which are mainly directed to Ankara and followed by Istanbul.

According to ISKUR, 13.871 people were officially registered as employed whereas 12.357 people were officially registered unemployed in Çorum⁴; and unemployment rate was 6,5% in 2010⁵. The rate of employees working in the industrial sector to total employment in Çorum is below Turkey average while the rate of employees working for the agriculture

¹ Registered to Corum Chamber of Commerce and Industry

² List of Stakeholders and Companies Interviewed

³ Michael E. Porter, Competitiveness Strategy Sector and Competitors Analysis Techniques, 1998

⁴ ISKUR. Provincial Employment and Vocational Education Board. Çorum Activity Report 2010.

⁵ TUIK. Statistics on Employment, Unemployment and Price.

sector to total employment is higher than Turkey average⁶. Employment in Corum mostly concentrated in textiles and machinery sectors. According to research study level of skilled labour is still quite low.

Economic Environment

Corum, working hard to develop in the Central Anatolia, transforming its agriculture-based economy into industry, improving the flour mills, tiles and brick production and dominating Turkey market, and offering performance in various industrial fields, is today a SME city. While port cities developed thanks to marine trade, Central Anatolian cities could not do the same. However, that began to change beginning from the second half of the 19th century, and outside influences changed the socio-economic situation of Anatolian cities, including Corum⁷.

Corum has been defined as one of the “New Industry Focus” by the Ministry of Development due to its improving assets such as local entrepreneurship, flexible production capabilities, high level of cooperation, trust and capacity to able to get organised.

Economic environment in Corum has been flourished upon presence of natural resources such as appropriate climate for wheat, barley and sugar beet production as well as good quality of clay in the region.

Çorum is very rich in the kinds of trades and industries. The foremost of them are earthwork, flour, feed, machinery, metal casting, egg, medical supplies, textile, automobile spare parts, furniture, paper, carton, package and ceramics.

About 3000 members registered to Corum Chamber of Trade and Industry is working in trade and services sector while 439 members plays important role in industry.

There are two organized industrial zones and they are Corum and Sungurlu OIZs (one of which is actively doing production). There are also 7 small industrial sites providing 1.500 jobs in Çorum⁸. [Corum Organized Industrial Zone](#) is not specialized on a certain manufacturing activity but its members activities span from machinery, food, plastic, forestry products, chemicals, ceramic, textile, furniture, metal industries and medical products. Most of the manufacturers are medium scale companies. OIZ provides jobs to 5400 people. Currently 77 companies are in operation.

⁶ State Planning Organisation (SPO), 2003. Çorum Province Development Performance

⁷ Informatory Document, Corum Informatory CD by CTSO, 2009

⁸ Yıldıztekin, Atilla. Aralık 2010. TR83 Logistic Master Plan.

Manufacturing industry has long been dominated by brick and tile production and flour mills and recently machinery and equipment manufacture. Developments in these sectors brought substantial level of specialisation and competence on food processing technologies as well as developing capabilities of mechanic systems in the region.

Leading Sectors

Machinery and equipments sector has a significant place in Çorum's industrial activities. The emergence of the sector goes back to 1960s with the aim of meeting the maintenance and reparation needs of flour and feed plants that drive the agricultural potential of the province. Production in this sub-sector became very successful not only in national markets but also in international markets.

The production of construction bricks and tiles are one of the most significant industrial and economical activities in Çorum. In 1950s, the sector was mainly based on the production of blend bricks. The manufacturing of bricks and tiles started in 1960s and became the second largest industrial sector of the province, following the mechanical manufacturing industry⁹. There are 11 bricks and 21 tiles factories in the province (2010) which constitute about 30% of total tiles production and 10% of total bricks production in Turkey.

Foreign Trade

According to TUIK data industry has been taken major weight in foreign trade of Corum. In 2009, 59,9 % of exports and 54,6 % of imports were done by industry while trading enterprises took 34,5 % of exports and 31,5 of imports.

The value of Çorum's exports were 113.954 (000USD) and the total number of exporting companies was 10310 in 2010, accounting for 0,10% of Turkey's total exports. The value of imports were 65.981, accounting for 0,04% of Turkey's imports.

Export volume of Corum is increasing every year. During the field study it is also observed that due to the proximity to target markets some of the manufacturing companies have their separate exporting companies in Istanbul where they manage their foreign trade activities where exports done through these companies could not be considered in given numbers.

Imports in Corum are mainly done by the industry which is followed by trade sector. Engines, pneumatic systems, valves are among the imported products.

⁹ Competitiveness Report, Çorum

¹⁰ ÇTSO, 2010

Technology and Innovation Development in Corum

In 2010, 129 (0.18% of Turkey total) trademark applications had been made to Turkish Patents Institute (TPI) from Çorum while 79 (0.24%) trademarks were officially recorded. The number of patent applications was 12 (0.37%) and the number of registered patents was 1(0.16%)¹¹.

- ❖ Compared to 2002 in 2010 trademark applications increased at 111 % and number increased from 69 to 129.
- ❖ Compared to 2002 patent applications increased at 500% from 2 to 12,
- ❖ Compared with 2002 industrial design applications increased 100% from 5 to 10.

Due to presence of strong industry, Corum showed significant shift in innovation and technology development. Field study reveals that awareness in manufacturing companies is high and innovation level will increase in upcoming years.

The University

Hitit University has been established in 2006 and consists of 6 faculties, 3 institutes and 3 application and research Science and Literature, Economics and Administrative Sciences, Theology, Engineering Faculty are among the faculties of Hitit¹².

Since Corum has developing industry presence of Faculty of Engineering is an important benefit however there is urgent need for establishing Faculty of Electronics to meet the needs of industry in terms of skilled labour and developing R&D capacity in the region.

Business Development Support in Corum

Middle Black Sea Regional Development Agency (OKA) has been established in 2009 with the aim of revealing the true potential and dynamics at the regional-local levels, ensuring their best planning and decreasing regional and local disparities. OKA's area of activities covers the provinces Samsun, Çorum, Amasya and Tokat. Main priorities of OKA are to improve direct foreign investments, employment and exports in the region as well as to improve the economical competitiveness of the region by supporting the production capacity of high value-added products.¹³ The total number of development agency applications from 4 provinces was 535 while 79 projects in total were awarded. 26 projects from Çorum were

¹¹ TSI Website. Trademarks and Patents Statistics.

¹² Hitit University, Activity Report 2010.

¹³ OKA, 2009 Faaliyet Raporu

qualified and Çorum ranked the first in terms of the number of qualified projects within the programme.

KOSGEB is a public institution which has been established in 1990 with the aim of improving the position of manufacturing industry enterprises in Turkish economy. In 2009, the target group of KOSGEB has been extended to services and trade sectors as well as manufacturing industry with an amendment to KOSGEB's establishment law. Number of companies benefited from KOSGEB funds has increased substantially from 2005 to 2011. While the number of companies was 56 in 2005, it has been doubled and was 128 in 2010.

Level of ownership and governance is quite high in Corum. Public and private representatives work together to develop the city. In Corum beside RDA and KOSGEB, Governorate and Municipality is also taking important role and supportive. Apart from all trade and industry Governorate gives special importance in development of tourism. Tourism should also be considered as promising business development sector for the future of Corum.

Business Support Organisations

Corum Chamber of Commerce and Industry was established in 1910. Since 1999, Corum Chamber of Commerce and Industry has undertaken to be the honorary representative of organizations such as the IGEME and National Productivity Centre, in order to serve its members better. The chamber carries a constant dialogue with the MPM (National Productivity Centre) with the aim of increasing the productivity of enterprises which are members of the chamber and providing the members with the necessary education and aid in development of the necessary conditions. The chamber is thus able to offer its members information and training services as required by the members or the current conditions.

European Business Centers in Turkey has been established by the EU funded project in 2009. The beneficiary was the TOBB and Chambers of Commerce and Industries with the aim of providing business development services and support to SMEs in order to improve their competitiveness, creating employment opportunities and as a result developing their position and contribution to the local and national economy. Çorum ABIGEM is established on November 2008 with the contribution of Çorum Chamber of Commerce and Trade (CTI); and was supported from EU for 18 months. Since March 2009, Çorum ABIGEM is providing services as a joint venture including stakeholders from both local and regional sides¹⁴.

¹⁴ Çorum ABIGEM, 2001. Activity Report 14.06.2011.

Existing Cluster Development Work

The first study regarding cluster development in Corum has been undertaken within the Development of a Cluster Policy in Turkey Project. According to the EU funded project,“ 10 clusters in 10 different provinces in the RCOP Region have been analyzed. Within 10 clusters, the cluster identified for Corum was “Machinery”. The Machinery cluster in Corum was considered to have a significant potential, however it was also emphasized that there is also significant room for improvement for cluster identity and awareness¹⁵. Apart from Machinery Analysis study there has not been other cluster development work undertaken in Corum.

Emerging Sectors and Potential Clusters

The research study indicated 4 strong emerging sectors and their primary sub-sectors in other words business clusters in Corum:

- ❖ **Agro-industry**
 - Food Processing Machinery Sub-Cluster
- ❖ **Mechatronics (Advanced Technology)**
 - Pneumatic and Lifting Systems Sub-Cluster
- ❖ **Innovative Roof Systems**
 - New Generation Roof Systems with Green Energy Sub-Cluster
- ❖ **Medical Supplies**
 - Surgery Supplies Sub-Cluster

Agro-Industry: Food Processing Sub-Cluster

Due to presence of high level of specialisation in flour mills and feeding factories machinery manufacturing sectors with their strong relations to supporting sectors such as metal casting, electronic and plastics, Corum has become an internationally known region with its knowledge and special production capabilities.



Development of food processing machinery and plants establishment brought worldwide known regional name however there will be a salutation in flour mill production sector and expertise in this sector can be adapted in other areas of

¹⁵Development of a Clustering PolicyforTurkey Project. Cluster Formation: Cluster Analysis in RCOP Provinces.

food processing industry. Corum can be the first destination in supplies of every kind of food processing machinery as well as the complete plant establishment knowledge.

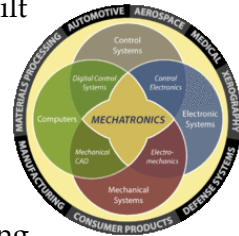
In Corum there are 25 companies working in flour mill machinery production and most of them are exporting their products to different countries of the world. Corum has known with its capacity of flour mills machinery production but promotion of the region with a visionary approach along with redefinition of the product as “food processing machinery” will not only increase the volume of exports but also increase the investment in the region thereby the level of technology use in the sector.

As stated earlier in this report Corum has important level of specialization on flourmills and feedmills machinery production. This expertise can be used in different areas of food processing sector such as food packaging, dairy and dairy processing machine and/or other related areas of agro-industry sector in consideration with increasing demands of sophisticated food processing machineries in the world markets.

Mechatronics: Pneumatic Systems Sub-Cluster

Mechatronics is an interdisciplinary area of engineering that combines mechanical and electrical engineering and computer science. A typical mechatronic system picks up signals from the environment, processes them to generate output signals, transforming them for example into forces, motions and actions.

The competence and strong momentum towards collaboration can built strong cluster initiative emerging into future cluster. It is essential to underline that there is presence of production capability however there is lack of electronics sector in Corum. One of the first actions to be taken can be establishment of a faculty of electronics or application and research centre to develop further complementary areas for developing mechatronics business in Corum.



Capacity of Corum and some of the target markets can be shown as below:

Sectors in Corum	Target Markets			
	Defence	Automotive	Medical	Aviation
Automotive spare parts	√	√		√
Lifting, Transporting and Pneumatic Systems	√	√	√	√
Other machinery, accessories and parts	√	√	√	√
Rolling mills, casting machinery, moulding	√	√	√	√
Food Processing Machinery (parts)	√			√
Plant Building	√	√	√	√
Medical			√	
Ceramics	√	√	√	√
Electronics	√	√	√	√

As a potential cluster mechatronics can meet the defense industry with the products of integrated *pneumatic systems*. Through improvement of electronics mechatronics cluster can provide advanced technology products to medical, automotive and aviation sectors.

Research study indicated that there is significant potential in machinery industry in Corum. Since it has variety of sub-sectors, in consideration with emerging markets and need for shifting to more added value products, having a start from advanced pneumatic systems can create a promising business area.

Innovative Roof Systems: Roof Systems with Green Energy

With the movement of more green and energy-efficient sensibility in building sector; building owners, contractors and design professionals are trying to sort out their options regarding to products that offer the strongest environmental benefits and promote better climate conditions for the future.

Sector players in Corum need to adapt new solutions for roofing technologies in order to survive in the market in the future. In terms of technological developments; photovoltaic roofing systems, systems that allow the production of energy on roofs or under roofing materials, green roofing systems, sophisticated roof windows, light chimneys can be counted as recent trends.

Research study indicated that tiles and brick manufacturing has been key drivers of Corum's economy. However developing technologies in the sector and presence of strong competitors in Turkey has changed the business environment especially the nature of the demand. Even if the manufacturing companies in Corum do not consider major decline in their sales trends and development in construction sector will put more pressure on manufacturers in terms of providing high quality products adoptable to environmental technologies. Tiles sector in Corum can survive couple of years without major problems but it is obvious that without producing added value products Corum cannot sustain its competitiveness and will lose its ground.

Medical Supplies: Surgery Supplies Sub-Cluster

Research study revealed that medical supplies sector is also emerging in Corum. There are four companies in Corum producing medical supplies and medical furniture to Turkey's health sector. Injection, hygienic gloves, catheters and surgery beds and chairs, dialysis chair are the products produced in Corum. Companies are either the only producers or among first three of Turkey's leading companies.

With increasing export shares medical supplies and equipment sector will gain an important role in development of Corum's economy.

In consideration with growing health sector and presence of strong and entrepreneurial companies is promising for Corum. When the current competences and improvements in the sector are reviewed surgery furniture (beds and chairs) and surgery supplies have innovative and technology based production in Corum.

Rationale

Over the course of the research study sectors in Corum were examined in consideration with following criteria and four potential sub-sectors were identified for further analysis;

- ❖ Potential to create employment opportunities for skilled labour
- ❖ Harness regional innovation assets for growth
- ❖ Role in region's development
- ❖ Change perception of the region
- ❖ Interrelationships with other potential target clusters in Turkey
- ❖ Level of specialisation and networking
- ❖ Contribution to national economic strategies
- ❖ Potential to attract investment

The potential sectors were determined as play in an extremely significant role in regional development in Corum. The study was built on objective analysis of region's realities and focused on future engines of growth where trade and export potential has been examined. Research reveals that target areas are offering opportunities for sustainable growth, can help region to establish regional identity and vision for future development, initiatives can be identified and aligned with target industry needs.

Target Cluster Decision Matrix summarizes the results of the research which is presented in this report. Based on the findings the report strongly recommends focusing project activities and competitiveness enhancement efforts on four target sub-sectors.

Target Cluster Decision Matrix

Potential Clusters	Agro-Industry	Mechatronics	Innovative Roof Systems	Medical Supplies
Economic Impact				
Growth of the Sector	√	√	√	√
Employment	√	√	√	√
Role in Regional Development	√	√	√	
Ability to meet 20-25% target by mid-2013	√	√		
Contribution to national goals and objectives	√	√		
Level of specialisation	√	√		√
Critical Mass of Companies	√	√		
Potential to attract investment	√	√		√
Demand				
Export potential markets	√	√		√
Presence of sophisticated home demand		√		√
Changes and trends in markets	√	√	√	√
Networking & Collaboration				
Regional Linkages	√	√		
Inter-regional Linkages		√		
Willingness to 'group'		√		√
Ability of local Stakeholders to support	√	√	√	√
Interrelated sectors		√		
Presence of implemented projects	√	√		
Factor Conditions				
Potential for Value-Chain improvements		√		√
Ability to innovate and follow market trends		√		√
Potential for Substantial Action Plan	√	√		
Employment of skilled labour	√	√		
Flexible production processes	√	√		√

Conclusion

The analysis shows four key areas in Corum where cluster development studies can create value and support manufacturers to expand their trade, export and gain dynamism to integrate their business to international value chains with a new vision and way of doing business.

As it has been stated earlier project can support all potential clusters within the execution period however starting with agro-industry special to machinery (production of feed and flour mills and food processing machinery) may provide project with the opportunity of realising early results of cluster development studies.

In two years time, project can create the most and biggest impact on Agro Industry Food Processing Machinery Cluster through;

- ❖ Establishing regional and inter-regional networks with relevant sectors and regions,
- ❖ SME Networking project can work with SMEs through a value chain analysis, benchmark with international buyers and define set of products and services for the industry,
- ❖ SME Networking Project can help manufacturers to access right information on targeted markets and provide trainings to SMEs on sales and marketing.
- ❖ SME Networking Project can provide technical assistance to prepare a cluster business plan/strategy.
- ❖ SME Networking Project can provide support of preparing cluster action plan and tool kit for further steps.
- ❖ SME Networking Project can help members to prepare project proposal to receive funds and have sustainable development.
- ❖ SME Networking project can review international best practices and can integrate a pilot module in Knowledge Management System of the Project.

The research study show that feed and flour mill machinery is the primary cluster for Corum followed by roof systems, mechatronics and medical supplies.

Local Advisory Committee Meeting was held on 8 September 2011 in order to invite views on the findings of the Economic review study. Most of the participants stated that findings are reflecting the current situation in Corum. Majority of participants agreed on reviewed areas. To start with agro industry (food processing) cluster received more support among participants. It must be considered that working on mechatronics is promising area in the middle and long term while medical supplies can be combined with Samsun.

