

THE CHALLENGES OF GSCM PRACTICES IN TURKISH MINING INDUSTRY: A REVIEW AND RESEARCH DIRECTION

Elif Nisa Sencan,

MsD Candidate, Shanghai University, Management School

ABSTRACT: *The concept of green issues has been around for couple of decades. Recently, it became more and more relevant and spread worldwide. As a result, Institutional and non-institutional pressure has risen on almost all industries, especially mining industries. In this context, the purpose of this paper is, firstly, to review the recent literature of Turkish GSCM practices (adoption and implementation of GSCM) and find out its challenges, basically in mining industry in Turkey and, secondly, to determine the research direction for evaluating and improving green mining implementations. A detailed literature review is done and sorted out according to findings and variables and the research direction is determined. It shows that the concept of GSCM and green mining entered to Turkey's border very recently and the damages caused by mining activities to the ecological environment are being ignored due to inadequate mining law, lack of knowledge and financial problems have got the attention of Turkish authors.*

KEYWORDS: *Green Mining, GSCM, Environmental Management.*

INTRODUCTION

Mining activities of human society can be dated till the Stone Age. Since then, minerals have been used to the development of human civilization. Mining industry brings good amount of wealth to the economies; however, mineral resources we use in our daily life cannot be found easily and are not extracted from the ground in a useable form (Ulusoy & Ayaşlıoğlu, 2012). Ore is an economical term for minerals and the definition of an ore is a material that occurs naturally and contains minerals that can be extracted for a profit. Searching for them, finding them, extracting them and processing them to make it into a usable form requires several technologically advanced steps (Mining and Mining Methods).

The economic growth, on the other hand, comes with the huge amount of consumption which is natural resources, in most cases. This huge consumption contributes to the environmental issues and resource depletion problems. Moreover, mining disasters can lead irremediable harm to the nature, environment and living creatures. That is why, the concept of green mining is significantly vital not only for the country itself but also internationally. In this regards, mining companies have to control a wide range of potentially serious environmental problems from acid mine drainage to tailings contamination or heavy metal overloading (Hilson & Nayee, 2002).

Recently, a lot of organizations and corporations adopting green business models as concern to environmental sustainability. As world is changing to greener production, in this paper, the author is focusing on adoption and implementation of green supply chain management, specifically in Turkish mining industry. Turkey is a developing country and in terms of economic minerals, Turkey has quite rich lands which is sitting on part of the Tethyan Metallogenic Belt (Lomas & Crompton Donnelly, 2018). Turkey has high potential with its vast amount of mineral resources. By converting its mineral resources to wealth, Turkey can easily uplift the economy

and restore prosperity of the people (Intravaia & Viana, 2016). As mentioned before, Turkey, with its government, with its scholars and with its mining companies, needs to focus on developing/adopting green mining concept for the sustainable development of the country.

BACKGROUND

GSCM

GSCM concept is getting popular day by day. There are many researches and studies have been conducted in this topic from general idea to specific industries.

The inspiration of greening the supply chain is started during the research on reverse logistics in 1990s (McKinnon, Browne, & Whiteing, 2012). In 1996, the research named ‘environmentally friendly manufacturing’ came out with the idea of green supply chain management in the Michigan State University (Wang & Luo, 2010). Afterwards, Van Hoek (1991) found out the relation between environmental-friendly logistics studies and the reverse logistics. In 2008, Hsu and Hu described GSCM as an approach that aims to improve performance of the processes and products considering the requirements of the environmental regulations (Hsu & Hu, 2008). According to Hervani et.al (2005), GSCM is in total of green purchasing, green manufacturing/materials management, green distribution/marketing and reverse logistics (Hervani, Helms, & Sarkis, 2005). Shortly, GSCM can be defined as traditional supply chain management applications together with environmental criteria (Gilbert, 2000).

GSCM concept was introduced in 1990s; however, it is a quite new concept especially for underdeveloped or developing countries like China, India, Turkey etc. For this reason, GSCM practices in these counties should be analyzed in order to see how it works in terms of utilities of GSCM in their main industries. In this study, the author focuses on mining industry in Turkey.

Mining Industry in Turkey

Turkey is a developing country with 80.8 million population and US\$849.5 billion GDP (IMF, data for 2017). Turkey’s geological location in terms of consisting economic minerals is quite important. Since being located on a key part of the Tethyan Metallogenic Belt, Turkey has a diverse array of minerals, such as lignite and boron fields, chrome, copper, nickel, magnesium, natural stones, industrial raw materials, rare earth elements and gold (Figure 1). Turkey’s mighty natural stones industry makes the half of the Turkey’s mineral export which is US\$5 billion. In addition, Turkey is the largest gold producer in Europe (Lomas & Crompton Donnelly, 2018).

In 2018, Turkey’s National Resources and Reserves Reporting Committee (UMREK) was accepted by the Committee for Mineral Reserves International Reporting Standards (CRIRSCO). This means that Turkey has got a stamp of approval of the international standards present in Turkey’s mining industry.

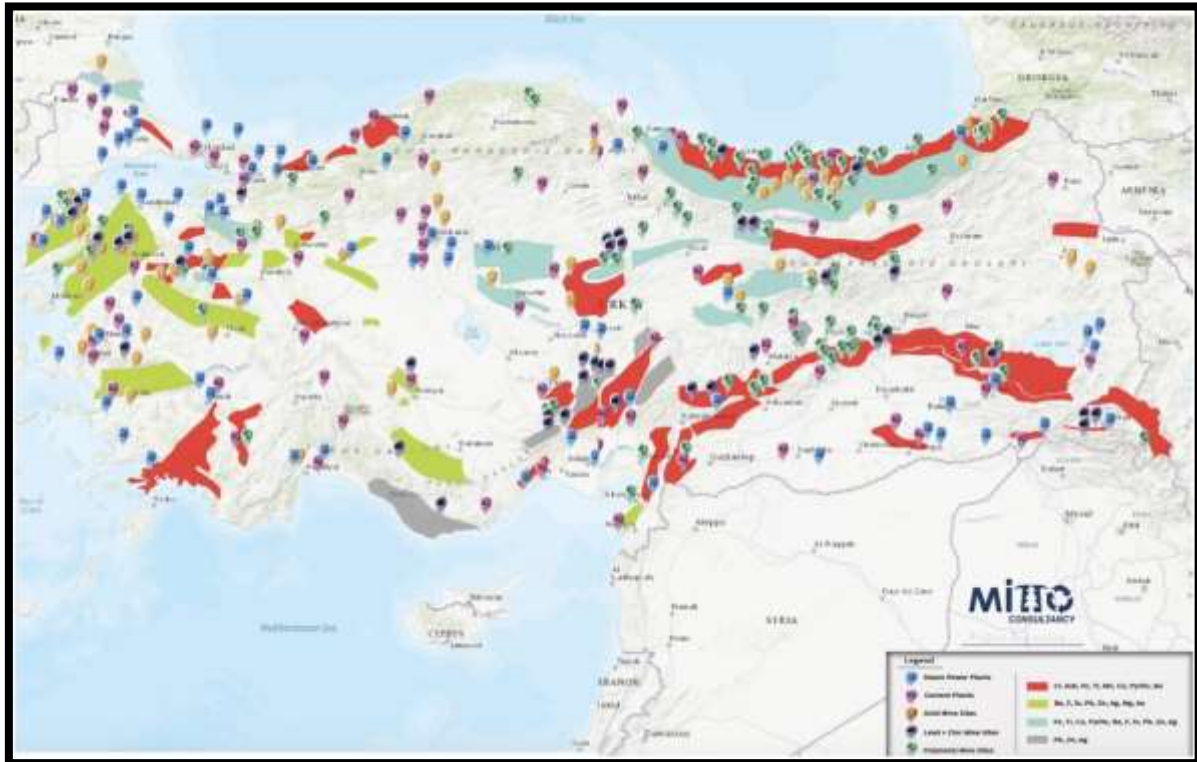


Figure 1: Turkey's map of mineral resources and locations (Darnall, Jolley, & Handfield, 2006)

REVIEW OF PREVIOUS STUDIES

The following part is the review of literature that contains previous studies about green supply chain management concept done by mainly Turkish scholars. These are summarized into three sections: the first part contains papers focusing on general theory of GSCM, the second part contains papers focusing on specific implementations of specific industries, and the third part contains papers focusing on GSCM in mining industry of Turkey. Tables are listed according to years and prepared according to findings and variables of the research.

Table 1 shows the previous studies of GSCM according to the general approach. Most researchers lay emphasis on managerial aspect of GSCM rather than manufacturing/ production aspect. Moreover, reverse logistics and sustainability are two important issue pointed out on the findings.

Table 1: Summary of the previous studies of GSCM in Turkey (Focusing on general theory of GSCM)

Year	Title/Author	Findings	Variables
2018	Supply Chain and Lean Supply Chain Akben, I., Gungor, A.	A well-designed and well-managed lean supply chain will help managers to see areas where their supply chain performance can be improved and intensify their attention and enable them to achieve higher levels of performance, thus increasing the likelihood of business success.	Traditional supply chain - lean supply chain: relationship patterns, time horizon, supply chain installation, supplier selection and evaluation, communication and information sharing, design and engineering activities, attitude towards quality, and problem solving etc.
2017	Green Supply Chain Management and An Application Kum, N.	-The green perception of the surveyed companies is not fully formed and the green practices are not sufficiently adopted.	1- Cost-cutting applications, 2- Lean logistics applications, 3- Environmental costs, 4- Cost of waste disposal, 5- Reverse logistics applications
2016	Green Supply Chain Management Practices' Effect on the Performance of Turkish Business Relationships Sabegh, M.H.Z., Öztürkolu, Y., Kim, T.	-The third party logistics service providers influence firms to have a proactive green behavior. -Logistics companies can get economic benefits by reducing the purchasing cost which can be reached by GSCM practice. -Business firms can accomplish the environmental performance by advancing their operational, economic performance and building a strong internal green practices.	Turkish business firms, their logistics providers and supply chain business firms: The influence of both external and internal parties on GSCM practices in business firms.

2016	A Discussion on Green Jobs and Employment Opportunities. Erden Özsoy, C.	-This study reveals the complexity of the definition of green works. -A common definition is needed so that everyone can agree on green jobs. -In this way, it will be possible to follow the developments in green business and employment in a more concrete way.	-Employment in environmental output production (direct employment in the production of environmental goods and services), -Employment in environmental processes (employment at each stage of the supply chain in the production of environmental goods and services), -Decent work (smooth jobs),
2015	Evaluating suppliers to include green supplier development programs via fuzzy c-means and VIKOR methods. Akman, G.	-The proposed methodology in this study is very effective and easy to deal with the supplier segmentation and evaluation problem. -The proposed methodology not only clusters the suppliers according to green criteria but also sequences suppliers and help managers to prepare a plan for GSDPS.	-Primarily: Performance criteria and green supplier evaluation criteria. -Secondarily: Criteria-delivery, quality, cost and service, and environmental/green criteria.
2012	Linking green supply chain management with environmental technologies and an application of technology selection Tosun, Ö., & Uysal, F.	-The pressures criterion has the most significant weight in the selection process. -Technical properties in physical criterion, installation costs in financial criterion and environmental issues in pressures criterion are the most important sub-criteria.	-Green supply chain management -Environmental technologies Criteria: Physical, Financial and Pressures
2010	CONCEPT OF SUSTAINABILITY AND SUSTAINABLE PRODUCTION STRATEGIES FOR BUSINESS PRACTICES Yavuz, A.	-Lean thinking has been the most common guiding principle of modern production management; -Lean and green approach appears to be the most prominent among the sustainable production strategies discussed in this study.	Nature capitalism, environmentally conscious strategies, clean production approach, green production approach, and lean and green approach.

2010	Green Supply Chain Management Applications in Turkey Akgül, A.K., Okşan, İ., Ömürdağ, Y.	-The firms operating in Turkey are not adequate for adopting GSCM applications. -Turkish manufacturers are still lacking the knowledge, experience and tools to effectively and efficiently improve their environmental performance from the adoption of these principles.	-Market expectations, -Regulatory compliance, -Business efficiency.
2008	A new approach to environmental management: The green supply chain Ergülen, A., Büyükkelik, A.	-The green procurement, green management, environmentally friendly packaging and transportation ensure the least damage to the environment during the entire life of the product they produce. -GSCM contributes to the sustainability of resources through reverse logistics activities such as reuse, re-production, recycling at the end of product life.	-Traditional supply chain management applications -Reverse supply chain management applications
2007	REVERSE LOGISTICS: IMPORTANCE AND WORLDWIDE APPLICATIONS Nakiboglu, G.	-Good reverse logistics practices can make a firm more competitive by reducing the (raw)material cost, diminishing the customer's risk when buying a product, the market response time, fulfilling social responsibilities and developing the 'greener image'. -Reverse logistics can minimize the threat of governmental regulations.	Operation of reverse logistics, causes and benefits to the corporations.

Table 2 shows previous studies of GSCM related specific industries in Turkey. There are 13 research paper found in the literature about GSCM in specific industries. These authors had narrowed down their research to specific industries so that they can deeply understand GSCM practices without comparing to other industries.

Table 2: Summary of the previous studies of GSCM in Turkey (Focusing on Specific Industries)

Year	Title/Author	Findings	Variables
2018	Green Supply Chain Applications: Aluminum Jonery Sector Izmir Example Atrek, B., Özdağoğlu, A.	-The green supply chain practices are not sufficient and should be progressed.	-Ecological efficiency (green purchasing, green manufacturing, green distribution/packing and reverse logistics)
2018	Effect of Green Supply Chain Applications on Operating Performance: An Empirical Analysis in Chemical Sector Günday, A. H.	-Green supply chain management activities (green procurement, eco-design, cooperation with customers, and recovery of investment) have a positive impact on business performance.	*Supply chain management (sustainable SCM- green SCM) *Performance (Environmental, operational, economical, organizational)
2018	A Proposal on a Multi-Period Mixed Integer Linear Programming Model for Biodiesel Fuels Supply Chain Network Design Ayvaz, B., Kuşakçı, A. O., Öztürk, F., Sırakaya, M.	-While the organization minimizes the transportation and distribution costs, it optimizes the environmental effects of all variables and minimizes delocalization and migration	-Second generation biodiesel supply chain -Multi-objective optimization
2017	Green Supply Chain Management and Business Performance at Green Hotels Akandere, G., Zerenler, M.	-Green supply chain management factors affect green supply chain management practices. -Green supply chain management factors affect business performance.	-Internal and external factors, -Green supply chain practices, -Business performance

2017	Green Economy and Practice in Food Industry Güneş, E., Keskin, B., Kıymaz, T.	-The high price of the products – “green products” and the lack of awareness about the subject are limiting the use of green products for the consumers. -The high initial investment costs of some of the green economy applications cause hesitations for the firms.	-Green economy concept in food industry (integration with agriculture, technological development, and consumer demands)
2016	A Research on the Relationship between Supply Chain Integration, Green Supply Chain Applications and Enterprise Performance Güzel, D., Demirdöğen, O.	-According to the study, it is seen that the logistic integration scale with the suppliers mostly consists of information sharing questions. -Cooperation with suppliers reduces the impact on the environment in environmental cooperation with suppliers.	1- Supply Chain Integration (Supplier integration, customer integration), 2- Applications of Green Supply Chain (Customers, suppliers), 3- Operational Performance
2016	APPLICATION CHAIN APPLICATIONS IN TURKISH AUTOMOTIVE SUPPLY INDUSTRY AND AN APPLICATION EXAMPLE Çapuk, K.	Benefits of the application: -'KANBAN': Optimum storage area, -Flexible production at small batches, -Good communication between production sites, -Pulling system and just-in-time philosophy, -Visual stock control.	*Green supply chain management (in terms of information sharing, avoiding waste of resources and waste of time)
2015	Corporate social Responsibility in Supply Chains Tekin, E. K., Ertürk, A., Tozan, H.	-Although the positive financial consequences of CSR applications are proposed in several studies, CSR introduces less quantifiable considerations relating to the natural environment and social issues.	- Practices (organizational, ethical, environmental) -Practices of human rights and working conditions, -Practices of occupational health and safety.

2014	<p>WASTE MANAGEMENT WITH GREEN SUPPLY CHAIN IN ELECTRICAL ELECTRONICS INDUSTRY</p> <p>Aksoy, H. M.</p>	<p>-The Waste Electrical and Electronic Equipment Directive of Turkey is functionally in force since May 2013; however, it is inferred from the obtained information that the responsible parts in the directive do not fulfil their tasks properly.</p> <p>-E-waste collection target of 4 kg/capita in 2018 set by Ministry of Environment and Urban Planning is not a proper amount in terms of sustainability when it is compared EU's new target of 20 kg/capita in 2019.</p>	<p>-The GSCM practices of electrical and electronic equipment manufacturers</p> <p>-E-waste management practices of both electrical and electronic equipment manufacturers and municipalities</p>
2013	<p>Environmental Perceptions of Small and Medium-Sized Enterprises and Buyer-Supplier Relations Impact on Environmental Applications</p> <p>Güner, S., & Coşkun, E.</p>	<p>-Small and medium-sized enterprises cannot benefit from some features that they do not have enough knowledge about environmentalism</p> <p>-The environmental sensitivity of the customers affects the environmental practices and supplier choices of the companies.</p>	<p>-Buyer-supplier relationships,</p> <p>-Environmentalism,</p> <p>-Supply chain management.</p>
2011	<p>A Fuzzy MCDM Approach to Evaluate Green Suppliers</p> <p>Çiftçi, G., & Büyüközkan, G.</p>	<p>-A good green supplier selection model in the competitive environment helping lessen the environmental and legal risks and increase the competitiveness of a firm.</p>	<p>There are four main variables: Product cost, product quality, service performance, environmental performance.</p>

2011	A model proposal for the vehicle routing problem in the green logistics chain Bolat, H. B., Bayraktar, D., Öztürk, M., Turan, N.	-Cost items are increasing for a firm that integrates green logistics practices into their processes. -The firms' desire to increase their profit margins and to minimize their costs shows that the need for longer time to take into account the green logistics practices as mentioned in the literature.	-Reducing the distance of the vehicle floor, -Choosing the vehicle which is less damage to the environment, -Reducing the number of used vehicle and -Increasing the security measures on the vehicle
2010	THE ROLE OF CUSTOMER CHOICES IN GREEN SUPPLY CHAIN MANAGEMENT: AN EMPIRICAL STUDY IN SAKARYA REGION Güner, S., & Coşkun, E.	-“pull” of market is more important than “push” of government, -Although customer pressure is stronger than government, “pull” of market is too weak and not enough to prompt supply chains to be green	-State pressure (regulations), -Consumer pressure (demands), -Environmental organizations, -Rivals, environmental awareness, -Supply chain members.

Table 3 shows the summary of previous studies of GSCM specifically in mining industry of Turkey. There are only five papers found in the literature related with GSCM in Turkish mining industry. Researchers aim is to comprehend the GSCM adoption and implementation in Turkish mining industry.

Table 3: Summary of the previous studies of GSCM in Turkey (Focusing on Mining Industry)

Year	Title/Author	Findings	Variables
2018	Mining Report Avşaroğlu, N.	-The scientific and systematic study are required by the Mining Law. -The multiplicity and complexity of the legislation is affecting mining. -The lack of emphasis on exploration and research and development studies, and the decreasing state support in recent years, financing problems, inadequate market research, the lack of a stable mining policy are one of the problems encountered in making our mines ready for operation.	-Mining regulations & policies (including environmental regulations) -Mining related industries in Turkey

2017	<p>THE FACTORS SUPPORTING THE "GREEN MINING" IMPLEMENTATION IN IRON ORE MINE SITES IN TURKEY</p> <p>Aslan, I.</p>	<p>-“Green mining” practices are not among the targets of firms; the sensitivity has increased in parallel with the statutory requirements and accordingly it is necessary to include practices in regulations in order to increase their proportion.</p> <p>-Consumer demands were found to be important in green mining practice, but the impact of competitors was low.</p> <p>-The vast majority of those surveyed has seemed to need government support.</p>	<p>*The "green mining" concept</p>
2012	<p>THE EFFECTS OF MINERAL EXTRACTION PROCESSES ON THE ENVIRONMENT</p> <p>Aydın, E.</p>	<p>-Mines and minerals, which are natural resources by mining enterprises, are brought to the economy for human well-being on the one hand and on the other hand, the major damage and damages to the ecological environment are often ignored.</p>	<p>-Mining Techniques, -Environmental effects of mining activities.</p>
2012	<p>Rehabilitation of Open-pit Mines and Reconstruction of the Nature: An Example Case of Şile-Avcıkoru Y. Ulusoy, Y., & Ayaşlıgil, T.</p>	<p>-Technologies that are compatible with the environment in production and consumption phases are not used.</p> <p>-The biological production potential of the degradation areas and the conservation and recovery of the landscape quality are neglected because they require cost and time.</p>	<p>-Nature repair and renovation, -Rehabilitation and degradation of degraded areas by mining activities.</p>
2007	<p>THE MINING INDUSTRY OF TURKEY Anaç, S., & Tamzok, N.</p>	<p>-Although Turkey has a very wide variety of minerals, the mineral wealth has only been partially explored and known reserves have been developed to the limited extent.</p>	<p>-Primary mineral production, -Mining legislation (including environmental regulations), -Privatization efforts in the sector</p>

Research direction

The concept of green supply chain management continues to be a significant research topic among the researchers. Especially in developing countries, there are inadequate number of studies to evaluate GSCM adoption and practices. Thus, the research direction, Figure 1, is should be focusing on more ISO 14001 certified firms since these firms are promising about the adoption of GSCM implementations. This approach is also compatible with the studies of Darnall et al. and Zhu et al. (Darnall, Jolley, & Handfield, 2006), (Zhu, Sarkis, Cordeiro, & Lai, 2008), (Seman, Zakuan, Jusoh, & Arif, 2012).

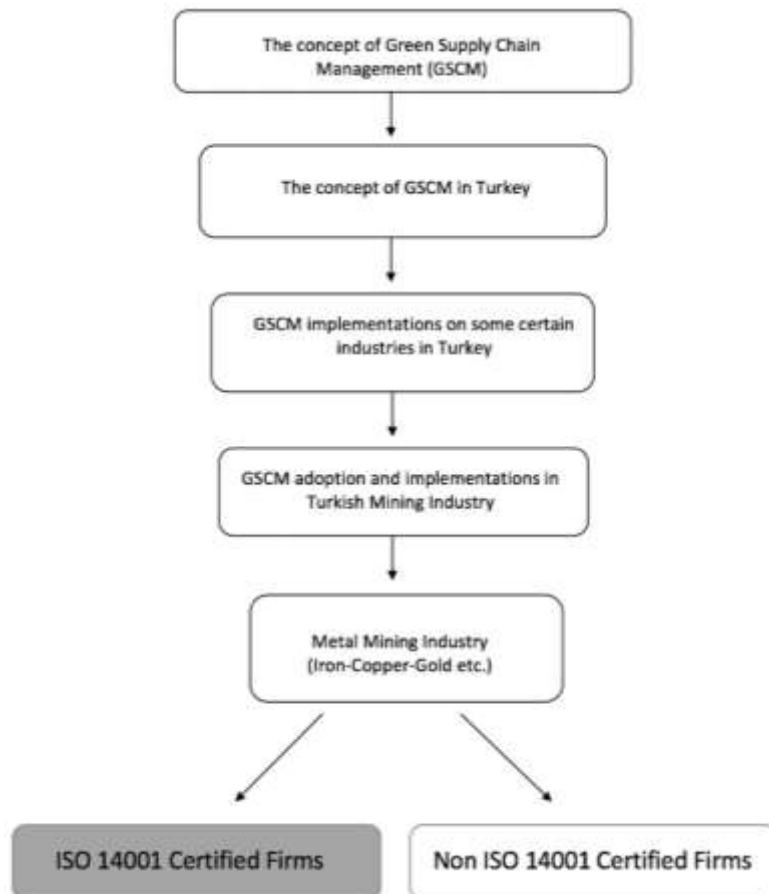


Figure 2: Research Direction Framework

CONCLUSION

The aim of this research is to discuss an overview of the development of GSCM literature and its adoption and implementation in Turkey, especially in mining industry. Although, there are some articles that discuss GSCM practices theoretically and practically, green concept is still very new for Turkey, similar with other developing countries (Seman, et.al., 2012). The study shows that the concept of GSCM and green mining entered to Turkey's border very recently and the damages caused by mining activities to the ecological environment are being ignored by the government and firms. The main challenges are inadequate mining law, lack of knowledge and financial problems that Turkish authors pointed out.

Considering the scarcity of surveys conducted in Turkey, it is thought that this study will contribute to the implementers in our country in terms of what level they are in the green supply

chain management and what should be done as next step. Further study is needed for better understanding towards GSCM practices and this study can be repeated in other fields, and revealing different applications, revealing the problems and deficiencies encountered, and comparing the results with foreign applications would contribute to the Turkish literature in future studies.

REFERENCES

- Çapuk, K. (2016, January). TÜRK OTOMOTİV YAN SANAYİNDE TEDARİK ZİNCİRİ UYGULAMALARI VE BİR ÜRETİM KANBANI ÖRNEĞİ . T. C. MALTEPE ÜNİVERSİTESİ SOSYAL BİLİMLER ENSTİTÜSÜ ULUSLARARASI TİCARET VE LOJİSTİK YÖNETİMİ ANABİLİM DALI. İstanbul.
- Çiftçi, G., & Büyükoçkan, G. (2011, April). A Fuzzy MCDM Approach to Evaluate Green Suppliers. *International Journal of Computational Intelligence Systems*, 4(5), 894-909.
- Öçlü, B. (2015). THE RELATIONSHIP BETWEEN GREEN SUPPLY CHAIN MANAGEMENT AND FIRM PERFORMANCE: A STUDY.
- Akandere, G., & Zerenler, M. (2017). Green Supply Chain Management and Business Performance at Green Hotels. *International Journal of Tourism and Social Research*(2), 77-98.
- Akman, G. (2015). Evaluating suppliers to include green supplier development programs via fuzzy c-means and VIKOR methods. *Computers & Industrial Engineering*(86), 69-82.
- Aksoy, H. M. (2014, May). GREEN SUPPLY CHAIN AND WASTE MANAGEMENT IN ELECTRICAL AND ELECTRONICS SECTOR .
- Anaç, S., & Tamzok, N. (2007). THE MINING INDUSTRY OF TURKEY. *2nd Balkan Mining Congress Book of Proceedings*, (pp. 37-43).
- Aslan, İ. (2017, January). THE FACTORS SUPPORTING THE "GREEN MINING" IMPLEMENTATION IN IRON ORE MINE SITES IN TURKEY.
- Atrek, B., & Özdağlıoğlu, A. (2014, June). Green Supply Chain Applications: Aluminium Jonery Sector Izmir Example . *Anadolu University Journal of Social Sciences*.
- Avsaroglu, N. (2018, 02 19). *Madencilik Raporu*. Retrieved from Research Gate: <https://www.researchgate.net/publication/323267958>
- Aydın, E. (2012, February). THE EFFECTS OF MINING PROCESSES TO THE ENVIRONMENT.
- Ayvaz, B., Kuşakçlı, A., Öztürk, F., & Sırakaya, M. (2018). A Proposal on a Multi-Period Mixed Integer Linear Programming Model for Biodiesel Fuels Supply Chain Network Design. *Uludağ Üniversitesi Mühendislik Fakültesi Dergisi*, 23(4).
- Bolat, H., Bayraktar, D., Öztürk, M., & Turan, N. (2011). A PROPOSAL MODEL FOR THE VEHICLE ROUTING PROBLEM IN THE GREEN LOGISTIC CHAIN. *XI. Üretim Araştırmaları Sempozyumu*.
- Darnall, N., Jolley, G., & Handfield, R. (2006). Environmental management systems and green supply chain management: complements for sustainability. *Business Strategy and the Environment*, DOI: 10.1002(bse.557.).
- Erden Özsoy, C. (2016). Yeşil İşler ve İstihdam Olanakları Üzerine Bir Tartışma. *Aksaray Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 8(1), pp. 51-59.
- Ergülen, A., & Büyükkelik, A. (2008). A New Approach In Environmental Management Green Supply Chain Management. Niğde, Turkey.
- Günday, A. (2018). Yeşil Tedarik Zinciri Uygulamalarının İşletme Performansı Üzerine Etkisi: Kimya Sektöründe Görgül Bir Analiz.

- Güneç, E., Keskin, B., & Kıymaz, T. (2014). Green Economy and Practise in Food Industry. *XI. Ulusal Tarım Ekonomisi Kongresi*.
- Güner, S., & Coşkun, E. (2010, November). THE ROLE OF CUSTOMER CHOICES IN GREEN SUPPLY CHAIN MANAGEMENT: AN EMPIRICAL STUDY IN SAKARYA REGION. *International Logistics and Supply Chain Congress*. İstanbul.
- Güner, S., & Coşkun, E. (2013, April). Environmental Perceptions of Small and Medium Sized Enterprises and the Effect of Buyer-Supplier Relationships on Environmental Initiatives. *EGE ACADEMIC REVIEW*, 13(2), 151-167.
- Güngör, A. (2018, July). SUPPLY CHAIN MANAGEMENT AND LEAN SUPPLY CHAIN. *Eurasian Journal of Researches in Social and Economics (EJRSE)*, 5(7), pp. 1-12.
- Güzel, D., & Demirdöğen, O. (2016). An Investigation on the Relationship Among Supply Chain Integration, Green Supply Chain Implementations and Business Performance. *Sosyal Bilimler Enstitüsü Dergisi - Karabük Üniversitesi*, 6(2).
- Gilbert, S. (2000). *Greening supply chain: Enhancing competitiveness through green productivity*. Asian Productivity Organization.
- Hervani, A. A., Helms, M. M., & Sarkis, J. (2005). Performance measurement for green supply chain management. *Benchmarking: An International Journal*, 12(4), pp. 330-353.
- Hilson, G., & Nayee, V. (2002). *Environmental management system implementation in the mining industry: a key to achieving cleaner production* (Vol. 64). International Journal of Mineral Processing.
- Hsu, C. W., & Hu, A. H. (2008). Green supply chain management in the electronics industry. *International Journal of Environmental Science & Technology*, 5(2), pp. 205-216.
- İmamoğlu, O., Akgül, A., & Ömürdağ, Y. (2010). Green supply chain management applications in Turkey. ResearchGate.
- İnce, M. (2009). YEŞİL TEDARİK ZİNCİRİ YAKLAŞIMI VE ÖRNEKLERİ.
- Kasap, G., & Peker, D. (2011). An Environmentalist Approach: Green Design. *Business and Economics Research Journal*, 2(2), pp. 101-116.
- Kum, N. (2017). YEŞİL TEDARİK ZİNCİRİ YÖNETİMİ VE BİR UYGULAMA. Edirne: Trakya Üniversitesi.
- Lomas, M., & Crompton Donnelly, S. (2018, Nov 20). *Turkey Mining 2018*. Retrieved from <https://www.gbreports.com/>: <https://www.gbreports.com/publication/turkey-mining-2018>
- McKinnon, A., Browne, M., & Whiteing, A. (2012). *Green Logistics: Improving the environmental sustainability of logistics*. Kogan Page Publishers.
- Mining and Mining Methods*. (n.d.). Retrieved 12 2018, from https://d32ogoqmya1dw8.cloudfront.net:https://d32ogoqmya1dw8.cloudfront.net/files/integrate/teaching_materials/mineral_resources/mining_methods_impact_reading.v13.pdf
- Nakıboğlu, G. (2007). THE IMPORTANCE AND CURRENT PRACTICES OF REVERSE LOGISTICS. *Gazi Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 9(2), pp. 181-196.
- Sabegh, M., Öztürkoğlu, Y., & Kim, T. (2016, February). Green Supply Chain Management Practices' Effect on the Performance of Turkish Business Relationships. *International Journal of Supply and Operations Management*, 2(4), pp. 982-1002.
- Seman, N., Zakuan, N., Jusoh, A., & Arif, M. (2012). Green supply chain management: A review and research direction. *International Journal of Managing Value and Supply Chains*, vol.3(1).
- Tekin, E., Ertürk, A., & Tozan, H. (2015). Corporate Social Responsibility in Supply Chains.

- Tosun, Ö., & Uysal, F. (2012). Linking Green supply chain management with environmental Technologies and an application of technology selection. *3rd International Symposium on Sustainable Development*. Sarajevo.
- Ulusoy, Y., & Ayaşlıoğlu, T. (2012). Açık Maden Ocaklarının Rehabilitasyonu ve Doğaya Yeniden Kazandırılmasının “Şile-Avcıkoru” Örneğinde İrdelenmesi. *Journal of the Faculty of Forestry*, 62(2), 21-36.
- Wang, M., & Luo, X. (2010). The study of Green Supply Chain Management: A case study of BYD, a Chinese car manufacturer. *Bachelor's Thesis in Industrial Management and Logistics*. Sweden: University of Gavle.
- Yavuz, A. (2010). CONCEPT OF SUSTAINABILITY AND SUSTAINABLE PRODUCTION STRATEGIES FOR BUSINESS PRACTICES. *Mustafa Kemal University Journal of Social Sciences Institute*, 7(14), pp. 63-86.
- Zhu, Q., Sarkis, J., Cordeiro, J., & Lai, K. (2008). Firm-level correlates of emergent green supply chain management practices in the Chinese context. *Omega*(36), 577-591.