Social network analysis is a fruitful approach to the study of relations and interaction between actors involved in organized crime. This dissertation utilizes network perspective to study several cases of organized criminal groups. It is divided into eight chapters. The first introductory chapter is followed by a chapter reviewing the most important network concepts, measures, and models, and their application in the study of organized crime. The four subsequent chapters are empirical studies. The third chapter is a case study of a political corruption network, known as the Rath affair. The study shows that the network consists of different, sometimes overlapping, relations (multiplexity), namely collaboration, resource transfer, and pre-existing ties. The network shows a clear core-periphery structure with politicians forming a dense core and businesspeople occupying periphery. The following chapter studies a case of counterfeit alcohol distribution network, known as the methanol affair. The network structure is composed of two subgroups bridged by one tie, permitting relatively efficient distribution of the beverages. Furthermore, statistical models point out the importance of triadic closure and pre-existing ties for the formation of ties in the network. The fifth chapter tests an influential theory in criminal networks research, the so-called efficiency/security trade-off. This theory predicts that profit-driven criminal networks are inclined towards efficiency reflected by the proliferation of ties, whereas ideology-driven criminal networks are inclined towards security reflected by the avoidance of redundant ties. This theory is tested on a sample of eleven profit- and nine ideology-driven networks, using whole network measures and statistical models. The results indicate that differences between the two types of networks are mostly small or contradictory to the theory. Moreover, both types of networks are brought about by the same set of mechanisms, namely triadic closure and the tendency against tie accumulation. The last of the empirical chapters is a study of two Dutch jihadi terrorist networks that were disrupted. The use of longitudinal data allows studying the effect of the disruption by law enforcement agencies as well as subsequent recovery of the networks. Whereas the first network, subjected to a large-scale disruption, is heavily damaged by the disruption with decreasing cohesion, the structure of the second network, subjected to only a small-scale disruption, is strengthened by more ties between actors afterwards. In both networks again, triadic closure is a prominent mechanism for tie formation. Moreover, both networks resemble a core-periphery structure after disruption. The seventh chapter is a methodological reflection on one of the most problematic issues in research on criminal networks - data collection. Six specific aspects of network data collection are reviewed in the context of criminal networks together with challenges and opportunities for research. Three potentially combinable techniques for data collection are proposed as a more complex solution for data collection in this domain, that is, biographies for data extraction, graph databases for data storage, and checklists for data reporting. The concluding chapter summarizes the research in the dissertation and provides directions for future research in terms of extending substantive research to other types of networks (e.g., corporate crime), theoretical developments inspired by analytical sociology, and development of specific models for the context criminal networks together with advancing data collection tools.