Chapter 7
The Adoption Process of Free & Open Source Software (FOSS) in Turkish Public Organizations

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EXECUTIVE SUMMARY

Free and open source software (FOSS) has been increasingly used both in public and private organizations in order to contain costs, increase software transparency and reliability, and information security, among other reasons. This article identifies and examines the arguments and actors, who have promoted and opposed the use of FOSS in the Turkish public sector. It also analyzes how these actors organize the processes of adoption and presents the discourses that they used to affect the open source-related policy decisions. The methods used e-mail questionnaires directed to IT experts in government, academia, private sector and the media, together with the archival analysis of related documents. It is found that FOSS enhances e-government implementations being relatively secure than proprietary software, low cost, participative, scalable and easy to manage. The article concludes with the evaluation of the current level of FOSS use in Turkish government agencies, an explanation of the process of adoption by presenting a process model of FOSS adoption in Turkey that may be applied in other similar countries and different frames of analysis that shape the adoption process. In this vein, the main aim is to link FOSS to the e-government processes and ultimate aim is to link this manuscript to the grass roots e-governance improvement literature.

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BACKGROUND

The use of "free and open source software" (FOSS) has become an important information and communication technology (ICT)[1] policy issue in the world during the last decade. It is increasingly used in government agencies to contain costs, increase software transparency and reliability, strengthening national information security, among other reasons. The FOSS topic at first sight seems to be a technical matter, but upon closer inspection, it is realized that it has very important social, economic and political ramifications of both national and global scale, and especially so for developing countries such as Turkey.

The process of FOSS adoption in Turkish government agencies can be better understood by a process model, which is developed by the authors based on the findings of this study. The process model of FOSS adoption, presented in Appendix 3, can be used to analyze FOSS adoption in government, not only in Turkey, but in other similar countries as well. The direction of interaction among actors are shown mostly by two-sided arrows representing the fact that the model can be used to explain both top-down and bottom-up approaches to FOSS adoption. In addition to national-level actors, international ICT vendor firms and international organizations such as the World Bank, IMF and OECD are also presented as influential actors in the adoption process.

This chapter relates three important concepts: "Free and open source software" (FOSS), public administration (government agencies, their administration, finance and personel; as well as their relationship with the political system), and e-government (the provision of government information and services via the use of information and communication technologies, ICTs). To this end, the chapter aims to explain the conditions, under which the public administration system of Turkey can adopt FOSS as a way to plan and implement its e-government processes and outcomes. Critical in this process are the expectations of government agencies from FOSS in terms of being relatively secure than proprietary software, low cost, participative, scalable and easy to manage.

SETTING THE STAGE

This chapter presents the arguments for and against the use of FOSS in Turkish government agencies. The main research questions that the article aims to answer are; (i) To what extent have FOSS been adopted in the Turkish public sector? b) What are the various barriers jeopardizing the adoption of FOSS in Turkish public service organizations? and c) What can be done to avert the existence of the barriers? In order to answer these questions, FOSS use in various government agencies ranging from national government ministries to major local government units (metropolitan municipalities), from universities to independent regulatory agencies (such as Turkish Radio and Television Supreme Council (RTUK)) is examined in detail. The study also presents the arguments/ discourses that the policy actors use so as to affect the FOSS-related policy decisions. The chapter concludes with proposing a different frame of analysis of decision-making with regard to FOSS use, along with a process model of FOSS adoption which is developed by the authors, and the discussion of possible policy implications of using or neglecting FOSS use in government for Turkey and developing countries elsewhere.

Adoption and implementation of FOSS in governmment agencies in very important as this operating system provides a technically secure and reliable, economically sound and easy to use technical backbone that helps the implementation/ management of individual e-government projects at the grass roots.