Building capacities for Policy Analytics in Public Administration

The digital era and the explosion of internet technologies has made available a wealth of new data (i.e. “big” and “open” data), while at the same time, an increase in computing power and advances in artificial intelligence (AI) have improved the ability of public sector organizations to analyze and use these data, thus providing ever new opportunities for policy-makers to support decision-making processes and increase the amount of information used. For example, governments around the world begin to apply algorithms and machine learning approaches to engage in predictive modeling and forecasting activities, whether in the context of health care, policing, or even the early detection of crises. Attracting the attention of researchers from various disciplines, such governmental applications have prompted a heated debate about the premises, risk and dangers of AI, such as ethical implications, transparency, or data protection issues, while less emphasis is put on the analytical capacities needed to exploit value of Big Data and how such capacities are built within government organizations. Though it is commonly acknowledged that governments need to establish certain capacities to cope with the manifold challenges of AI, theoretical approaches to AI capacity building remain fragmented and rather case specific.

The aim of this paper therefore is to provide a framework for analytical capacities that governments need to establish at the individual, organizational and wider system level in order to engage in and create value of Big Data. In doing so, it will bring together the literature on policy analytical capacities (PAC), Digital Era Governance (DEG) and Big Data in the public sector, thus sorting the fuzzy and often disordered literature on digitalization capacities. The framework presented in this paper also acknowledges the role of institutions in establishing such capacities, which, especially at the wider system level has not been paid attention to.