**The Economics of Software Process Maturity and Its Interaction with Perceived Organizational Support: A Holistic Case of the United Arab Emirates.**

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### ABSTRACT

The paper spans (a) the theoretical and practical aspects of both management decision making and support, (b) the importance of integrating the interfaces between IT process models (Capability Maturity Model Integrated - CMMI® in particular) and organisational support strategies, and (c) the complementarity of hard and soft systems. All three are particularly significant in the current era where the boundaries of corporate entities have become increasingly indefinite. Equity (and debt) and therefore ownership is dispersed globally: so coordinating management decision in Information Technology Offshoring (ITO) for example is becoming more and more complex.

Following the popular hard/soft distinction pioneered by Peters and Waterman (1982), if perceived organisational support (POS) which is primarily a soft system, is to be effective in the ITO, it must be integrated with process models such as CMMI®. The integration of people-centric strategies demands attention because of the changing socio-cultural setting; it is also challenging, sizable and significant (Chevers and Grant, 2017). However, we propose a solution. We synthesise our empirical work on people-centred strategies in the UAE, based on an analysis of Perceived Organisational Support (POS) with new data on the adoption of CMMI®. We use two sets of data (quantitative and qualitative), an analysis and a review of the most up-to-date scholarly work on CMMI® to produce a management model, POS- CMMI® (NCOSE, 1999).

The software industry is dominated by global giants and the offshore companies that supply them. Both compete aggressively; speed and quality of software delivery and speed of development are critical to the profitability and survival of both parties. CMMI® is the industry standard measure of performance. However, we argue that the extent to which employees feel that they are supported by their host companies is an important factor determining its success (Rhoades and Eisenberger, 2002; Aselage and Eisenberger, 2003).

We propose that theory of POS provides valuable insights into the problems of boosting the gains to both the industry giants and the software companies who supply them. In this paper, we focus on the UAE because it is a leading region for offshoring and outsourcing. We offer an empirical model as a method of integrating Perceived Organisational Support with CMMI® with particular reference to the role of the human interface between them.

Software companies in the UAE use CMMI® as one of their preferred processes to generate and deliver their IT deliverables (Naim and Dabash, 2015). As of today, CMMI® is viewed globally as a viable model to produce high-quality IT deliverables. Increasingly, the CMMI® model has become essential to meet and satisfy the rapidly changing needs of clients. Recent studies have indicated 50% of programming related work is performed after the implementation stage. Globally, the estimated cost of software maintenance remains 40-80% of the life cycle cost (Chevers and Grant, 2017).

The criticality of generating software value efficiencies is well documented in the literature, (Jorgenson and Wessner, 2006; Jones, 2014). Delivery organisations strive to achieve delivery maturity by adapting distinguished maturity practices, because, delivery maturity enables the software businesses to build, develop and retain competitive advantages. However, sustaining those advantages is only possible when the business organisations are prepared to use human involvement through POS to a sizeable level ([Goldblat,](https://search.proquest.com/indexinglinkhandler/sng/au/Goldblat,+Reuven/$N?accountid=173659)2013; Kumari, 2019; Evans, 2009).

Recent literature records widespread difficulties with implementing CMMI®; meeting budgeted time deadlines, ensuring the quality of existing products and at the same time developing distinct software applications (Alshehhi, 2011; Naim and Dabash, 2015). The effectiveness of implementation is a key issue for CMMI®. The implementation does not happen in a vacuum. Integration of the human interface becomes a necessity with CMMI®. We emphasise the need for integrating POS with CMMI®. POS is an active organisational practice, which prioritises human involvement and contributes to firms’ CMMI® strategy. We draw on literature that spans CMMI® practices worldwide (Aselage, and Eisenberger, 2003; Rhoades and Eisenberger, 2002; Naim and Dabash, 2015).

We add to the broad literature by adopting recent findings in a yet unpublished doctoral thesis by the first author. In addition to a review of the recent literature on CMMI® and POS, we draw upon 9 interviews collected from CMMI®-enabled information technology companies for empirical data analysis with distinctive results for UAE.

It is believed that the research will bring a significant understanding of developing a people- oriented process strategy aiming increased organisational outcomes.

**Key Words:** CMMI®, POS, people centric strategy and process maturity.

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