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Value Co-creation and Local Content Development: Transformation, Digitalization and Innovation in the Oil and Gas Industry

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Abstract. This study explains how the co-creation of value in networks can lead to technological upgrades in a local industry (local content development) through transformation of business processes, digitalization of drilling rigs and innovation in oil extraction in the oil and gas industry of Kazakhstan. Theoretical perspectives on local content development (LCD) are predominantly informed by economic and political perspectives. The aim of this paper is to develop a strategic perspective on LCD in clusters. This is qualitative research which uses a case study approach.

Keywords: Oil and gas industry · Value Co-creation
Local content development · Digitalization · Clusters

1 Introduction

The broad definition of local content policy (LCP) assumes that it is - “an industrial tool that can enable domestic producers to expand their activities, at least partially with domestic inputs, and gain access to international technological and managerial expertise... [in order to] enhance their competitiveness” [3, 4]. While literature on this topic is currently emerging, this research agenda is predominantly informed by economic and political perspectives, strategic perspectives are virtually absent [3]. This is in itself problematic, because the reason why LCPs may fail is that they are based on an insufficient understanding of stakeholders’ strategies and interests. This paper fills this gap in theory by embracing the role of LCPs in technological upgrade. Technological upgrade is defined as increased organizational performance and competitiveness as a result of improved technology capabilities.

2 Collaborative Approach to LCP

Shapiro and Rabinowitz [5] provided an explanation for cooperative approach to regulation in economics, suggesting that collaborative techniques have to be combined with punishment. A collaborative approach to LCPs that defines the expectations of the government, while providing the international oil companies with flexibility to develop

its own local content plans and procurement procedures can achieve greater results. The reason why companies collaborate is joint creation of value, or value co-creation. In the management literature, value co-creation is a paradigm that has emerged from the service management field, innovation management studies, and marketing and consumer research [1]. It states that organizations interact with each other for the development of new business opportunities. Purposeful interaction creates benefits – driving dialogue, learning, and resource transfer. Firms act as resource integrators, as specialization forces them to access existing knowledge, skills, competences, people, products, and available investment [2]. This interaction which technological platforms often mediate, leads to innovation, participation, and improved services [1]. Therefore, ICT technologies has effect on performance of local companies in the oil and gas cluster, a network of interconnected international and local companies, including small and medium enterprises, specialized suppliers, service providers, firms in related industries, associated institutions (universities, standard agencies, and trade associations), government and citizens that co-create value and develop local content through interactions and exchange of resources, technology and management skills with each other. The role of LCP is to support value co-creation in clusters. This can lead to the technological upgrade, i.e. organizational performance and competitiveness based on improved technology capabilities and further local content development.

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