

Model of Production with a Closed Life Cycle as a Basis for the Development of the Circular Economy in the Context of Digital Transformation

Maria Vetrova ^a, Dinara Ivanova ^b

^{ab} St.Petersburg State University, Saint-Petersburg, Russia

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ABSTRACT

On November 25-27, 2015, the UN General Assembly put forward 17 key sustainable development goals, one of which is Ensuring sustainable production and consumption patterns. Achieving this goal requires a review of the current dominant in many countries linear model of the economy based on the principle of “take, make, waste”, with the aim of converting production and consumption patterns into closed form, where all products and materials are developed with the possibility of recycling or reuse . The global trend of digitalization has led to the possibility of efficient formation of closed supply chains and today more and more attention is being drawn to the concept of a circular economy, which has a restorative nature based on the principle of “take, make, reuse” (Pakhomova N., Richter K., Vetrova M., 2017). The number of scientific papers and best practices in the application of circular business models has been steadily increasing in recent years. If in 2016 the number of publications related to the circular economy amounted to about 400, in 2018 the number of studies grew to 1000 (Ngan S., How B., Teng S. et al., 2019). Companies around the world are actively implementing the principles of the circular economy at all stages of value creation, striving to develop closed supply chains.

Keywords: circular economy, digital technology, decision-making model, closed supply chains