

The Prosumer

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In recent years, the concept of the prosumer has garnered extensive attention across various fields, including marketing, energy consumption, and innovation research. This attention is driven by the significant role prosumers play in developing more efficient, sustainable, and health-conscious market systems, propelled by advancements in social and technological domains. Broadly defined, a prosumer is an individual who acts as both a producer and a consumer. Originally coined by Toffler in the 1980s, the term describes individuals who blur the lines between producers and consumers by engaging in the creation of value for their own use or for others. Prosumers are seen as external partners who participate in co-creation processes with organizations, contributing to innovative outcomes and the production of the products and services they consume. The concept of the prosumer, individuals who simultaneously act as producers and consumers, has gained significant attention across various sectors. This entry explores the evolving role and impact of prosumers on sustainability, innovation, and market dynamics. A comprehensive literature review and empirical analysis were conducted to understand prosumer behavior and contributions. The findings reveal that the prosumers' roles range from significantly enhancing sustainability by generating renewable energy to promoting personalized education via teacher–prosumer models. They also drive technological advancements in fields such as 3D printing and cryptocurrency. The study concludes that prosumers have the potential to foster a more resilient and inclusive economy, although challenges such as regulatory barriers and technological dependencies must be addressed to fully leverage their contributions.

prosumer

role

energy

sharing economy

prosumer capitalism

In recent years, the role of prosumers has gained increasing attention within the energy industry and the digital economy. The term “prosumer”, coined by Alvin Toffler in his seminal work, *The Third Wave* (1980) ^[1], refers to individuals who blur the lines between producers and consumers by engaging in the production of goods and services for their own use or for shared use within a community. Prosumers are redefining traditional economic roles by integrating consumption with production activities to create value for themselves and others. The advent of digital technologies and platforms has facilitated this dual role, enabling user-generated content, collaborative innovation, and peer-to-peer (P2P) interactions ^[2].

The surge of online platforms and social media has amplified the influence of prosumers, allowing them to shape product development, marketing strategies, and service delivery ^[3]. The phenomenon of prosumption extends beyond the digital realm, reaching various sectors including energy, healthcare, education, fashion, art, 3D printing, Bitcoin mining, and agriculture. Advances in science and technology have propelled prosumers to contribute to the creation and dissemination of knowledge and resources ^{[4][5][6]}. This shift in consumption challenges traditional business models and necessitates a reevaluation of value creation processes, consumer behavior, and market dynamics ^[7].

A key area where prosumers play a significant role is the energy industry [6][8][9][10][11]. The integration of distributed generation technologies, such as solar photovoltaic systems and wind turbines, has enabled consumers to actively participate in energy production. Prosumers not only generate energy for their own use but also supply excess power to the grid, enhancing the resilience and sustainability of energy systems. In the education sector [12], the COVID-19 pandemic has granted students greater autonomy in choosing their learning content and becoming knowledge creators, fostering a teacher–prosumer dynamic that promotes more personalized and student-centered education. In the arts, digital technologies have blurred the boundaries between artists and viewers, leading to increased collaboration in the creation of artworks, including non-fungible tokens (NFTs). However, in the fashion industry, the development of prosumption is limited by socio-cultural and class systems [13][14]. Research on certain countries reveals that, in the realm of fashion prosumption, roles such as trendsetting and narrative construction are often exclusive to technologically and socially privileged end-users/prosumers, constrained by hierarchical structures. In traditional sectors such as agriculture and emerging fields like Bitcoin mining and 3D printing, prosumers also hold significant influence. In agriculture, prosumers motivated by personal satisfaction engage in self-production and consumption [15]. Bitcoin miners, as prosumers, are primarily driven by financial incentives to enhance network security and stability [16]. Meanwhile, in the 3D printing sector, consumers gain access to printers and materials to create personalized products, transitioning into prosumers and providing customized products to the community.

Given the impact of prosumers on societal development and their importance across various fields, scholars have begun to examine the evolution of prosumer capitalism within the framework of capitalist development. Prosumers contribute to innovation, value creation, and distributed flexibility, yet they also face challenges such as exploitation, knowledge disparities, and dependency on technology. Fully harnessing the potential of prosumers is crucial for promoting green, sustainable development and advancing societal and technological progress.

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