

Parcel Lockers in the Metropolis GZM: A Study of five largest companies in Poland*

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Abstract

The expansion of information and communication technologies has significantly contributed to the growth of e-commerce, with the global market value steadily increasing. A critical element of this ecosystem is the method of product delivery, which has diversified to include home delivery, pick-up points, in-store collection, and parcel lockers. Parcel lockers offer consumers the flexibility to retrieve purchases at their convenience, independent of store hours or home presence, making them an increasingly popular choice. In recent years, urban areas have seen rapid growth in the number of parcel lockers and the entry of new delivery service providers. This paper investigates the development of parcel lockers in the core cities of the Metropolis GZM. It addresses two main research questions: (1) How many parcel lockers are in these cities? (2) How has their number changed across three six-month intervals from October 2023 to October 2024? The study focuses on the five leading parcel locker operators in Poland, presenting data from October 2023, April 2024, and October 2024. Parcel locker density was recalculated per 1,000 inhabitants and per square kilometre, and skewness was also assessed to understand spatial distribution. Findings reveal that the most significant growth occurred between the first and second periods. All core cities experienced an increase in parcel lockers, alongside a shift toward a more balanced market among operators. While minor asymmetries in distribution were detected, the overall layout remains relatively even. This paper may serve as a foundation for further, in-depth research concerning the location of parcel lockers.

Keywords: e-commerce, parcel lockers, development of parcel lockers