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The use of bicycle messengers in the logistics chain, concepts further revised

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Abstract

The paper deals with the use of bicycle messengers, also called bike couriers, in the modern logistics chain. In an era where almost every actor - from policy makers to senior managers - is thinking about the environment and sustainability, new innovative concepts are developed worldwide. On the other hand, an abundance of solutions to improve efficiency and overall sustainability of logistics and other related business activities are already available in the market. Reinventing the wheel all over again might not be necessary. One of the methods to deliver parcels in a more sustainable way, is the transport of freight by bike. People on bike deliver and transport post, parcels or freight with a low volume or weight. Bike couriers are proven to be fast and reliable within congested urban areas. These bikers mainly advertised their ability to go fast from one place to another in a city. Sustainability was a selling argument, but speed was of more importance. Also, in Europe some bike courier markets are reasonably well developed. Specific markets seem to exist for transport of freight by bike.

The research question of this paper concerning bicycle messengers is whether these companies can be an economic viable alternative for fossil fuel powered transport, and if so, in what markets these opportunities can be found. The authors draw conclusions about the business model and integrate encountered weaknesses and opportunities. An operational cost calculation is included. A simulation of a round trip delivery scheme in an urban area took place. A van as well as a bike courier solution was compared. To draw some conclusions about the economic feasibility of the round trip by bike courier, the cost per stop is compared and will be discussed.

The paper ends with a conclusion on the observations made, and with a number of recommendations.

Keywords : Logistics; parcel freight; urban logistics; bicycle courier; cargo bike

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1. Introduction

Bicycle messengers - also known as bike couriers or cycle couriers - are picking up and delivering items by bicycle. These companies are most often found in the central business districts of metropolitan areas. Very likely, they work on a small scale, collecting packages and distribute them quickly throughout the city. The market exists, because of the advantages biking has in urban areas. Compared to, as can be called the conventional van- or truck transport, bikes do suffer less from road congestion problems. It can even be stated that the more urban areas face congestion, the more these have an advantage. Delivery times are to be shorter. Reliability can be offered as bike couriers, compared to the conventional transport, need a more stable period of time to do a certain trajectory which is regardless weather conditions, traffic jams, peak or off-peak times, strikes in public transport similar all year round.

Nowadays bike couriers are observed as transport companies delivering packages, letters, contracts, etc. Shippers are among others advertising agencies, law firms, administrations, etc., which create a time pressure to deliver fast. However, other products are transported by bike too. The distribution of lunches for instance is seen as a common practice.

This paper is looking at bike couriers from the viewpoint of logistics. As indicated, they are seen as transport companies of smaller packages and mail, mainly from A to B in one city centre. It has to be analysed whether bike messengers can be part of a broader logistics network, where transport from one part of the city to another part is a relatively small section. In terms of distance, this first- and last mile stretch is representing a smaller share of the mileage logistics companies are doing, but it is not necessarily neglectable as in terms of costs this first- and last mile is significantly important. Logistics networks are operating on a national, European and in most cases on a worldwide scale. Maybe the bike messengers' with their local focus are seriously in conflict with the modern logistics organisations whilst on the other hand they can become an important local partner for the very big logistics companies

As vans are polluting urban areas and furthermore losing an enormous amount of time and money in congested areas, the issue of the last mile is gaining importance. As such, a shared incentive for privately operating companies and governments (at a national and certainly at local level) can be seen to stimulate alternative transport concepts, ideas of city depots, the use of inland waterways to deliver in city centres, electrically-powered vehicles, shifting to night transport etc. are getting increasing attention. Local governments want to decrease the number of vans and trucks running around in city centres. [1][2]

According to Gevaers et al. (2009) [3], the last mile is, due to its very specific delivery needs, considered as the most expensive part of the supply chain. The last mile, described as the last stretch of a parcel delivery to the final consignee who has to take reception of the goods at home or at a cluster / collection point or at the office, accounts depending on several characteristics, for 13% up to 75% of the total supply chain costs. Related to these high costs are the many inefficiencies in the last mile and the poor environmental performance [3]. What is important in the parcel logistics is, besides the last mile, as well the first mile. Companies do pick up parcels and envelopes at mainly offices. The first mile is seen as the link between the senders location and the place where the shipment enters the logistics network (can be a depot or hub for example). Efficiency gains are possible.

The research question in this paper concerning bicycle messengers is whether these companies can be a viable alternative for fossil fuel powered transport. Economically viable is here interpreted as a full cost per stop when operating routes in an urban area.

To be able to answer this question, a literature review was held. Secondly, Belgian market players were listed. A market study was done. First contacts were made among others with the Belgian bike messenger company Pedal BXL. Subsequently, a meeting with a start-up player named Lunchbutler.be took place. This company will be elaborating a logistics (IT) platform to connect bike couriers and their customers much easier. As a result of both contacts, an open questionnaire was prepared and sent to all