



Proenvironmental travel behavior among office workers: A qualitative study of individual and organizational determinants [☆]



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ABSTRACT

An analysis of individual and organizational determinants of proenvironmental work-related travel behavior, and their interactions, is presented. Interviews and focus groups were conducted with office workers from four organizations in two Dutch provinces. Environmentally-relevant behavior related to commutes and business trips (i.e. travel frequency, travel mode, teleworking, and teleconferencing) was examined. Evidence from interorganizational comparisons suggests that organizational measures did not have uniform effects on employee behavior which was partially due to differences in attitude and personal income. The salience of social norms pertaining to work-related travel behavior also differed between organizations and organizational subpopulations. Differences in attitudes between employees, however, did correspond to some extent to organizational culture or focus differences at the organizational level. Finally, the results underscore the possibility that similar outcomes at the behavioral level might be the result of different underlying dynamics.

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1. Introduction

Recent modeling research suggests that behavior change needs to play a key role in containing or reducing energy use for transportation (Girod et al., 2013). Fossil fuel use is a main contributor to human-induced carbon dioxide emissions, which aggravate global climate change (IPCC, 2007). For these and other environmental and societal reasons, such as air pollution and traffic jams, promoting more sustainable and energy-efficient travel behavior is of substantial interest.

Although reviews of “soft” transport policy measures, which include behavioral change programs, indicate that these tend to be effective, the mechanisms underlying their effectiveness are under-researched (Cairns et al., 2008; Richter et al., 2010) and the reported magnitude of intervention effects vary greatly (Cairns et al., 2010). Moreover, most reported (non-peer-reviewed) intervention studies lack methodological rigor and are likely to show reporting bias (Moser and

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Bamberg, 2008). In other words, it is still unclear which soft policy measures are truly effective, and if effective, why this is so.

A recent meta-analysis of the psychological determinants of car use showed that social-cognitive variables – as derived from the Theory of Planned Behavior – and habit were good predictors of intention and behavior (Ajzen, 1991; Gardner and Abraham, 2008). However, less is known about how factors external to the individual, such as region and the type of organization at which one is employed, impact on these individual determinants of behavior.

Previous research on travel behavior has mostly examined travel mode choice for private or commuting purposes of individuals within a confined geographical region (Aarts and Dijksterhuis, 2000; Bamberg, 2006; Davidov, 2007; Handy et al., 2005; Van Vugt et al., 1996; Verplanken et al., 2008). Although some have studied residents from diverse geographical locations, regional differences were usually not examined (Steg, 2005; Thøgersen, 2006). A notable exception is Bamberg et al.'s study on public transportation use in two distinct urban areas which allowed for exploring the influence of regional contextual factors on psychosocial determinants (Bamberg et al., 2007).

Furthermore, little is known about the role of organizations because many commuting behavior studies almost exclusively focus on individual-level influences (Domarchi et al., 2008; Mann and Abraham, 2006). In fact, compared to household contexts and private individuals, few studies have examined (other) proenvironmental behavior in organizations at the individual, behavioral level of analysis (Abrahamse et al., 2005; Bamberg and Moser, 2007; Bansal and Gao, 2006). Previous research on organizations and the environment has mainly investigated the effects of external determinants and organizational characteristics on organizational engagement with environmental sustainability (Etzion, 2007). In a recent review, a systematic analysis of interactions between the individual employee and the organization was found to be lacking in empirical research (Lo et al., 2012b). This is in sharp contrast with the substantial proportion of soft policy measures that have been initiated through the workplace (Cairns et al., 2008; Kearney and De Young, 1995–1996). More behavioral travel research in workplace intervention contexts is needed to ensure a better application of theory in policy and practice.

Finally, the environmental impact of transportation is not confined to travel mode choice for commuting purposes. Within the organizational context, relatively little research has examined the determinants of other work-related travel behavior such as business trip frequency, and more sustainable behavioral alternatives to traveling like teleworking and teleconferencing (Aguilera, 2008; Kearney and De Young, 1995–1996; Moos et al., 2006; Toffel and Horvath, 2004). For instance, a review of telework research concluded that employees' motivations for teleworking remained unclear, and research on organizational level influences was called for (Bailey and Kurland, 2002). In order to maximize the effectiveness of organizational interventions, it can be insightful to study the whole array of work-related travel behaviors. One benefit of examining various behaviors in one study is that their relative potential for change can be compared while keeping organizational context constant.

The current paper aims to address the above-mentioned research gaps by analyzing individual and organizational determinants of work-related travel behavior among office workers in four organizations with different organizational foci from two distinct regions in the Netherlands. Where appropriate, we will further investigate interactions between the individual and the organizational influences. Topics of interest include commuting travel mode choice and frequency, national and international business trip travel mode choice and frequency, teleworking, and teleconferencing.

1.1. Individual determinants

Individual determinants are defined as determinants of a psychosocial nature that are relevant on the individual level. We chose to employ a framework – similar to the one used in Gardner and Abraham's (2008) meta-analysis – which only contained general theoretical concepts that are commonly used to explain a wide range of social behaviors. Research has not established the superiority of more domain-specific theories such as Stern's Value-Belief-Norm Theory (Kaiser et al., 2005; Stern et al., 1999). Thus, we have included social-cognitive variables (i.e. attitudes; subjective norms; self-efficacy) and habit in our framework for individual determinants:

“Attitudes” are an individual's overall evaluation of a behavior (Eagly and Chaiken, 1993). In the specific context of travel mode choice, it is important to note that attitudes towards behavioral alternatives may also significantly influence one's choice (Gardner and Abraham, 2010). Several subcomponents of attitudes can be distinguished. One distinction is that between instrumental and experiential aspects of attitudes (Fishbein and Ajzen, 2010). The former is connected to the outcome of a behavior while the latter is linked to the experience of engaging in a behavior. For certain categories of social behavior, it is also useful to emphasize the role of an individual's moral evaluation of a behavior. The moral component is often referred to as the “personal norm” or “moral norm” (Kaiser, 2006; Parker et al., 1995).

In contrast to attitudes, the influences of *other* people on the individual are reflected in “perceived norms”, which are defined as the perception of other people's evaluation of a behavior. A useful distinction is that between injunctive norms, which concern others' approval/disapproval of one's own behavior, and descriptive norms, which refer to others' behavior (Schultz et al., 2007).

Another social-cognitive component related to the individual in question is “self-efficacy”, which refers to a person's evaluation of whether one has the necessary resources, knowledge and/or skills to attain a goal (Bandura, 1997), or more narrowly conceived, to perform a behavior (Ajzen, 1991). Evidently, perceptions of control are linked to objective external circumstances. In the context of commuting behavior, for instance, it is clear that travel mode options are influenced by the individual's commuting distance and the regional infrastructural constraints.

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