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VALUING PUBLIC TRANSPORT CUSTOMER AMENITIES: INTERNATIONAL TRANSIT AGENCY PRACTICE

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INTRODUCTION

A diverse range of factors can affect the quality of public transport from the customer perspective. Typically, these elements are classified into ‘hard’ factors (e.g. mode, service frequency, right of way, operating hours, fares) and ‘soft’ factors (1). Soft factors are commonly referred to as ‘customer amenities’ and cover a range of ancillary improvements which are not directly related to operations or service quantity but can enhance the quality of the passenger experience (2). Examples of customer amenities include information provision, passenger facilities, station/stop quality and personal security measures. A classification of public transport customer amenities is provided in Figure 1.

FIGURE 1 Classification of public transport customer amenities (3).

Various studies have been undertaken to determine the value that public transport passengers place on different types of customer amenities (4-7), with selected values available in published guidelines (8; 9). However, there is a very limited understanding of current practice across transit agencies in the use of customer amenity valuations. A better understanding of current practice can help to establish the relative importance of customer amenity valuations for project appraisal purposes and to determine the extent to which customer amenities are considered across different types of public transport projects. Through benchmarking, it can also help to identify areas of advanced practice across agencies, which can then guide the choice of methods adopted elsewhere.

This paper aims to provide an overview of current practice across selected transit agencies in estimating and applying public transport customer amenity valuations. It is part of a wider research program exploring best practices in customer amenity valuation (3).

LITERATURE REVIEW

A review of the literature indicates that stated preference has been the dominant method used to estimate the value of public transport customer amenities, although customer ratings have also been relatively common (10). Other techniques include the priority evaluator method, revealed preference, and maximum difference (or best-worst) scaling. In some cases, multiple methods have been used to value customer amenities. For example, stated preference has been combined with customer ratings in some cases so that the relative importance of different amenities, as rated by customers, can be applied to willingness to pay estimates for overall vehicle and station/stop quality (11). Despite the advantages of using revealed preference for valuing customer amenities, where consumer behaviour is directly
observed, relatively few studies have adopted this method given the difficulty in controlling for external factors that may additionally influence the customer experience (6; 12).

A range of issues have been identified with the valuation of public transport customer amenities. A key issue relates to high levels of variability inherent in the values themselves which can make it difficult to transfer values from one service or city to another (13). Differences in values can arise through changes in socioeconomic characteristics such as age, gender and income, but can also be affected by trip purpose, frequency, length and time of day (1; 14). Other key issues include changes in customer expectations and the relevance of amenities over time which may affect the value ascribed to customer amenities as minimum standards increase and technology replaces some traditional forms of printed customer information (5). As noted by Robson (6), the quality of customer amenities may need to continually evolve and improve in order to stand still.

**METHOD**

In order to meet the aim of this research, a survey of selected transit agencies was undertaken during January – February 2018. The aim of the survey was to understand current practice across transit agencies in estimating and applying public transport customer amenity valuations. A total of 12 cities were targeted for the survey: Melbourne, Sydney, Brisbane, Perth, Auckland, London, Paris, Toronto, San Francisco, Vienna, Oslo and Singapore. Cities were selected which were generally comparable to Melbourne (where the authors and research funding body are located), although some diversity in contexts was also sought.

Following identification of the appropriate representative/team in each agency, a link to an online version of the survey was sent via email. Survey questions asked agency representatives about the extent to which customer amenities are included in public transport project appraisals, details of any valuation studies, and the use of published customer amenity valuations.

A response to the survey was received from all 12 cities, except San Francisco. While a number of agency representatives had been identified for San Francisco, a response could not be achieved for this city within the timeframe available for the survey. Where responses were provided for other cities, agency representatives often had to coordinate input to the survey from a number of others within their organisation, with this process typically taking a number of weeks.

**FINDINGS**

For the types of public transport projects that agencies had been involved with in the last 10 years, representatives were asked about the extent to which customer amenities are typically included in project appraisal. Table 2 details the results which reveal considerable variation in the extent to which customer amenities are included in the appraisal of given project types across cities.

Sydney, Brisbane and Auckland reported that they almost always (generally 80-100% of the time) include customer amenities in the appraisal of public transport projects. Melbourne, and to an extent Perth, stands out in contrast to these Australasian cities since they only do this 60-80% of the time for train/tram projects and 40-60% of the time for bus projects. London and Singapore include amenities in appraisals of new bus and train/metro stations and to an extent for bus/rail rolling stock. For London, this is done at lower levels for other public transport projects and is generally not considered in Singapore for other project types. Paris and Toronto do not typically include amenities in project appraisals; Paris never, and Toronto very rarely.

Representatives were also asked if their agency had ever been involved in making its own estimates of the value of public transport customer amenities in their city. As shown in Table 3, a total of 17 studies were reported across 7 out of the 11 cities, with Sydney and London reporting the largest number of studies (5 each). Most studies considered customer amenities for train/metro (15 studies) and to a lesser extent bus (13 studies) and tram/light rail (11 studies). Stated preference was the most common survey method (used in 11 out of 17 studies), with consultants/contractors undertaking the majority of valuations (12 out of 17 studies).
Representatives were asked if their agency uses any published sources of public transport customer amenity values. The results revealed that published sources are used in 7 of the 11 cities (Melbourne, Sydney, Perth, Auckland, London, Toronto and Singapore), including:

- **Australian Transport Assessment and Planning Guidelines (8):** used in Melbourne, Sydney & Perth
- **Business Case Development Manual (9; 15):** London, Toronto & Singapore
- **Economic Evaluation Manual (16):** Auckland
- **Guide to Project Evaluation (17):** Sydney
- **National Guidelines for Transport System Management in Australia (18):** Melb, Sydney & Perth
- **Passenger Demand Forecasting Handbook (19):** London
- **The demand for public transport: A practical guide (20):** Sydney
- **WebTAG Transport Analysis Guidance (21):** Sydney.

While agencies generally reported to using published sources specific to their country, it is noted that agencies located in Toronto and Singapore use customer amenity values from London (9) with Sydney adopting values from both the United Kingdom (20; 21) and Australia (8; 17; 18).
CONCLUSION

The aim of this paper was to provide an overview of current practice across selected transit agencies in estimating and applying public transport customer amenity valuations. A survey of transit agencies across 11 cities was undertaken to achieve this aim.

For train/metro and tram/light rail projects, the Australasian cities – Sydney, Brisbane, Auckland and to an extent Perth – generally all have widespread inclusion of customer amenities as part of project appraisals. Melbourne stands out relative to other Australasian cities as having customer amenities included less frequently in appraisals of train/tram projects. Australasian practice tends to include customer amenities more frequently in project appraisal than London, who tend to incorporate amenities in a smaller share of their appraisals. Paris, Toronto and Vienna, although they adopt advanced appraisals for some projects, rarely include customer amenities in these appraisals.

Information relating to 17 valuation studies was provided by agency representatives across 7 cities. Consultants/contractors undertook most of the valuation studies which may highlight the need to ensure that agencies have sufficient in-house skills and resources available for correctly interpreting and applying the outputs of such studies. Agency representatives in Auckland, Toronto, Perth and Vienna did not report any original local primary research studies valuing amenities in their city.

Published sources of customer amenity values are used by agencies in 7 out of the 11 cities. While agencies generally use sources specific to their country, Toronto and Singapore (and to some extent Sydney) use values from London. This finding may suggest a lack of customer amenity values available in these cities and that local valuation studies are needed to fill this gap.

While this research has provided an understanding of current practice across transit agencies in estimating and applying public transport customer amenity valuations, it is limited to practice in 11 cities only. Furthermore, while considerable effort was taken to ensure each survey response represented practice across each agency, the responses are limited to the information and knowledge available by those completing the survey. Nevertheless, this paper sheds important light on current practice in the field of public transport customer amenity valuation and helps to establish the current state of play in this area. Future research is needed to understand best practice in the field of public transport customer amenity valuation.

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REFERENCES


