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45



## **Rapid buses, rapid opinions.**

A frame analysis of the media coverage surrounding bus rapid transit (BRT) systems in Bogotá, Colombia and Jakarta, Indonesia

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## **ABSTRACT**

Bus rapid transit (BRT) systems are a popular form of urban transportation that can reduce congestion, are cost-efficient, can mitigate climate change via its high capacity busloads, and increase road efficiency (King, 2013; C40 Cities, 2016). However, the literature does little to evaluate those claims from a dialogue-based perspective, with subject-matter expert claims and policymaker testimonies acting as proxies. In response to this gap, this paper conducts a frame analysis of 150 news media articles from 2013-2015 covering two of the most popular BRT systems in operation: Bogotá's TransMilenio and Jakarta's TransJakarta. Using Entman's (1993) four-pronged approach, this paper unveils the existence of unintended negative risks to BRT systems, significant framing differences between domestic and international coverage, and the emergence of a broader sociological context within which BRT operates. The findings carry key consequences for policymakers, especially those based in urban spaces situated within developing country contexts. In the interest of finding a middle-ground between cost and transport efficiency, this paper highlights incentives for policymakers to understand and address emerging news media frames in the pursuit of successful BRT systems.

## **KEYWORDS**

Bus rapid transit (BRT), public transportation, frame analysis, urban development, policy

## 1. INTRODUCTION

The growth of bus rapid transit (BRT) systems in cities around the world is testament to what its backers claim are advantages of cost-efficiency, travel time cuts, carbon dioxide (CO<sub>2</sub>) and volatile organic compound (VOC) emissions reductions, and increased road safety, among others (Cervero, 1998 in Wheeler and Beatley, 2009; Wright, 2003 in Fjellstrom, 2003; Rodríguez and Targa, 2003; Kennedy et al., 2009; Wheeler and Beatley, 2009; Deng and Nelson, 2011; Cervero and Kang, 2011; King, 2013; C40 Cities, 2016). As momentum has grown and its benefits become clearer, today 167 cities have some form of BRT installed within their limits, whether as fragmented corridors or as complete systems (BRTData.org, 2018b).

TransMilenio, the BRT system installed in Bogotá, Colombia, and TransJakarta of Jakarta, Indonesia are two of the more matured, well-documented system operators in the world today (C40 Cities, 2011; C40 Cities, 2012). TransMilenio, which opened in late 2000, now ferries more than 2 million passengers per day on a 113km-long network: approximately 11% of the total BRT ridership in all of Latin America (BRTData.org, 2018a). TransJakarta, meanwhile, transports upwards of 370,000 passengers per day on a 207km-long network, which is the largest of any BRT system in the world (BRTData.org, 2018c). With similar population densities and similarly matured BRT systems, both cities are ideal for a comparative case study that investigates the extent to which the heralded advantages of BRT are reflected in both domestic and international news media reports.

Faced with contemporary challenges like congestion, cost constraints, and high population densities, policymakers in cities like Bogotá and Jakarta are faced with new problems that require innovative policy solutions like BRT (Wheeler and Beatley, 2009). Through BRT, lawmakers are directly influencing the institutions and cultures that their constituents experience within the urban realm, from both resource-based (e.g. via the provision of buses) and rhetorics-based (e.g. the way in which BRT is framed and advertised) perspectives (Hajer and Laws, 2006; Ingram et al., 2007). Participation in BRT for citizens of Bogotá and Jakarta, therefore, is affected by the rules put forward by local government, the way in which the systems are framed for potential users, user capacity and preferences, and their real-world experiences of the respective systems (Hajer and Laws, 2006; Ingram and Schneider, 2006; Ingram et al., 2007). Transmunicipal collaboration networks (TCNs) like the C40 Cities Climate Leadership Group (C40 Cities) have also emerged as key distributors of information frames regarding BRT systems on a global scale; they distill the technical jargon of system designers into results-driven policy options that lawmakers can comprehend (Román, 2010; Lee and Koski, 2014; Keil and Whitehead, 2015). As a result, existing policy solutions to urban congestion, cost constraints, and rising population density - like BRT - have become collaborative efforts, with local governments, system operators, and TCNs coming together to make the benefits of TransMilenio, TransJakarta, and other BRT systems more accessible and feasible for other cities around the world.

However, while TCNs like C40 Cities, their partner local governments, and BRT system suppliers are quick to tout the multifaceted benefits of high-capacity buses with dedicated rights-of-way,

I investigate the extent to which TransMilenio and TransJakarta have lived up to their expectations in the written discourse of their daily news media critics. As the news media can often employ a critical eye towards policy solutions like BRT systems, their reflections on the daily performance of TransMilenio and TransJakarta can shed light on an aspect of the extent to which policymakers can call BRT a success in both cities. To do so, I employ a frame analysis of 150 news media articles: 50 from broadsheet newspaper outlets in Bogotá, another 50 from broadsheet newspaper outlets in Jakarta, and another 50 from international outlets - all of which pertain to one or both of the BRT systems compared in this analysis. I examine distinctions in frames, if any, between bus rapid transit as-advertised and its reflections within news articles for the years 2013-2015, and draw conclusions that highlight the need for further review of BRT performance as a policy solution for congestion, cost-efficient transport, climate change mitigation, and increased road efficiency.

Schön and Rein (1994), Rein and Schön (1996), and Hajer and Laws (2006) suggest that the difference between status quo stability and change within a given policy domain is explained in part by the corresponding strength and stability of the public's perception of facts, values, and fiction. If the gap between these three nodes of knowledge vis-à-vis TransMilenio and TransJakarta is minimal, both local governments can remain relatively comfortable acting within the status quo. However, should the gap be deemed significantly large enough to an extent where the policy domain of urban transport - and more specifically, the use of BRT systems - in Bogotá and Jakarta could be challenged, then policymakers and their partner stakeholders ought to reflect on dissonance between the frames they present and those reported on by their news media counterparts.

## **2. THE NEED FOR BUS RAPID TRANSIT**

BRT, the form of transportation that features exclusive above-surface roadspace to buses that lets them operate similarly to train services but at reduced costs, have been and continue to be adopted into the urban development plans of cities around the world (Cervero, 1998 in Wheeler and Beatley, 2009; Wright, 2003 in Fjellstrom, 2003; Rodríguez and Targa, 2003; Kennedy et al., 2009; Wheeler and Beatley, 2009; Deng and Nelson, 2011; Cervero and Kang, 2011). According to the Institute for Transportation & Development Policy (ITDP)<sup>1</sup>, BRT corridors must feature five basic characteristics:

- A dedicated right-of-way that removes buses from the path of impeding traffic;
- Alignment of the busway with other traffic in order to minimize conflicts;
- Collection of fares off-board to reduce total travel time;
- Measures to increase bus speeds at intersections to further reduce total travel time, and

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<sup>1</sup> ITDP shares direct transport and planning expertise with local government representatives on a global scale. Its core program areas include climate and transport policy, cycling and walking, outreach and awareness, public transport, sustainable urban development, and traffic reduction.

- Platform-level boarding, where the bus floor and boarding platforms are level in order to increase efficiency, passenger safety, and comfort (ITDP, 2018).

BRT was developed as a direct response to congestion and the need for more efficient modes of transportation, particularly in densely populated areas that are characteristic of developing countries. Out of the 167 cities featuring BRT systems listed on the Global BRT Database<sup>2</sup>, 87, or roughly 50% of the total, are situated in countries with a GDP per capita below USD\$10,000.00 (BRTData.org, 2018). A further eleven of these cities are featured among the Global BRT Database's 20 most densely populated urban areas per square kilometer. While BRT systems also exist in key cities within developed countries, their uptake amongst their developing country counterparts continues to comprise a significant - and in some cases, growing - proportion of the global total (Cervero, 1998 in Wheeler and Beatley, 2009; Deng and Nelson, 2011; BRTData.org, 2018b).

Especially important for urban governments situated in developing countries is its perceived cost-effectiveness when compared to building subway systems underground; Wright (2003, in Fjellstrom, 2003) documents that BRT systems were installed at a cost ranging from USD\$1-5.3 million per kilometer, whereas train-dependent metro operations below surface-level cost anywhere between USD\$65-207 million per kilometer. At the intersection of traditional bus routes that are integrated into existing traffic roadways and their faster subway counterparts, BRT offers a feasible middle-ground between the two on the levels of both cost and efficiency. The attractiveness of BRT is further helped on by the reluctance of international financial organizations like the World Bank to initiate lending schemes for new metro projects due to their view of heavy rail systems as 'cost-ineffective' (Cervero, 1998 in Wheeler and Beatley, 2009). For capital-strapped local governments that are struggling to cover the costs of other basic needs for their constituents, BRT has become an especially attractive alternative for a public form of transport that has the potential to reduce costs and travel times simultaneously.

According to city planners and backers of the system, the objective of BRT - in the broader attempt to reduce growing congestion and travel times - was to move people, rather than the cars they drove, faster (Wright, 2003 in Fjellstrom, 2003). Speed is consistently among the principal benefits of BRT in the face of longer travel times given congestion and overuse of roads (Levinson et al., 2002; Wright, 2003 in Fjellstrom, 2003; King, 2013). With dedicated corridors and cleared pathways without the impediment of traffic, buses within a BRT system arrangement are able to depart from and arrive at their destinations in a much quicker fashion.

BRT has also come to represent a friendly face in the fight against climate change, as cities implement these systems in attempts to reduce CO<sub>2</sub> and VOC emissions (King, 2013; C40 Cities, 2016). With drastic reductions in the number of vehicle kilometers travelled (VKT) within cities by allowing up to 160 passengers at a single time depending on the size of the bus, the opportunity cost that would

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<sup>2</sup> BRTData.org is an actively-populated database of information on bus rapid transit systems worldwide hosted by the BRT+ Centre of Excellence and maintained in collaboration with its members, the Institute for Transportation & Development Policy (ITDP), and the World Resources Institute (WRI) Ross Center for Sustainable Cities.

have been otherwise imposed on emissions output is significantly reduced (King, 2013; C40 Cities, 2016). It is the high capacity of buses employed on BRT systems that drives the majority of emissions reduction, by foregoing the addition of other vehicles for citizens living in different districts of relatively large cities like Bogotá and Jakarta. And while buses have long been noted for their status as high-emitting vehicles relative to their more efficient counterparts on the road (Bond et al., 2004), their high capacity can negate those effects. King (2013) and C40 Cities (2016) also highlight the manufacture and uptake of newer-generation buses - including hybrid-fuel and hybrid-electric variants - as another key element of the emissions reduction advantages inherent in the adoption of BRT systems.

Road safety is also a key element of the BRT system infrastructure (Cervero, 1998 in Wheeler and Beatley, 2009; Wright, 2003 in Fjellstrom, 2003). Dedicated platforms, rights-of-way, and consistent average speeds are a boon for road safety amongst BRT passengers, who can benefit from a service whose public backing can be heavily influenced by its perceived safety.

## **2.1. On Selecting TransMilenio**

Labelled by Cervero (2013) as the “gold standard,” Bogotá’s TransMilenio is widely-heralded as one of the industry’s best examples of BRT implementation (Rodríguez and Targa, 2004; Hensher and Golob, 2008; Wheeler and Beatley, 2009). Wheeler and Beatley (2009) dub Bogotá a “city of innovation and inspiration” thanks to TransMilenio, where passenger travel times fell by as much as 33%, the number of accidents along its corridors came down by 84%, and facilitated Colombia’s ability to trade greenhouse gas emissions credits on global carbon markets thanks to savings achieved through BRT. Wright (2009) touts features that were palpable in the system’s early days: a 1% increase in public transit ridership within TransMilenio’s first full calendar year of operation (2001) with just two out of a planned 22 corridors, which remains significant in the face of declining ridership in many cities. Both Hensher and Golob (2008) and Wright (2009) highlight the system’s peak flow of 35,000 passengers per hour per direction, which they claim is comparable with heavy rail systems around the world and sets a new standard for BRT. 2013 data from BRTData.org indicates that peak flows have increased to top 48,000 passengers per hour per direction, which speaks further volumes of the system’s uptake among citizens (2018a). Given its wide critical acclaim across the BRT literature and among policymakers and their advisors, TransMilenio represents a system that continues to be studied in ample amounts from the supply-side, but remains relatively understudied from a demand-side perspective in which public opinion is more widely considered.

TransMilenio is also significant in terms of the role it plays both within the Colombian and the broader Latin American contexts. Serving a capital whose population density tips the scale at 3,347 people per square kilometer and situated within a country whose GDP per capita sits at USD\$5,806, TransMilenio ferries an impeccable 2.2 million passengers per day across 113km of dedicated corridors (BRTData.org, 2018a). Situated in the continental context, TransMilenio’s daily passenger load represents almost 11% of the Latin American total. With such intensive use in a densely-populated city



that is itself located among other densely-populated urban areas, TransMilenio faces ample opportunity for public scrutiny, especially under the eyes of an ever-critical press who, through their work, may shed light on aspects of the system that are seldom discussed within the existing literature.

Lastly, given TransMilenio's use as a model case study for students of urban development and prospective policymakers seeking cost-effective solutions to city-level congestion, the system stands as an ideal example for which media scrutiny can be investigated within a developing country context. Of the 42 countries on the BRTData.org list that feature cities with BRT systems, Colombia has the 11th-lowest GDP per capita (2018a). Bolstering the literature on BRT systems in developing country contexts - specifically in the field of frames used in news media portrayals - can help inform policymakers and researchers alike on further steps to take when considering BRT as a policy solution.

## **2.2. On Selecting TransJakarta**

Rising as an example of BRT implementation in times of increasing motorization and congestion, TransJakarta continues to gain momentum as a model - especially for neighboring cities in Asia (Deng and Nelson, 2011; C40 Cities, 2012; Cervero, 2013). Deng and Nelson (2011) report 2008 data showing peak flows of 3,200 passengers per hour per direction, with total ridership taking citizens away from their cars, motorcycles, and taxis. Since then, peak flow has increased to 3,600 passengers per hour per direction, and at 207km TransJakarta is the world's longest connected network of BRT corridors (BRTData.org, 2018c). Cervero (2013) notes that because BRT can be built in segments that don't require complete shutdown of roadways that will only intensify pre-existing congestion problems, TransJakarta was especially attractive for its host government as a solution that could be plausibly built in stages. Staging was not simply a convenience for mitigating congestion challenges during construction, but also provided cost cushioning as budgets were then impacted in corresponding stages. More than a traffic solution, TransJakarta represents a feasible and sustainable policy option for cash-strapped local governments - especially across the Asian continent - looking to ease urban congestion without breaking the bank.

Like its Colombian counterpart, TransJakarta's significance at the local level is amplified at the regional level, especially when compared to systems in other cities. Serving a metro area of 28 million people whose population density exceeds 3,800 people/km<sup>2</sup>, Jakarta itself is a booming megacity with key transport needs to ferry its citizens and visitors. With a GDP per capita of USD\$3,570 - more than USD\$2,000 lower than Colombia - Indonesians have an even greater need for cheap, yet efficient public transport (BRTData.org, 2018c). Jakarta comprises almost 13% of total BRT corridor kilometers and 4% of total ridership across the Asian continent. When controlling for China's massive BRT system investments totaling 672 kilometers across 20 cities, the Indonesian capital stands out for its single-city effort to curb congestion over time. As Deng and Nelson (2011), C40 Cities (2012) and Cervero (2013) highlight, TransJakarta's example is widely sought-after thanks to both its engineering ingenuity and its political feasibility as a policy solution to urban congestion.

In a similar vein to TransMilenio, TransJakarta is situated in a distinct developing country context. Comparing both systems under a unified frame analysis methodology could provide key insights for policymakers in similar contexts, and particularly for those in the process of or looking at building BRT corridors of their own. If revealed frames differ from the ones put forward by BRT supporters, then policymakers have great incentives to understand and adapt their systems in an effort to optimize them and preserve the favorability of BRT as a cost-efficient policy option.

### **3. THE NEED FOR FRAME ANALYSIS**

Much of the existing literature on BRT systems - including TransMilenio and TransJakarta - focus on their engineering aspects, and whether or not they follow through on stated promises of shorter travel times, decreased congestion, and improved environmental quality, among others (Cervero, 1998 in Wheeler and Beatley, 2009; Levinson et al., 2002; Hensher and Golob, 2008; Wheeler and Beatley, 2009; Deng and Nelson, 2011). TCNs and think tanks often present BRT in constructive ways for policymakers, offering guidebooks, sourcebooks, and general references which prospective cities can refer to for advice (Levinson et al., 2002; Wright, 2003 in Fjellstrom, 2003; Cervero, 2013; C40 Cities, 2016). Other branches of the BRT literature delve into system interactions with other aspects of urban planning and development, including land values (Cervero and Kang, 2011; Deng and Nelson, 2011) and transit-oriented development (Hensher and Golob, 2008; Deng and Nelson, 2011). Of notable omission is in-depth research on the news media's framing(s) of BRT systems, and whether or not such portrayals play a key role in furthering or hindering public support.

Frame analysis, according to authors who have written both seminal works and supporting research within the literature, focuses on the way in which language makes active and passive impacts on the consciences and actions of individuals and groups (Goffman, 1974; Snow et al., 1986; Entman, 1993; Hajer and Laws, 2006; Kuypers, 2010). Holding the assumption that the use of language is the "organizing framework" for which we can understand society, the way in which it is used is believed to have a direct effect on individual and group interpretations of real-world occurrences (Goffman, 1974; Hajer and Laws, 2006). As both Edelman (1993) and Entman (1993) argue, any perceivable phenomenon can be interpreted differently based on the characteristics that are displayed, repressed, and the way in which they are classified and described. Such interpretations, therefore, can lead to differing opinions amongst a variety of stakeholders across the policy domain within which a particular phenomenon exists. In this particular case, the phenomenon is a BRT system - conceptualized through TransMilenio and TransJakarta - that sits within the broader policy domain of sustainable urban transport, which on its own is a subset of sustainable urban development.

Schön and Rein (1994), Rein and Schön (1996), and Hajer and Laws (2006) make the critical suggestion that a policy domain's susceptibility to stability or change depends - in part - on the corresponding strength and stability of the causal constituency's perception of facts, values, and fiction. As the contextualization of bus rapid transit and its examples in Bogotá and Jakarta show, governments

that employ BRT systems and their partners in TCNs like C40 Cities have not been shy in unveiling the potential benefits that BRT can bring to a city and its citizens. Rhetoric of their kind is a clear attempt to persuade readers that their policy solution (BRT) to policy problems (congestion and long travel times, among other) is better than either the status quo or any other potential solution proffered (Kuypers and King, 2005; Kuypers, 2010). Benefits are often touted to as full an extent as possible on government press releases and distribution materials; shortcomings and critiques, however, are often left to the news media, everyday users, and academia. As Kuypers (2010) goes on to point out, criticism is done in the interest of promoting “greater appreciation and understanding” (p. 290). This reasoning in itself may be framed in a way that some may take more positively than the traditional connotation of ‘criticism’, but it is accurate insofar as the news media concerned. As news writers, they attempt to shed light on what isn’t already being advertised; in this case, these are characteristics of BRT systems that governments and TCNs do not tout in their reports, policy briefs, and press releases. While the opinions and rhetoric of everyday users and academia are not to be taken lightly, this paper focuses expressly on the frames presented by the news media in Colombia, Indonesia, and the international level.

User exposure to news media articles - both in print and online - continues to influence the perceptions of phenomena in the real world. For reference, Colombia’s *El Tiempo* remains the nation's largest newspaper with 980,000 print readers on a daily basis and more than 10 million unique visitors on its website per month (Innovation Media Consulting, 2016). It also retains the largest Twitter following across Latin America with 6.43 million followers, which speaks further volumes of its potential reach and influence on readers (Martinez, 2015). Indonesia, meanwhile, is home to daily newspaper *Kompas*, which sees a daily circulation of 530,000 copies in print (Miles33.com, 2013); its corresponding Twitter following exceeds 7 million users (Twitter, 2018). Given such figures for two publications alone, readership and visibility - should news articles regarding TransMilenio or TransJakarta appear on some of the largest daily newspapers and online news sources in Colombia, Indonesia, and abroad - are not an issue insofar as potential for reader influence is concerned. And regardless of a news media outlet’s claim to be impartial or not, both the conscious and subconscious choices made in the editing process can prove influential to individuals reading articles, especially if such behavior is repeated over time (Entman, 1993; Kuypers, 2010). The consequences, therefore, are critical: through their large print- and online-based followings, news media outlets have a near-unparalleled forum through which their rhetoric could - consciously or subconsciously - impact their readers’ perceptions of BRT systems in Bogotá and Jakarta in a manner that is significantly different from the image drawn-up by government- and TCN-based proponents of systems like TransMilenio and TransJakarta.

While the literature on frame analysis and its application in social movement contexts is vast and growing, it is not without its critics. Oliver and Johnston (2000), for example, critique the frame analysis method as one that fails to capture the complexity embedded in the thought processes underlying social movements. Ideology, they claim, is far more profound and complex than the surface-

level frames that researchers have come to analyze and present as critical to the social movements discourse. According to them, a more multifaceted approach to ideologies across a given population and its corresponding exposure to information, culture, and other potential intervening variables should be considered alongside the frame analysis approach. While frames are important, Oliver and Johnston call for a separation of frames from ideologies in order to better distinguish between characteristics of a given phenomenon that are being ‘opposed’, and those which are deeply-held beliefs among a set of actors.

Benford (1997) highlights that framing itself has seldom been criticized, and that the terms ‘framing’, ‘frame analysis’, and ‘frames’ have turned into clichés. While recognizing the pivotal role that frames play in advancing research on the understanding of social movements, he notes that a “systematic neglect” of empirical efforts, descriptive biases, and static tendencies - among others - all play a role in undermining the frame analysis method. For example, Benford takes the time to list out a page full of different frames that have been studied or uncovered in the literature up until his time of writing (1997, p. 414-415). In doing so, he points out that while frames can and should play a role in the social movements literature, frames have thus far shown more ‘description’ than ‘analysis’; hence the claim that frames have become a cliché.

Both Oliver and Johnston (2000) and Benford (1997) make valid critiques of frame analysis from conceptual and methodological perspectives, respectively. This paper, while not infallible from weakness and critique, addresses some of their concerns in key ways. First, while Oliver and Johnston (2000) appeal for a more nuanced analysis of ideologies rather than frames, I make no claims of comprehending underlying ideologies and their corresponding complexities unless explicitly stated. The analysis of news media pieces on TransMilenio and TransJakarta is exclusively placed under a framing perspective, intended to inform the literature on BRT system perceptions and, with enough luck, help provide a platform upon which further research can be undertaken. This further research can then include a more complex analysis of ideologies, or at least a subset thereof, which would begin the process of rectifying what Oliver and Johnston (2000) see as a clear gap in the social movements literature. Second, I address Benford’s (1997) critiques by once again placing this study firmly within a frame analysis literature that complements the adjacent empirical studies on social movements, especially those concerning BRT systems. While this paper will indeed be largely descriptive, I delve into an analysis of several news media articles to investigate the way in which BRT systems in both Bogotá and Jakarta are portrayed in an attempt breadth. Depth will be achieved, in part, by the particular methodology I employ under Entman’s (1993) four-pronged approach, which is explained in further detail below. Moreover, providing a descriptive study is not inherently detrimental to the frame analysis literature; it helps form the basis upon which further study and in-depth can be performed. In sum, this paper makes no presumptuous claims about the ideologies of potential causal actors in the BRT systems debate; uses frame analysis in a way that properly identifies the nature and objectives of rhetoric according to the

Entman (1993) approach; and helps provide the descriptive, news media-based foundation for further analytical research in the future.

#### **4. HYPOTHESES AND METHODOLOGY**

To what extent do news media articles at both the domestic and international levels reflect the frames presented by governments and TCNs who endorse the implementation of BRT systems as a policy solution to congestion, the need for cost-efficient transport, climate change mitigation, and road efficiency? This is the research question that this paper sets out to answer through a frame analysis of a total of 150 news media articles: 50 from broadsheet newspaper outlets in Bogotá, another 50 from broadsheet newspaper outlets in Jakarta, and another 50 from international outlets of varied kinds, ranging from radio stations to weekly magazines and broadsheet daily newspapers. The unit of analysis within this paper, following the lead of Matthes and Kohring (2008) and Matthes (2007), is the article. Having selected TransMilenio and TransJakarta as my compared cases, I examine articles from some of the largest news media publications in both Colombia and Indonesia, as well as notable international outlets who have all provided commentary on at least one aspect of the BRT systems in both capital cities - all of which have been authored between the years 2013-2015, inclusive. Opinion and editorial pieces may be included in the list of articles<sup>3</sup>. The 50 articles from local news sources and the 25 internationally-sourced articles on TransMilenio are sourced using the Google News function, with the time and date tool set to scan for pieces published between 01 January 2013 and 31 December 2015. The remaining 25 articles, which cover TransJakarta from the international media, are sourced from the *LexisNexis* academic database thanks to a shortage of results in the aforementioned Google News search. In answering the research question, I employ Entman's (1993) four-pronged approach to frame analysis to distinguish any distinctions in frames between the reports and news media articles - if any - and shed light on conclusions that focus on the need for further review of BRT performance as a policy solution for the stated problems of congestion, the need for cost-efficient transport, climate change mitigation, and road efficiency.

TCNs like C40 Cities (2016) present BRT systems as all-in-one solutions to the four problems stated above, each of which are defined and operationalized in specific ways. Congestion is defined as the state wherein the number of vehicles on a given roadway exceed its optimal carrying capacity; that is, when adding one more vehicle on the road does not significantly compromise the amount of space taken up by all other vehicles. The need for cost-efficient transport is embodied by the gulf in differences between traditional bus transport and the use of heavy rail; the former costs less but could remain inefficient at transporting people quickly from point A to point B, while the latter offers a much quicker transport option but at a much higher price (Wright, 2003 in Fjellstrom, 2003). Climate change

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<sup>3</sup> In their study, Matthes and Kohring (2008) do not analyze opinion pieces. I include those pieces in this paper because, despite not being subject to the same nature of editing as other, supposedly more 'multi-sided' pieces in the news sections of broadsheet newspapers, opinion pieces are nonetheless widely read by readers and may also contribute to the shaping of public opinion.

mitigation is operationalized directly through carbon emissions and VOC emissions saved given the number of vehicles foregone as more citizens utilize public transport. The need for road efficiency, meanwhile, is a combination of different characteristics that contribute to faster, safer, and people-friendly roads. These characteristics include the minimization of accidents, injuries, and/or deaths, shorter travel times for BRT buses within their allotted corridors, adequate responses to local rush hour times where the supply of buses can meet passenger demand, and shorter ‘dwell’ times: the amount of time taken between the moment when passengers arrive on the boarding platform, and when they board a bus. Each of the four posed problems presents a unique challenge which, according to proponents like C40 Cities (2016) and Wright (2003 in Fjellstrom, 2003), is tackled at least in part through the installation and operation of BRT systems like TransMilenio and TransJakarta. Matthes and Kohring (2008) and David et al. (2011) explicitly list out each individual frame characteristic and frame before creating their own clusters of frames set-up for analysis. In this paper, I create the clusters of frame characteristics and larger frames during the data analysis process, using the categories, topics, and themes outlined in this paragraph.

With the research question and accompanying conceptualizations in mind, I put forward the following two hypotheses of the paper:

*H<sup>1</sup>: The frames presented by news media articles at the domestic level differ significantly from those inherent in the supporting documents authored by governments and transmunicipal collaboration networks that espouse BRT as a policy solution.*

*H<sup>2</sup>: Compared to domestic coverage, the frames presented by news media articles at the international level are more consistent with those inherent in the supporting documents authored by governments and transmunicipal collaboration networks that espouse BRT as a policy solution.*

The most notable characteristic within this paper’s hypotheses is present in the expected difference in framing between domestic and international news media outlets. Here, in the interest of bringing the ‘bigger picture’ to light and shedding more information in a holistic manner (Kuypers, 2010), I predict that local news media in cities that already have functioning BRT systems (e.g. Bogotá and Jakarta) will be more critical of those systems in an attempt to highlight areas for improvement. Conversely, and following Kuypers (2010), I predict that international news media, in the interest of proffering plausible solutions to urban development challenges like congestion, long travel times, and climate change, will portray frames that are more in line with those already presented by supporting governments and TCNs. I hypothesize that international news media outlets are more likely to espouse positive frames in an attempt to garner interest within audiences in cities that, as of yet, do not have operating BRT systems.

With both hypotheses in tow, the methodology through which this paper investigates and analyzes the frames present in news media articles should be elaborated upon. Robert Entman (1993) provides a definition of framing that simultaneously creates four measurable subcategories with which a descriptive analysis can be carried out:

To frame is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described.  
(Entman, 1993, p. 52)

Entman's four-pronged framework sees problem definition, which outlines the actions of the causal agent in terms of costs and benefits; causal interpretation, which seeks to diagnose the causes that the agent claims are behind a given problem; moral evaluation, which evaluates the effects of involved causal agents; and treatment recommendation, where causal agents offer their proposed solutions for the problem at hand (1993). Put together, all four provide a relatively holistic evaluation of a given article and the frames present therein. When combining hundreds of articles for each BRT system across both the local and international news media landscapes, Entman's (1993) frame analysis approach can help illuminate the problems, causes, moral rationales, and proposed solutions vis-à-vis the benefits that have been published by BRT supporters.

With this approach for frame identification in mind, I will code each news media article gathered according to each of the four potential frames: problem definition, causal interpretation, moral evaluation, and treatment recommendation. Sentences, phrases, and word choices within each article will be coded into one or more of the four frames above. While data will be separated according to the BRT system (e.g. TransMilenio vs. TransJakarta), the frame sets will be examined both individually and together, in order to pinpoint with a certain degree of accuracy the extent to which frames between the news media and BRT supporters differ. Conclusions on the framing of TransMilenio and TransJakarta across their respective news media communities will be drawn based on the aggregated data resulting from the coding process. Due to time and resource constraints, this paper does not benefit from the use of multiple coding rounds by performed by multiple coders as seen in several frame analysis efforts that already exist (Matthes and Kohring, 2008; David et al., 2010). Instead, the author undertakes a meticulous coding process wherein the codes are deduced from the 150 news media articles analyzed, using the manual highlighting technique without the use of cluster qualitative analysis software (ex. NVivo or RQDA). The coding process involves the creation of binary figures for every identified topic, actor, attribution, benefit, and risk; a '1' is placed if the indicated variable is found within an article, and a '0' if otherwise. These binary figures are aggregated and both the mean and standard deviations are calculated to provide summary statistics on the frames present within articles across both domestic and international coverage for TransMilenio and TransJakarta.

Furthermore, where possible, articles have been translated from their original language of either Spanish or Indonesian into English using a version of Google Translate - a popular web-based translation application - that is built-into the web browsers used by the author: namely, Google Chrome and Safari. While there are obvious grammatical errors in some of the translations provided by the built-in application, any risks and biases of these mistakes are mitigated by the author's meticulous attention to details and use of context in the remainder of the article to formulate the article's original idea(s). Furthermore, the author's intermediate knowledge of Spanish is a further aid in interpreting the articles as regards TransMilenio that are written in the language - particularly those published by domestic Colombian press.

Lastly, as Kuypers (2010) notes, frame analysis is a qualitative exercise that focuses on interpretation. As a result, the researcher's subjectivity also plays a key role in the procedures, findings, and implications involved in a given study. Those subjectivities, alongside the rhetoric explicitly stated by actors surrounding TransMilenio and TransJakarta, are made explicit in this study to the best of the author's ability.

## **5. THE IMPLICATIONS OF IDENTIFIED FRAMES IN THE BRT DEBATE**

As this paper has already referenced in part, frames can provide a normative-prescriptive story that informs readers of the way in which a problem is defined and the accompanying actions that both can and should be taken to mitigate it (Rein and Schön, 1996). With Schön and Rein (1994) and Hajer and Laws (2006) supporting this claim, the frames identified in this paper vis-à-vis the performance of both TransMilenio and TransJakarta can carry significant implications for their operation, maintenance, and evolution. Moreover, such implications may also be relevant for both BRT systems in other cities and public transport solutions in general that combat stated problems of a similar nature.

Given that governments invest a significant amount of resources into the installation and operation of BRT systems, they have a direct incentive to at least pay attention to the ways in which those systems are framed - both in the eyes of the news media at home and abroad. News media portrayals, influential as they are, could in turn affect the opinions and views that constituents, BRT users, and prospective BRT users have on BRT as a policy solution to the stated problems of congestion, and the need for cost-efficient transport, climate change mitigation, and road efficiency.

This paper helps lay the foundation for a body of research that focuses on the way the news media and the public perceive and communicate the characteristics of TransMilenio and TransJakarta. As policy domain stability is a key interest of relevant governments and their partners, attention to frames is the first half of the equation; the second comes with their ability to collect, process, and adapt to that information in the broader effort to deliver on BRT's stated benefits - especially for urban spaces in developing countries, who are arguably in most need of a system that reaches a middle-ground between cost and travel efficiency.



## 6. RESULTS

Table 1 (see Annex A) lists out the mean values and standard deviation for the frames present across the randomly-selected domestic and international coverage for TransMilenio; Table 2 (see Annex B) presents the same information for TransJakarta. Following Entman (1993) and Matthes and Kohring (2008), the table is split into four distinct sections: problem definition, causal interpretation, moral evaluation, and treatment recommendation. Problem definition features the topics and actors found in the sample; causal interpretation attributes benefits and risks to different actors based on the frames uncovered within the text; moral evaluation lists the benefits and risks of different variables vis-à-vis the chosen BRT system found throughout the sample; and treatment recommendation is a scaled, author-prescribed figure, rating overall judgment of the BRT system within the article on a scale of 1-7. The scale operationalizes the judgment of the extent to which the article is satisfied or dissatisfied with the given BRT system to merit policymaker action.

It is in the interest of external validity to incorporate variables whose themes are similar enough into a larger category of variable; in other words, creating codes that are mutually-exclusive (Matthes and Kohring, 2008; David et al., 2010). Because of the complexity of the BRT systems in both Bogotá and Jakarta, and in the interest of preserving the internal validity of the comparative case study, this paper does not feature results with mutually-exclusive codes and frames. Some variables may fit or intersect with others; this is exemplified by comparing the risks of ‘mugging’ and ‘turnstile skipping’ in Table 1, for example, which could arguably be filed under the solitary theme of ‘security’. However, the nature of the security involved in both types of risks are distinct: turnstile skipping poses a risk to TransMilenio as perpetrators risk their lives crossing the street and operators lose money on those who board illegally, while mugging results in the loss of individuals’ belongings while potentially endangering their health. Such differences are the reason why variables have not necessarily been grouped together, as has been done in several frame analysis studies in the existing body of literature. While this represents a slight compromise in the external validity of the results, the need to separate variables also reveals the complexity of frames within a given BRT system, which could prove to be a key takeaway for policymakers.

## 7. TRANSMILENIO: DISLIKED AT HOME, PRAISED ABROAD

### 7.1 Domestic Coverage: Few Benefits, Many Risks

As Table 1 shows, the domestic coverage of TransMilenio defines problems with the system in the predominant contexts of system/fleet changes ( $\bar{x} = 0.62$ ), budget use ( $\bar{x} = 0.46$ ), and gender-based abuse ( $\bar{x} = 0.40$ ). Right behind them, issues of overcrowding, accidents, mugging, and turnstile skipping - where passengers dangerously cross passing traffic on non-BRT designated lanes to jump queues and turnstiles at designated BRT stations, thus risking their lives - are also prevalent. TransMilenio operators and spokespersons ( $\bar{x} = 0.88$ ), as well as passengers and pedestrians ( $\bar{x} = 0.76$ ), are the most frequently-cited actors; mayors and policymakers ( $\bar{x} = 0.50$ ) follow suit. It should be noted that, contrary to reports

from TCNs like C40 Cities and other best-practice sharing networks, the frames of congestion ( $\bar{x} = 0.22$ ), cost-efficient transport ( $\bar{x} = 0.14$ ), and climate change mitigation ( $\bar{x} = 0.02$ ) are notably lacking in volume.

In the context of causal interpretation, the majority of the sentiment is one of risk, stemming from two key actors: TransMilenio operators and spokespersons, and passengers and pedestrians. Benefits in the causal context are also present via TransMilenio operators/spokespersons and mayors/policymakers, but at around half the volume of their counterparts. From the moral evaluation perspective, the results become even clearer: TransMilenio is scarcely framed as a solution for congestion ( $\bar{x} = 0.06$ ), the need for cost-efficient transport ( $\bar{x} = 0.10$ ), and climate change mitigation ( $\bar{x} = 0.02$ ). Instead, TransMilenio is predominantly framed as a system susceptible to risks of gender-based abuse ( $\bar{x} = 0.42$ ), budget use, turnstile skipping, accidents, and overcrowding. When analysing whether or not the sample of articles frames TransMilenio's status quo as a phenomenon that must change (e.g. policymakers ought to act to change the status quo), the opinion is clear with a mean score of 0.80. And in the context of treatment recommendation, domestic coverage rates TransMilenio with a sentiment that hovers closer to 'somewhat disappointed' according to the seven-point scale, which corroborates the number and volume of risks present across the articles sampled.

While there is a good amount of overlap in the standard deviations for each frame variable presented within the 50-article sample for domestic coverage, it should nonetheless be noted that the heralded frames of congestion reduction, BRT as a cost-efficient transport option, climate mitigation, and overall road efficiency are relatively missing. Instead, TransMilenio operators/spokespersons (and mayors/policymakers to a lesser extent) are often blamed for a system that encounters budget allocation problems, accidents, and overcrowding. Passengers and pedestrians, meanwhile, are called out for gender-based abuse that comes in the form of untoward acts against women, the dangerous and illegal practice of turnstile skipping, and frequent mugging. Domestic coverage, therefore, is a stark departure from the ideal benefits presented by TCNs like C40 Cities, their partners, and other supporters of BRT as a modern transportation solution.

## **7.2. International Coverage: More Benefits, Mitigated Risks**

Table 1 also shows a stark contrast in frames between domestic and international coverage. To start, the topics of congestion ( $\bar{x} = 0.64$ ), cost-efficient transport ( $\bar{x} = 0.60$ ), and climate change mitigation ( $\bar{x} = 0.60$ ) have returned in international coverage, while the topics that appeared as risks in domestic coverage - budget use, gender-based abuse, system/fleet changes, accidents, and turnstile skipping - have significantly diminished relative to the figures found across domestic coverage (overcrowding being the exception with a mean score of 0.40). Several new topics are also introduced in international coverage: the TransMilenio status quo as insufficient ( $\bar{x} = 0.64$ ), TransMilenio as good practice ( $\bar{x} = 0.60$ ), TransMilenio as the largest system ( $\bar{x} = 0.36$ ), link-up with other transport services ( $\bar{x} = 0.36$ ), plans for improvement ( $\bar{x} = 0.32$ ), and TransMilenio as a system that is worse now ( $\bar{x} = 0.28$ ). Moreover, both TransMilenio operators/spokespersons and mayors/policymakers are now the principal

actors with a mean score of 0.96, while passengers/pedestrians relatively take a back seat with a mean score of 0.48. In terms of the topics that surface on the international level however, already there is a noticeable contrast to domestic coverage.

From a causal interpretation perspective, TransMilenio operators/spokespersons ( $\bar{x} = 0.68$ ) and mayors/policymakers ( $\bar{x} = 0.84$ ) are the principal reasons behind benefits to the BRT system: a key departure from domestic coverage, where neither of the three identified actors feature a mean score above 0.26. Simultaneously, risks are also attributed to operators/spokespersons and mayors/policymakers ( $\bar{x} = 0.56$ ) - with the latter bearing a much larger share of the blame than as featured in domestic coverage. Passengers/pedestrians shoulder a smaller share of the blame, scoring an average of 0.28.

More key differences abound when lining up moral evaluation scores for international coverage with domestic coverage. As the problem definition scores may preliminarily suggest, the benefits of congestion reduction ( $\bar{x} = 0.52$ ), TransMilenio as a cost-efficient transport option ( $\bar{x} = 0.56$ ), and even climate change mitigation ( $\bar{x} = 0.20$ ) all feature values much higher than their domestic counterparts – with a minimum distance of one SD. Already, international coverage seems to hold the frames that staunch supporters of BRT claim their systems to have. Moreover, there are additional benefit frames that were unearthed when coding international coverage, namely: TransMilenio as a ‘good practice’ example ( $\bar{x} = 0.64$ ), travel time savings ( $\bar{x} = 0.40$ ), plans for improvement to the system ( $\bar{x} = 0.36$ ), and linking-up with other travel services ( $\bar{x} = 0.32$ ). Arguably, the appearance of travel time savings and the link-up with other services as frames suggests that international coverage also lines up with the favorable claim that BRT increases road efficiency as earlier conceptualized. The appearance of such frames should alert policymakers to a potential bias inherent in international coverage, favoring replicability over challenges that can be discovered at the local level while systems operate.

With the simultaneous focus on benefits comes a corresponding perceived decrease in the frames on risks: budget use, accidents, turnstile skipping, mugging, and gender-based abuse values all fall when compared to their counterparts in domestic coverage. Overcrowding ( $\bar{x} = 0.32$ ), gender-based abuse ( $\bar{x} = 0.32$ ), and budget use ( $\bar{x} = 0.20$ ) all remain present in some of the articles sampled. Importantly, another three risks are added that were not present in domestic coverage: congestion ( $\bar{x} = 0.32$ ), increased travel times ( $\bar{x} = 0.32$ ), and the perception that TransMilenio was great before, but worse now ( $\bar{x} = 0.24$ ). The inclusion of these three frames could suggest that, despite the increased prevalence of BRT-friendly frames across international coverage, the emergence of key risks should raise caution warnings for prospective policymakers looking to implement BRT. On the whole, international media frame the TransMilenio status quo as one in need of change ( $\bar{x} = 0.60$ ), albeit to a lesser extent than their colleagues in the domestic press.

Corresponding with the increase in the diversity and volume of benefit frames across international coverage for TransMilenio, the system’s treatment recommendation is significantly more positive at a value of 3.92. On the prescribed scale of 1 to 7, perspectives on TransMilenio could thus

be viewed as ‘neither satisfied nor dissatisfied’. Result reliability is dampened by the small-*n* (25), but nonetheless provide a snapshot of the coverage on TransMilenio between the years 2013-2015.

## **8. TRANSJAKARTA: MORE POSITIVE FRAMES**

### **8.1. Domestic Coverage**

Table 2 shows another clear departure from BRT-friendly topics that surface in domestic coverage. System/fleet changes ( $\bar{x} = 0.76$ ), budget use ( $\bar{x} = 0.54$ ), cost-efficient transport ( $\bar{x} = 0.26$ ), and accidents ( $\bar{x} = 0.22$ ) are among the most relevant topics through which problems are defined, with bus faults ( $\bar{x} = 0.18$ ) and overcrowding ( $\bar{x} = 0.10$ ) coming in at a lesser extent. The predominant actors are the TransJakarta operators and spokespersons ( $\bar{x} = 0.86$ ), governors/other policymakers ( $\bar{x} = 0.54$ ) and passengers/pedestrians ( $\bar{x} = 0.34$ ), while the Transportation Agency also plays a role ( $\bar{x} = 0.22$ ). It should be noted that topics of travel time, climate change mitigation, and overcrowding are relatively low in frequency across the 50-article sample. From a causal perspective, operators/spokespersons and governors/policymakers shoulder the majority of benefit attributions ( $\bar{x} = 0.44$ ), with passengers and pedestrians not being mentioned at all in a benefit context. However, operators/spokespersons are simultaneously the largest recipients of risk attribution ( $\bar{x} = 0.40$ ), followed by the Transportation Agency with a mean score of 0.22.

Analyzing moral evaluation, TransJakarta is somewhat attributed the benefits of cost-efficient transportation ( $\bar{x} = 0.30$ ), congestion reduction ( $\bar{x} = 0.28$ ), and partnerships with other organizations to enhance its own service ( $\bar{x} = 0.30$ ). Travel time, climate change mitigation, and plans for improvement are virtually non-existent in the 50-article sample, suggesting that some of the frames backed by TNCs and BRT supporters are missing in the TransJakarta context within the domestic press. The risks are dominated by budget use ( $\bar{x} = 0.28$ ); a significant number of articles cited procurement mishandling allegations on the part of the Jakarta Transportation Agency, with particular reference to the purchase of buses from China-based manufacturers. Several of these buses were reported as malfunctioning or causing dangerous accidents while in operation. The Office of the Attorney-General has since stepped in to investigate the case. This storyline helps explain the prevailing risk of budget use, as well as the risks attributed to the Agency and the small quantity of benefit attributed to the Attorney-General. Other risks include accidents and bus faults - again linked to the malfunctions found among the fleet of buses employed - as well as a status quo that must change ( $\bar{x} = 0.48$ ).

Despite the risks involved however, domestic coverage portrays TransJakarta in a relatively neutral state of affairs, with a treatment recommendation judgment score of 3.82 that sits between ‘slightly dissatisfied’ and ‘neither satisfied nor dissatisfied’. At the domestic level then, the media already views the system as somewhat more favorable than their Colombian counterparts do with TransMilenio: a score of 3.82 to the latter’s 2.28.

### **8.2. International Coverage**

As with TransMilenio, international outlets - while represented with a smaller- $n$  (25) - once again contain different frames than their domestic counterparts. Budget use and system/fleet changes, while remaining significant in the analysis, are eclipsed by congestion ( $\bar{x} = 0.56$ ) and travel time ( $\bar{x} = 0.56$ ) as the principal topics in problem definition. Cost-efficient transport remains relatively stable ( $\bar{x} = 0.28$ ), while the topics of partnerships with other services ( $\bar{x} = 0.40$ ), the status quo as insufficient and in need of change ( $\bar{x} = 0.36$ ), and TransJakarta as good practice ( $\bar{x} = 0.36$ ) have all resurfaced. In terms of actors, gone are the Jakarta Transportation Agency and Office of the Attorney-General completely; they've been replaced by operators/spokespersons ( $\bar{x} = 0.72$ ), governors/policymakers ( $\bar{x} = 0.68$ ), and to a lesser extent, passengers/pedestrians ( $\bar{x} = 0.28$ ). This suggests that the international focus shifts away from procurement issues stemming from Transportation Agency and onto other phenomena occurring within the TransJakarta system.

Causally speaking, operators/spokespersons and governors/policymakers remain the main recipients of benefit attributions ( $\bar{x} = 0.44$ ). Governors/policymakers also make up a key segment of risk attribution ( $\bar{x} = 0.24$ ), but the largest risk appears to be that of other drivers on the road ( $\bar{x} = 0.32$ ). The reason for this is made apparent in the analysis of moral evaluation, where a mean score of 0.28 is attributed to the risk of other vehicles encroaching on designated BRT lanes. This behavior, among other consequences, congests lanes that should make BRT otherwise faster and free of congestion. This corresponds with the emergence of congestion ( $\bar{x} = 0.20$ ) and slower travel times ( $\bar{x} = 0.16$ ) as frames across international coverage. Meanwhile, budget use, accidents, and bus faults - all mainstay frames in domestic coverage - have all relatively diminished. The status quo, meanwhile, stands at a mean score of 0.32 - lower than the 0.48 seen across domestic coverage. As a result of the continued benefits and the diminished effect of risks to the system, TransJakarta scores a higher mean of 4.12 in the treatment recommendation judgment spectrum. With a relatively small standard deviation, it is safe to say that international coverage of TransJakarta stands as the least negative of all other scores in the same category.

## 9. DISCUSSION: BROADER TRENDS AND IMPLICATIONS

While Tables 1 and 2 feature a large number of variables and reflect the complexity of the BRT systems studied in this paper, there are nonetheless key takeaways that policymakers ought to account for in their decision-making processes, particularly if they are looking at procuring a BRT system for their constituencies.

First, in both the TransMilenio and TransJakarta contexts, new frames emerge outside of those put forward by TCNs like C40 Cities and other BRT backers (Cervero, 1998 in Wheeler and Beatley, 2009; Wright, 2003 in Fjellstrom, 2003). For Bogotá, gender-based abuse topped the list, followed by turnstile skipping and mugging, among others. For Jakarta, non-BRT driver behavior and an ongoing procurement investigation bogged down perceptions of BRT's efficacy for prospective users. Such new frames - which could themselves be framed as 'unintended consequences' ought to be expected when

choosing, constructing, and maintaining a BRT system in any given city. As the results show, the impacts of a BRT system transcend the four hallmark benefits of congestion reduction, cost-efficiency, climate change mitigation, and increased road efficiency; there are social consequences that are not taken into account in traditional reports that currently exist within the literature.

Second, based on the preliminary data in Tables 1 and 2, it can be said that both null hypotheses in this paper can be rejected to a degree of confidence. The first hypothesis posits that domestic coverage frames differ from those inherent in documents authored by BRT supporters, like transmunicipal collaboration networks and sponsoring governments. While standard deviation figures can be minimized still, Tables 1 and 2 show a clear departure from the frames of congestion reduction, cost-efficient transport, climate change mitigation, and road efficiency within domestic coverage. Thus, the null hypothesis can be rejected on preliminary terms. The second hypothesis, which posits that international coverage more closely matches the four supporting frames than its domestic counterpart, can also be validated preliminarily. The frequency of benefit attributions and causal interpretations across international coverage either matches or significantly outweighs those found in domestic coverage.

Third, and building on the emergence of new, unintended frames, the broader cultural setting within which a BRT system is located can have a significant impact on its performance, and consequently, its framing in the media. Gender-based abuse in Bogotá, for example, is often chalked-up as a consequence of a patriarchal society structure (*The Economist*, 2015). TransMilenio, therefore, can act as a vehicle for behaviors that emerge as a function of that societal structure - both literally and figuratively. The same principle applies for irresponsible drivers in the TransJakarta context. Drivers in non-BRT lanes encroaching on BRT lanes in order to gain a time advantage risk congesting TransJakarta and pose a danger to other drivers on the road. Reports in the coverage of a lack of enforcement on the part of police to apprehend violators of BRT-exclusive lanes compounds the cultural conundrum: not only may drivers disrespect certain road rules, but those people put in place to enforce the rules may not do so effectively. As a result, TransJakarta's ability to curb congestion and reduce travel times is only as good as its ability to keep its dedicated lanes closed off to non-BRT traffic. Policymakers have an intrinsic incentive to understand and address these broader sociological trends because they can impact the returns on investment and the overall value of their BRT systems. If, as in Bogotá, the system is deemed unsafe, users could be deterred from its use. If, as in Jakarta, the system makes no improvement on travel time because of a lack of road rule enforcement, then user rates may drop. Both cases jeopardize operating revenue streams. The consequences can be significant, and policymakers' incentives to address and respond to broader sociological contexts only increase as the size and complexity of the BRT system rises as well.

Fourth, international coverage consistently yields fewer dissatisfactory frames of both TransMilenio and TransJakarta when compared to their domestic counterparts. As observed in Tables 1 and 2, international outlets focus on benefit attributions and benefits resulting from the existence of

BRT. Here, the frames espoused by TNCs and BRT backers appear in abundance: congestion reduction, cost-efficient transport, climate change mitigation, and various factors contributing to increased road efficiency are seen as emergent benefits in both systems. Furthermore, the significance of locally-based problems - like gender-based abuse and turnstile skipping in Bogotá or bus faults and procurement scandal allegations in Jakarta - are diminished in international coverage. With a significant amount of articles dedicated to portraying both TransMilenio ( $\bar{x} = 0.60$ ) and TransJakarta ( $\bar{x} = 0.36$ ) as examples of ‘good practice’, there is an inherent incentive on the part of news writers to proffer the benefits of BRT systems for prospective users. Such articles can become a list of benefits for policymakers, city dwellers, and unsuspecting readers who are presented with the positives of having a BRT system in their city, and in this context particularly for densely-populated cities situated within developing country contexts. In doing so however, the articles eschew the local risks inherent in adopting a BRT system; such actions can, as seen in Tables 1 and 2, create knock-on effects that reduce the efficacy and mitigate positive perceptions of BRT.

## 10. LIMITATIONS

Several key limitations to the study must be addressed. First, the sample size of articles analyzed leaves room for improvement. 100 domestic articles and 50 international articles across both TransMilenio and TransJakarta provide sufficient data to back preliminary conclusions, but as the relatively large standard deviation values show throughout both Tables 1 and 2, uncertainties can be further reduced by increasing the sample size. Doing so would involve the use of more extensive databases that house more press articles at both the domestic and international levels, so as not to be limited by the availability present on the Google News search engine and the *LexisNexis* academic archives.

Second, the frame variables selected for both TransMilenio and TransJakarta are, unlike Matthes and Kohring (2008), non-mutually exclusive. Accidents and bus fires, for example, rather than being grouped under one unified variable, are separated. This is done to preserve the differences in operationalization that occur between the two systems, and the frames that can emerge therefrom. Naturally however, in the process of maintaining internal validity through this method, a modicum of external validity is sacrificed. The applicability of the results of this paper to other contexts may be relatively limited by this factor as a result; nonetheless, in the interest of preserving frame accuracy, the decision was taken to collect data and code on as many different frames and variables as possible.

Third, this paper collects data from one overarching actor in the policy cycle: the news media. The news media are critical as their publications can help shape public opinion, but they are far from being the only actors in the mix. Further research should delve deeper into the frames present across BRT systems and across actors, potentially utilizing focus groups, interviews, and surveys to gather data on a wider range of people. In the process, both accuracy and reliability of findings can be improved.

Fourth, this paper only contains one coding round, performed by the author himself. To reduce the effects of bias and to ensure higher degrees of quality in the results, several coding rounds should take place and ought to be conducted by persons other than the lead author. Given the nature of the thesis, the latter is difficult to achieve under these conditions; however, further coding rounds could yield greater confidence in the results. Attempts to build on or replicate this research should follow the best practices of qualitative methods in order to optimize data reliability.

## **11. CONCLUSION**

Bus rapid transit remains a highly attractive transport policy option in urban spaces whose leaders are looking for a way to move its citizens faster without breaking the bank. While the main positives of BRT - congestion reduction, cost-efficient transport, climate change mitigation, and road efficiency - are well and true in many contexts, this paper highlights the differences in frames that can emerge from domestic and international press coverage in the two specific cases of TransMilenio and TransJakarta. Using Entman's (1993) frame analysis methodology and building on the work of Matthes and Kohring (2008), the analysis of 150 articles covering both BRT systems yields significant departures from supporting frames within domestic coverage. Seeking to deliver up-to-date news to their readers, domestic outlets may be less interested in highlighting system benefits than they are concerned with reporting the news, which involves a variety of frames that are distinct from what supporters of BRT systems would like to see. Furthermore, discrepancies in frames between domestic and international coverage suggests a difference in purpose; in many instances, international articles framed either one of the selected BRT systems as an ideal case study from which good practices can be implemented in prospective cities. These phenomena, combined with the emergence of new frames that are embedded in the social fabric of the city in which a BRT system is located, form the nuances that complicate the supposed benefits that BRT should bring to the constituents it serves.

In their seminal work on policy controversies, Schön and Rein (1994) highlight that public discourse - such as the frames presented in both domestic and international media articles - takes on the form of an "institutional vehicle for policy debate" (31-32). And by placing such frames - which can be argued as "normative-prescriptive" stories that give a recommended action for a particular problem - in the public sphere, the policy status quo can be moved right or left based, in part, on the strength of the actors behind them (Rein and Schön, 1996). While this paper carries its honest limitations that must be improved upon in further iterations of research, policymakers should nonetheless take note of the frames that can emerge and disappear in real-world implementation of BRT systems, and adequately prepare for them in turn. TransMilenio and TransJakarta are policy solutions in the urban planning realm, but they are also situated within broader sociological contexts that mechanical approaches to the problem of congestion cannot anticipate alone. In the case of TransMilenio, problems of gender-based abuse and the life-threatening risks of turnstile skipping and mugging rear their ugly heads in ways that policymakers focused solely on the mechanics of vehicle movement cannot anticipate and prepare for.



The same lesson applies for TransJakarta's case, where a blatant disrespect of road rules and constant corruption allegations exist. In the struggle to move BRT from a position policy endangerment into one of acceptance and relative success, policymakers must first be adept at identifying the problems inherent in the systems that currently exist today (Ingram et al., 2007).

In the context of TransMilenio and TransJakarta, there are two sets of policymakers who are directly impacted by the findings of this paper. First, policymakers in Bogotá and Jakarta, respectively, now have an opportunity to build on this research to conduct more in-depth analysis on the ways in which BRT systems are received and perceived, especially in the eyes of the news media both at home and abroad. Once sufficient analysis has been conducted, policymakers can then take correctional measures through appropriate policy that mitigates negative perceptions and risks to the system, while enhancing positive aspects at the same time. The second set of policymakers who are directly impacted by this paper are those who are in the process of considering BRT for their urban space. Particularly for those policymakers situated in developing country contexts and whose budgets are cash-strapped, this paper is clear support for an evidence-based approach to public policy. A clear understanding of both the technical elements of BRT and the broader sociological context within which it is set is necessary in order to optimize the system's chances of overall success. This paper does not, in any way, shape, or form, minimize the importance of sound engineering and technically-focused urban planning; instead, it advocates for a two-pronged approach that elevates the value of social effects as a factor that could impact the ways in which a planned BRT system is perceived by the public, news media, and other stakeholders. For both sets of policymakers however, the incentives are clear: a thorough comprehension of and proper attention for the sociological dimension of BRT installation and operation are necessary.

If policymakers are concerned with maintaining existing BRT systems or seeking sufficient advocacy coalition support for the installation thereof, then Rein and Schön (1996) once more hold telling keys to success. If, as Entman (1993) and Hajer and Laws (2006) posit, frame analysis is an opportunity to highlight the ways in which real-world phenomena are connected to the individual consciousness and broader social action, then the strength of these frames and the actors behind them are critical to preserving policy preferences. As normative-prescriptive notes, a collective set of frames can give policymakers a better sense of the strength and stability of a given BRT system. More importantly, based on these findings, policymakers can then adapt their policy actions to better address any challenges that exist. Whether the context is TransMilenio and TransJakarta, BRT as a policy solution, or policy tools in general, the hallmark of evidence-based policymaking is the education of actors before they take action. As this paper highlights through frame analysis, the potential for fallout from a misjudgment of BRT system consequences is high if precautions are not taken to address community needs in a more holistic manner.

If unexpected frames and unintended consequences are the story to the paper, then opportunities for evidence-based policy comprise the moral to the story. This paper yields profound insight into the sociological aspects of BRT systems, the newfound need for policymakers to consider and adapt to their

characteristics if they are to produce favorable, successful, and reliable iterations of BRT for urban spaces in most need. The system is no less cost-efficient, no less an opportunity to reduce congestion, and no less a chance to further mitigate climate change than it was at the beginning of the paper. It is clearer, however, that policymakers must support the implementation of BRT with an eye towards unintended consequences and public scrutiny.

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### 13. ANNEX A: Table 1

Table 1. Mean Values and Standard Deviations for TransMilenio Frames, Domestic and International (2013-2015)			
Frame elements and corresponding variables	Description/sub-topics included	Domestic Coverage (n=50), $\bar{x}$ (SD)	International Coverage (n=25), $\bar{x}$ (SD)
<b>PROBLEM DEFINITION</b>			
Topic: Congestion	Number of vehicles on roads added/reduced	0.22 (0.42)	<b>0.64 (0.49)</b>
Topic: Cost-efficient transport	Implementing effective transport policy at-cost	0.14 (0.35)	<b>0.60 (0.50)</b>
Topic: Climate change mitigation	Emissions reduction and other environmental benefits	0.02 (0.14)	<b>0.20 (0.41)</b>
Topic: Budget use	System procurements, corruption allegations	<b>0.46 (0.50)</b>	0.28 (0.46)
Topic: System/fleet changes	Route changes, fleet additions/retirements, new routes/corridors, system enhancements, fare changes	<b>0.62 (0.49)</b>	0.20 (0.41)
Topic: Accidents	Fires, road-based accidents, injuries as a result of boarding attempts	<b>0.34 (0.40)</b>	0.20 (0.41)
Topic: Turnstile skipping	Passengers skipping turnstiles at BRT stations to avoid payment, risking lives by crossing streets with moving traffic	<b>0.34 (0.48)</b>	0.04 (0.20)
Topic: Mugging	Theft/robbery of personal belongings, with the potential for injury	<b>0.32 (0.47)</b>	0.12 (0.33)
Topic: Overcrowding	Surplus of passengers at BRT stations or on BRT buses, compromising personal space and comfort	<b>0.36 (0.48)</b>	0.4 (0.50)
Topic: Link-up with other transport services	BRT operators partner with other companies/organizations/service to enhance service delivery	—	<b>0.36 (0.49)</b>
Topic: Gender-based abuse	Abuse of women using the BRT system	<b>0.40 (0.49)</b>	0.24 (0.44)
Topic: TransMilenio as good practice	BRT system as a 'good practice' to be replicated elsewhere	—	<b>0.60 (0.50)</b>
Topic: TransMilenio as largest system	BRT system as largest, or one of the largest, in the world	—	<b>0.36 (0.49)</b>
Topic: TransMilenio status quo is insufficient	BRT system status quo in need of policy changes	—	<b>0.64 (0.49)</b>
Topic: TransMilenio was great before, is worse now	BRT system formerly favored, now has fallen out of favor	—	<b>0.28 (0.46)</b>

Table 1. Mean Values and Standard Deviations for TransMilenio Frames, Domestic and International (2013-2015)			
Frame elements and corresponding variables	Description/sub-topics included	Domestic Coverage (n=50), $\bar{x}$ (SD)	International Coverage (n=25), $\bar{x}$ (SD)
Topic: Plans for improvement	BRT system is subject to plans for improvement announced by operator or policymaker	—	<b>0.32 (0.48)</b>
Actor: TransMilenio operators/spokespersons	—	0.88 (0.33)	<b>0.96 (0.20)</b>
Actor: Mayor/policymaker	—	0.50 (0.51)	<b>0.96 (0.20)</b>
Actor: Passenger/pedestrian	—	<b>0.76 (0.43)</b>	0.48 (0.51)
CAUSAL INTERPRETATION			
Benefit attribution: TransMilenio operators/spokespersons	System operators/spokespersons are responsible for benefits to the BRT system	0.26 (0.44)	<b>0.68 (0.48)</b>
Benefit attribution: Mayor/policymaker	Mayors/policymakers are responsible for benefits to the BRT system	0.24 (0.43)	<b>0.84 (0.37)</b>
Benefit attribution: Passenger/pedestrian	Passengers/pedestrians are responsible for benefits to the BRT system	0.06 (0.24)	0.04 (0.20)
Risk attribution: TransMilenio operators/spokespersons	System operators/spokespersons are responsible for risks to the BRT system	<b>0.58 (0.50)</b>	0.56 (0.51)
Risk attribution: Mayor/policymaker	Mayors/policymakers are responsible for risks to the BRT system	0.34 (0.48)	<b>0.56 (0.51)</b>
Risk attribution: Passenger/pedestrian	Passengers/pedestrians are responsible for risks to the BRT system	<b>0.52 (0.50)</b>	0.28 (0.46)
MORAL EVALUATION			
Benefits: Congestion	BRT reduces congestion	0.06 (0.24)	<b>0.52 (0.51)</b>
Benefits: Cost-efficient transport	BRT reduces costs while maintaining efficacy (relative to other transport options)	0.10 (0.30)	<b>0.56 (0.51)</b>
Benefits: Climate change mitigation	BRT mitigates climate change through emissions reduction and increased passenger capacity	0.02 (0.14)	<b>0.20 (0.41)</b>
Benefits: Good practice example	BRT is an example of ‘good practice’ for policymakers around the world	—	<b>0.64 (0.49)</b>
Benefits: Link-up with other travel services	BRT partners with other organizations to enhance its service	—	<b>0.32 (0.48)</b>
Benefits: Time-savings	BRT reduces total traveling time	—	<b>0.40 (0.50)</b>

Table 1. Mean Values and Standard Deviations for TransMilenio Frames, Domestic and International (2013-2015)			
Frame elements and corresponding variables	Description/sub-topics included	Domestic Coverage (n=50), $\bar{x}$ (SD)	International Coverage (n=25), $\bar{x}$ (SD)
Benefits: Plans for improvement	BRT is buoyed by announced plans for improvement	—	<b>0.36 (0.49)</b>
Risks: Budget use	Actors are responsible for BRT misuse funds / Unfulfilled promises, contracts	<b>0.36 (0.48)</b>	0.20 (0.41)
Risks: Accidents	BRT is prone to accidents	<b>0.32 (0.47)</b>	0.12 (0.33)
Risks: Turnstile skipping	BRT is prone to turnstile skipping	<b>0.34 (0.48)</b>	0.08 (0.28)
Risks: Mugging	BRT is prone to mugging	0.30 (0.46)	<b>0.12 (0.33)</b>
Risks: Overcrowding	BRT is prone to overcrowding within buses and at stations	0.32 (0.47)	0.32 (0.48)
Risks: Gender-based abuse	BRT is prone to gender-based abuse	<b>0.42 (0.50)</b>	0.24 (0.44)
Risks: Congestion	BRT contributes to congestion	—	<b>0.32 (0.48)</b>
Risks: Time-consuming	BRT increases total traveling time	—	<b>0.32 (0.48)</b>
Risks: TransMilenio was great before, worse now	BRT system was better in the past, but delivers a lower-quality service now	—	<b>0.24 (0.44)</b>
Risks: TransMilenio status quo	BRT status quo is an insufficient transport option for the city	<b>0.80 (0.40)</b>	0.60 (0.50)
<b>TREATMENT RECOMMENDATION</b>			
Judgment: Dissatisfied/Satisfied*	In summary, coverage is dissatisfied/satisfied with the BRT system	2.28 (1.21)	<b>3.92 (1.61)</b>
<p>* The ‘Judgment’ variable is a scaled response from 1-7, where:</p> <p>1 = ‘very dissatisfied’</p> <p>2 = ‘somewhat dissatisfied’</p> <p>3 = ‘slightly dissatisfied’</p> <p>4 = ‘neither satisfied nor dissatisfied’</p> <p>5 = ‘slightly satisfied’</p> <p>6 = ‘somewhat satisfied’</p> <p>7 = ‘very satisfied’</p>			

## 14. ANNEX B: Table 2

Table 2. Mean Values and Standard Deviations for TransJakarta Frames, Domestic and International (2013-2015)			
Frame elements and corresponding variables	Description/sub-topics included	Domestic Coverage (n=50), $\bar{x}$ (SD)	International Coverage (n=25), $\bar{x}$ (SD)
<b>PROBLEM DEFINITION</b>			
Topic: Budget use	System procurements, corruption allegations	<b>0.54 (0.50)</b>	0.32 (0.48)
Topic: System/fleet changes	Route changes, fleet additions/retirements, new routes/corridors, system enhancements, fare changes	<b>0.76 (0.43)</b>	0.52 (0.51)
Topic: Accidents	Fires, road-based accidents, injuries as a result of boarding attempts	<b>0.22 (0.42)</b>	0.04 (0.20)
Topic: Gender-based abuse	Abuse of women using the BRT system	0.06 (0.24)	—
Topic: Congestion	Number of vehicles on roads added/reduced	0.12 (0.33)	<b>0.56 (0.51)</b>
Topic: Travel time	Amount of journey time on BRT	—	<b>0.56 (0.51)</b>
Topic: Cost-efficient transport	Implementing effective transport policy at-cost	0.26 (0.44)	<b>0.28 (0.46)</b>
Topic: Climate change mitigation	Emissions reduction and other environmental benefits	<b>0.04 (0.20)</b>	—
Topic: Turnstile skipping	Passengers skipping turnstiles at BRT stations to avoid payment, risking lives by crossing streets with moving traffic	—	—
Topic: Mugging	Theft/robbery of personal belongings, with the potential for injury	—	—
Topic: Overcrowding	Surplus of passengers at BRT stations or on BRT buses, compromising personal space and comfort	0.10 (0.30)	<b>0.12 (0.33)</b>
Topic: Bus faults	On-board fires and other bus malfunctions	<b>0.18 (0.39)</b>	0.04 (0.20)
Topic: TransJakarta as good practice	BRT system as a 'good practice' to be replicated elsewhere	—	<b>0.36 (0.49)</b>
Topic: TransJakarta as largest	BRT system as largest, or one of the largest, in the world	—	<b>0.16 (0.37)</b>
Topic: TransJakarta status quo is insufficient	BRT system status quo in need of policy changes	—	<b>0.36 (0.49)</b>
Topic: Link-up with other transport services	BRT operators partner with other companies/organizations/service to enhance service delivery	—	<b>0.40 (0.50)</b>

Table 2. Mean Values and Standard Deviations for TransJakarta Frames, Domestic and International (2013-2015)			
Frame elements and corresponding variables	Description/sub-topics included	Domestic Coverage (n=50), $\bar{x}$ (SD)	International Coverage (n=25), $\bar{x}$ (SD)
Actor: TransJakarta operators/spokespersons	—	<b>0.86 (0.35)</b>	0.72 (0.46)
Actor: Jakarta Transportation Agency	Agency in charge of procuring equipment and overseeing transportation development	<b>0.22 (0.42)</b>	0.00 (0.00)
Actor: Office of the Attorney-General	Office in charge of auditing BRT system procurements	<b>0.08 (0.27)</b>	—
Actor: Governor or other policymaker	—	0.54 (0.50)	<b>0.68 (0.48)</b>
Actor: Passenger/pedestrian	—	<b>0.34 (0.48)</b>	0.28 (0.46)
<b>CAUSAL INTERPRETATION</b>			
Benefit attribution: TransJakarta operators/spokespersons	System operators/spokespersons are responsible for benefits to the BRT system	0.44 (0.50)	0.44 (0.51)
Benefit attribution: Governor or other policymaker	Governors/policymakers are responsible for benefits to the BRT system	0.44 (0.50)	0.44 (0.51)
Benefit attribution: Passenger/pedestrian	Passengers/pedestrians are responsible for benefits to the BRT system	—	—
Benefit attribution: Office of the Attorney-General	The Office of the Attorney-General is responsible for benefits to the BRT system	<b>0.06 (0.24)</b>	—
Risk attribution: TransJakarta operators/spokespersons	System operators/spokespersons are responsible for risks to the BRT system	<b>0.40 (0.49)</b>	0.12 (0.33)
Risk attribution: Governor or other policymaker	Governors/policymakers are responsible for risks to the BRT system	0.18 (0.39)	<b>0.24 (0.44)</b>
Risk attribution: Passenger/pedestrian	Passengers/pedestrians are responsible for risks to the BRT system	0.08 (0.27)	0.08 (0.28)
Risk attribution: Jakarta Transportation Agency	The Agency is responsible for risks to the BRT system	<b>0.22 (0.42)</b>	—
Risk attribution: Other drivers	Other drivers in non-BRT lanes are responsible for risks to the BRT system	—	<b>0.32 (0.48)</b>
<b>MORAL EVALUATION</b>			

Table 2. Mean Values and Standard Deviations for TransJakarta Frames, Domestic and International (2013-2015)			
Frame elements and corresponding variables	Description/sub-topics included	Domestic Coverage (n=50), $\bar{x}$ (SD)	International Coverage (n=25), $\bar{x}$ (SD)
Benefits: Congestion	BRT reduces congestion	0.28 (0.45)	<b>0.40 (0.50)</b>
Benefits: Travel time	BRT reduces total traveling time	—	<b>0.44 (0.51)</b>
Benefits: Cost-efficient transport	BRT reduces costs while maintaining efficacy (relative to other transport options)	<b>0.30 (0.46)</b>	0.28 (0.46)
Benefits: Climate change mitigation	BRT mitigates climate change through emissions reduction and increased passenger capacity	0.04 (0.20)	—
Benefits: Good practice example	BRT is an example of ‘good practice’ for policymakers around the world	—	<b>0.32 (0.48)</b>
Benefits: Link-up with other travel services	BRT partners with other organizations to enhance its service	0.30 (0.46)	<b>0.40 (0.50)</b>
Benefits: Plans for improvement	BRT is buoyed by announced plans for improvement	—	—
Risks: Budget use	Actors are responsible for BRT misuse funds / Unfulfilled promises, contracts	<b>0.28 (0.45)</b>	0.08 (0.28)
Risks: Accidents	BRT is prone to accidents	<b>0.20 (0.40)</b>	0.04 (0.20)
Risks: Gender-based abuse	BRT is prone to gender-based abuse	0.06 (0.24)	—
Risks: Turnstile skipping	BRT is prone to turnstile skipping	—	—
Risks: Mugging	BRT is prone to mugging	—	—
Risks: Other vehicles encroaching on designated BRT lanes	Other drivers encroaching on BRT lanes are responsible for risks to the BRT system	—	<b>0.28 (0.46)</b>
Risks: Overcrowding	BRT is prone to overcrowding within buses and at stations	0.08 (0.27)	0.08 (0.28)
Risks: Great before, worse now	BRT system was better in the past, but delivers a lower-quality service now	—	—
Risks: Congestion	BRT system is responsible for increasing on-road congestion	—	<b>0.20 (0.41)</b>
Risks: Time-consuming	BRT system is responsible for increasing total traveling time	—	<b>0.16 (0.37)</b>
Risks: Bus faults	BRT is prone to fires, rips, and malfunctions	<b>0.20 (0.40)</b>	0.04 (0.20)
Risks: TransJakarta status quo	BRT status quo is an insufficient transport option for the city	<b>0.48 (0.50)</b>	0.32 (0.48)
TREATMENT RECOMMENDATION			



Table 2. Mean Values and Standard Deviations for TransJakarta Frames, Domestic and International (2013-2015)			
Frame elements and corresponding variables	Description/sub-topics included	Domestic Coverage (n=50), $\bar{x}$ (SD)	International Coverage (n=25), $\bar{x}$ (SD)
Judgment: Dissatisfied/Satisfied*	In summary, coverage is dissatisfied/satisfied with the BRT system	3.82 (1.45)	<b>4.12 (1.30)</b>
<p>* The 'Judgment' variable is a scaled response from 1-7, where:</p> <p>1 = 'very dissatisfied'</p> <p>2 = 'somewhat dissatisfied'</p> <p>3 = 'slightly dissatisfied'</p> <p>4 = 'neither satisfied nor dissatisfied'</p> <p>5 = 'slightly satisfied'</p> <p>6 = 'somewhat satisfied'</p> <p>7 = 'very satisfied'</p>			