

جامعة ميدأوشن

كلية الإدارة

قسم / تخصص.ادارة المشاريع



العنوان :

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What Makes Public Transport Less Attractive in Saudi Arabia? A Qualitative Study

Abstract

This study delves into the challenges that Saudi Arabia faces in embracing public transportation, a country where the reliance on private cars remains high despite the expansion of public transit options. The study's overarching goal is to discover the interrelated elements that make public transportation less appealing, with the hope of preventing opt-in changes to more environmentally friendly modes of transportation. A total of thirty semi-structured interviews were conducted with residents of Saudi Arabia to gather qualitative data on the topic of public transportation usage barriers. The interviews covered topics such as cultural values, reliability, efficiency, and convenience. Through strategic recruitment, we were able to gather a wide range of perspectives from regular customers, infrequent users, and daily car commuters. The investigation revealed structural problems stemming from the way private mobility experiences connect with city lives as a result of decades of car-centric planning. Conflicts between cultural expectations of privacy and overcrowded transportation settings are also highlighted by the results, as are holes in the network's connection and dependability. Among the suggested remedies are the following: the improvement of multimodal access; the resonance of messaging with community values; and the upgrading of carriages. Sustainably shifting modes of transportation may be encouraged through public education initiatives, transit-oriented development, and policies that prioritize the needs of citizens. Thus, this study contributes to the literature by offering new socio-cultural perspectives on the challenge of long-established mobility regimes.

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1.0 Chapter One: Introduction

Global urbanization is experiencing tremendous growth in many regions around the world. Migration of people from rural areas to cities in search of a better life has led to significant changes in human lifestyle patterns and daily routines. The Kingdom of Saudi Arabia is witnessing rapid urban growth, with its urban population rising from 9 million in 1980 to nearly 30 million in 2014. This level is expected to double and reach 97.6% by 2030. The majority of the population is concentrated in several regions, including Riyadh, Makkah, the Eastern Province, and Al Madinah, respectively (Gastat Portal SA 2022). This rapid increase in the process of urbanization creates numerous challenges for authorities in keeping up with the growing demand for available urban services and providing them efficiently (United Nations, 2020). The human accumulation resulting from urbanization generates traffic congestion in cities, leading to environmental pollution and economic losses on various levels, consuming nearly a quarter of the total energy. As a result, the transportation system has become a vital element in urbanization, serving as a fundamental pillar that requires attention and focus at the highest levels. However, transportation is characterized by complexity due to various factors such as traffic volume, diversity, and origin-destination patterns. With the increasing population of cities in the Kingdom of Saudi Arabia and the reliance on cars as a primary means of transportation, this has caused traffic congestion and general difficulties in mobility. Between 1968 and 1996, the number of vehicles increased from 26,880 to 670,300. Developing public transportation has become extremely critical. This began with the establishment of the Saudi Public Transport Company with government support in 1979, connecting over 282 cities and villages across the kingdom and providing intercity and intracity networks. With the emergence of trains, including the North-South Railway, Riyadh-Dammam Railway, and the Haramain

Train, alongside buses, car travel remains the most commonly used mode of transportation, accounting for approximately 88% compared to other means of transportation. The Royal Commission for Riyadh City launched the King Abdulaziz Public Transport Project, which includes an extensive network of buses and trains (2015). While this project is still ongoing, it is essential to understand people's opinions and impressions toward public transportation in the Kingdom of Saudi Arabia and what can motivate them towards it. This study presents the results of a descriptive study that includes people's opinions and impressions toward public transportation in Saudi Arabia. The structure of this study begins with explaining the methodology and research process. The next section discusses the study's results, followed by the discussion section. The study's limitations are discussed in the fifth section. The conclusion is presented in the sixth section of this study.

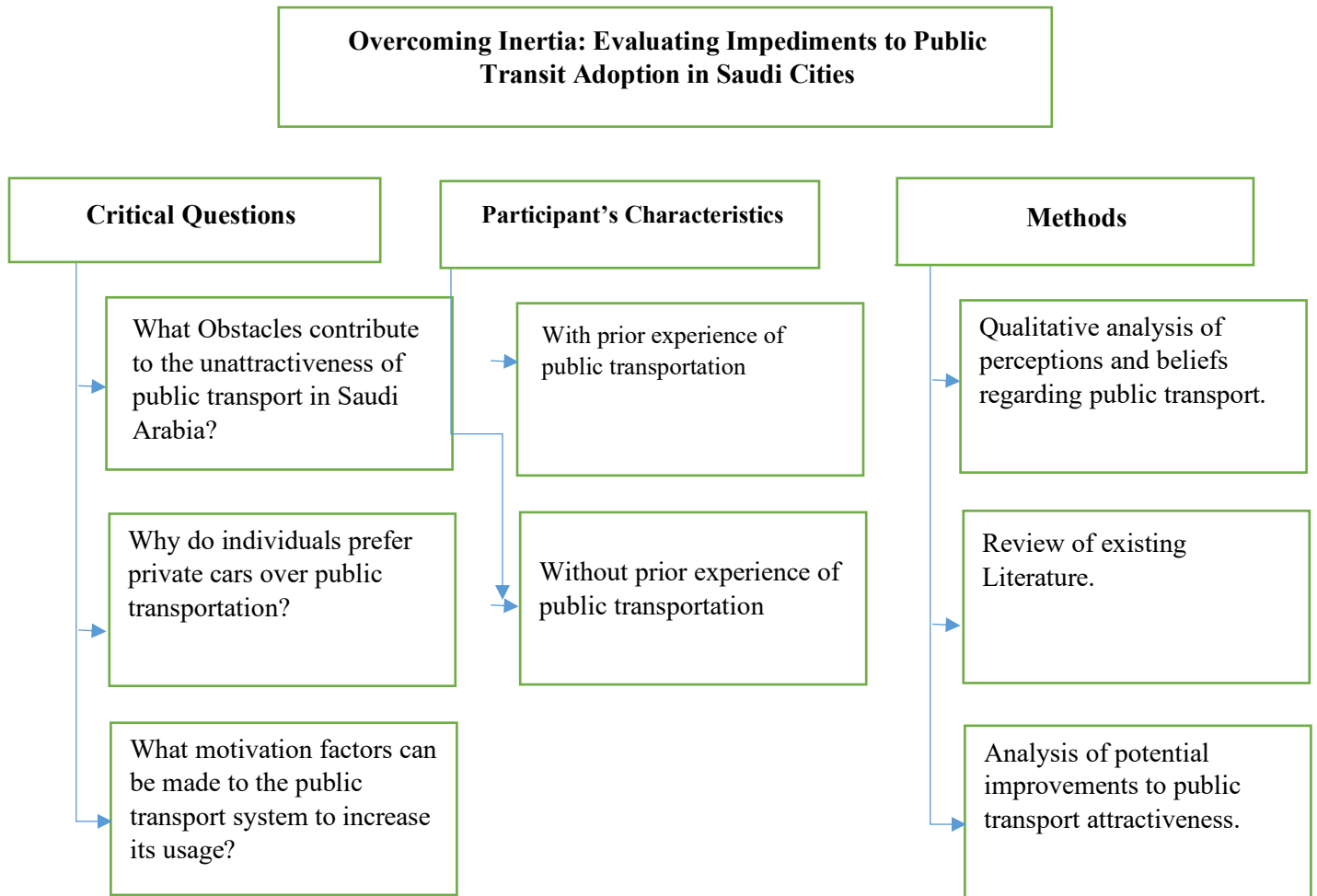


Figure 1: Key components of this research

2.0 Chapter Two: Literature Review

The literature extensively discusses the multiplicity of factors shaping Saudi Arabia's transportation landscape, underpinned by the dominance of private car ownership. Central to mobility patterns is the affordability of automobiles enabled by minimal registration costs and taxes, coupled with low fuel prices that render cars broadly accessible (Al-Fouzan, 2012; Alqahtani et al., 2012). According to Al-Dubikhi (2007), public transportation accounts for less than 2% of daily trips in Saudi cities, while private vehicles account for approximately 85%. Even though there are strong sustainability reasons to adopt public transit, these dynamics have fostered a dependence on cars and the perceptions of the convenience, status, and flexibility they provide. Research confirms that the low monetary costs of driving are a major factor in the development of car-centric habits that have persisted over the last several decades. Riyadh stands out as a vast metropolis that prioritizes unfettered individual mobility. The majority of daily commutes in this city are made possible by private, point-to-point transportation (Al-Hathloul, 2017).

Primary behavioural obstacles, as shown by the data, are deeply ingrained mobility cultures and aspirations that favour automobile transport. Research shows that many Saudi commuters continue to choose driving even when public transportation is more economical for certain trips. This is because many of these drivers have non-financial reasons related to things like identity, emotions, and perceptions that are difficult to change (Steg, 2005). The dry climate of Riyadh, where summer temperatures can reach 50 degrees Celsius, makes outdoor modes of transportation like walking, cycling, and waiting for buses less appealing. Proposals for new public transit projects, such as the Riyadh Metro, face opposition due to complex mobility headwinds. This highlights the need for multi-pronged transition strategies that address not only

infrastructure availability and costs, but also convenience, subcultures, and the emotional aspects of transportation decisions. According to Alotaibi and Potoglou (2017) and Queiroz et al. (2020), private vehicle usage is likely to persist unless there are thorough policies that address both the practical and cultural factors that influence people's travel motivations and the geographical factors that cause haemorrhage.

Scholars contend that cultural and behavioural domains exert particularly tenacious inertia when it comes to public transportation adoption in Saudi Arabian cities, although studies acknowledge that these hurdles incorporate both financial and non-financial aspects. Research shows that most people see public transportation as a shackled, last-ditch effort, used only by economically disadvantaged groups who have nowhere else to go (Aljoufie, 2016). The attractiveness of public transportation, particularly buses and trains, is severely hindered by this stigma. According to the numbers, stigma is made up of different parts that include things like socio-cultural identities and gaps in experience. When it comes to service gaps, studies show that many people, particularly women and families, are put off by things like overcrowded stations and vehicles without privacy protections, waiting areas that are exposed to bad weather, and problems with reliability and network connectivity (Aldalbahi & Walker, 2015). According to Beirão and Cabral (2007), the lack of enthusiasm for public transportation is exacerbated by the negative connotations associated with it, such as deprivation, alienation from dominant car cultures, and the potential loss of identity that comes with giving up personal cars in favour of mass transportation.

As a result, public policy and communication initiatives are desperately needed to reframe the subliminal messaging that portrays public transportation like buses and metros as a means of transportation for the oppressed. Dismantling stigma requires strategies that portray

modern transit services as enabling aspirational lifestyles and national ethos, not just as a last resort for captive commuters (Steg, 2005). Systems where factors like cleanliness, cooling, polite personnel, and connection efficiencies take priority over pure utility considerations in design choices and contracts are necessary because research shows that amenities and experiences significantly impact perceptions (Eboli & Mazzulla, 2007). Broadening accessibility across income segments and realigning services and messaging with subcultural particularities are crucial, according to the literature, for a lasting revival of mainstream public transit. As a supplement to awareness campaigns emphasizing community belonging, environmental citizenship, and life quality arguments, recommendations include family coaches, prayer spaces, women and children sections, and targeted subsidy programs (Redman et al., 2013).

Hard policy interventions are just as important, according to experts, as the urgent need to dispel stigmatized perceptions that dampen interest in public transportation in Saudi cities. According to Kreutzig (2014), transportation platforms in car-centric contexts are expected to be flexible and reliable, but in practice, they often fall short due to insufficient last-mile provisions, integration complexities, and weak service networks. According to research, there are still obstacles to people willingly using public transportation, such as insufficient coverage due to infrequent or missing routes and limited access to the first and last miles. Such deficiencies impose friction costs on people considering modal migrations, whether they be in dispersed residential areas without nearby pickup points or in office parks and commercial centres without connectivity (Delbosc & Currie, 2011). When compared to the convenient door-to-door mobility offered by ride-hailing services or personal automobile ownership, research shows that uncertainty regarding wait times and multi-leg journeys involving changes add even more inconvenience. The necessity for integrated transportation to connect origins/destinations and

trunk routes is emphasized by these viewpoints. In order to remove access barriers, experts agree that mass transit networks must prioritize multimodal integration, which includes parking, micro-mobility, walking, and cycling (Pojani & Stead, 2015). Research also highlights the importance of improving frequency and reliability, as well as coordinating schedules and stops in real-time, as crucial for increasing certainty and decreasing service quality gaps with cars (Tirachini et al., 2014).

Experts also stress the need of transit-oriented city planning strategies for increasing accessibility and ridership. According to Cervero and Murakami (2008), land use plans that prioritize dense mixed-use centres located along metro corridors and circulator networks not only facilitate changes in mobility culture but also alleviate navigational hardships. According to experts, the mobility calculus and choices at the periphery can be reshaped through the up-zoning of pedestrian-friendly precincts that link multifunctional hubs with reduced parking provisioning. When it comes to identifying problems with public transportation in Saudi Arabian cities, specialists warn against simplistic solutions and insist on comprehensive plans that include new infrastructure, new policies, and public awareness initiatives.

Investments in transit-oriented development and multimodal interconnections should be prioritized in order to achieve long-term success in reducing reliance on automobiles, according to research (Cervero & Kang, 2011). But experts warn that unless we also work to change people's attitudes about mobility and whiskey, the infrastructure we build runs the risk of being underutilized. It is necessary to appeal to Saudi commuters' emotions because, as pointed out by Alotaibi and Potoglou (2017), the private automobile makes it difficult to displace feelings of power, control, and status. Therefore, academics stress the importance of social marketing campaigns that recast public transportation like buses and metros as enablers of contemporary

sustainable lifestyles rather than merely cost-cutting measures, in order to increase ridership (Steg, 2005). Particular resonance may be evoked by resetting communication around issues of nationality, belonging, and collective environmental duty. Research also shows that income-tiered concession programs, family coaches, and women's sections can all benefit from targeted amenities and pricing policies that address stigma and affordability at the same time (Redman et al., 2013).

Such multi-domain strategies underpinned by unified visions resonating with subcultures emerge as indispensable acceleration catalysts. As King Abdulaziz Project for Riyadh and Jeddah Metro demonstrate, political leadership backing and nationwide coordination is pivotal to sustainable transitions (ADA, 2013). Scholars advocate centralized bodies like the Saudi Public Transport Authority that harmonize planning, regulation and integration across municipal agencies (Almatar, 2022). Academics further highlight that lasting reversals of deep-rooted mobility cultures require long-term outlooks transcending political cycles. Public transit networks shape urban form and travel habits over decades through irreversible capital outlays and land-use reconfigurations. Therefore, experts recommend depoliticized governance frameworks that balance continuity, adaptability and multi-stakeholder representations (Paget-Seekins, 2016). Ultimately, the literature cautions against miscalibrating the complexity of behavioural and systemic mobilities transformations warranting sustained multi-domain interventions.

3.0 Chapter Three: Methodology

A qualitative approach was undertaken for this study to gain an in-depth understanding of public transportation adoption barriers and perspectives. Primary data was collected through semi-structured interviews with 30 Saudi residents of diverse backgrounds regarding their mobility behaviours, public transit usage impediments and overall impressions. Purposive sampling was employed to capture perspectives spanning both experienced public transportation patrons and non-users deterred by prevailing obstacles. The flexible interview format enabled contextual probes while keeping discussions focused around key themes of convenience, efficiency, reliability and alignment with cultural values that emerged as salient from the literature.

All interviews averaging 20-25 minutes were recorded upon consent and professionally transcribed. Transcripts were anonymized with generic persona codes (such as 'P1', 'P2' and so on to represent 'Participant 1', 'Participant 2', and so on) hence shielding participant identities effectively. Data analysis entailed iterative coding of textual narratives to uncover explanatory categories, barriers and solution clusters. To add contextual interpretations to codes, descriptive memoing was also used. In order to achieve our goal of discovering systemic mobility adoption barriers based on sociotechnical regimes and lifestyles, we compared emerging themes across user categories for convergence and divergence. We excerpted representative quotes that summarized important challenges and suggestions to back up our human-centric interpretation of the results. To ensure a fair distribution of weight between theoretical frameworks and first-hand accounts, relevant literature was also cited.

Structured surveys fail to capture the richness and candour of the accessibility barriers and impressions associated with Saudi public transit, but the qualitative approach offered by the

chosen researcher more than meets the eye. Inadequate infrastructure, uncertainties about reliability, and conflicts with cultural comfort zones are all interrelated, as was shown by the probing questions that surveys fail to address. Unfortunately, we can't draw any firm conclusions about the population as a whole due to the small sample size. In order to better prioritize adoption obstacles, it would be helpful to conduct follow-up quantitative surveys based on the emerging categories.

3.1 Data Collection

The 30 interviewees were hand-picked from diverse professional networks and referrals, representing a range of geographic locations and major Saudi cities like Jeddah, Dammam, and Riyadh. Although public transportation options have expanded, most Saudi residents still use private vehicles, so this recruitment campaign targeted them specifically. From student commuters to office workers, administrators, housewives, and retirees, maximum variation sampling aimed to gather viewpoints from all walks of life. There were open-ended questions in the semi-structured discussion guide that probed barriers to using public transportation, problems with cultural alignment, and ideas for improvements along the dimensions of efficiency, convenience, and experience. Additional information about individual mobility concerns, values, and ways of life was gleaned through follow-up questions that encouraged respondents to elaborate on their initial answers. Before analysis, each interview recording was double-checked by hand with the expert transcript.

3.2 Data Analysis

The first round of provisional coding in ATLAS ti was based on important themes identified in previous research, such as privacy, connectivity, reliability, and flexibility. This guided the investigation and made it possible for inductive patterns to arise naturally from the

stories. The second cycle's use of descriptive memos to elaborate on categorical codes, barrier clusters, and recommendations shed light on explanatory linkages. For meta-inferences, matrices were used to look at how common barriers were for different types of users. Findings from the manuscript were supplemented with representative quotes that encapsulated common viewpoints. In order to situate first-hand accounts within theoretical mobility adoption models, citations from relevant literature were used. The last themes highlight the intersection of mass transit environments and sociocultural mores, as well as the systemic mobility impediments caused by infrastructure limitations.

4.0 Chapter Four: Data Analysis

Insights from qualitative research reveal a web of problems with adaptability, efficiency, connectivity, and cultural value alignment as causes of the slow uptake of public transportation in Saudi Arabia. The results highlight systemic sociotechnical hurdles rather than isolated ones, and they stem from the ways in which private mobility's inherent ease and experiences interact with urban norms and ways of life. Priority is given to private transportation due to its well-established flexibility and direct point-to-point connectivity, which can be tailored to meet individual needs. Because it is now possible to go from A to B without stopping, personalized mobility has become the standard. With the rise of ride-sharing apps that allow users to plan their own routes on demand, it's much easier to get people to change their habits and use public transportation, which follows predetermined schedules. This dimension, which includes convenience and individual freedom, runs the risk of being ignored by techno-centric viewpoints that are only concerned with growing networks and not with larger lifestyle commitments.

Public transportation still has a ways to go before it can be considered efficient, and this includes things like inadequate route density, gaps in the first and last mile of travel, and reliability uncertainties, all of which contribute to the persistence of these deeply ingrained patterns of behavior. The dangers and expenses of not using private transportation are heightened by problems like unreliable feeder connections, long travel times, and unpredictable schedules. Accessibility is further worsened by the lack of multimodal integration in Saudi Arabia's vast cities. People who are used to having more room to themselves may not be as enthusiastic about taking public transportation due to issues like lack of air conditioning, cramped seating, and overcrowding. When these limitations on physical efficiency interact with sociocultural influences, the opposition to using public transportation becomes even stronger. Because of

concerns about the lack of adequate privacy protections and gender segregation measures, some families and women choose not to use overcrowded trains and buses. The compromises made to meet societal norms and comfort requirements make public transportation less appealing than private vehicles, which offer more freedom. People will continue to use cars as a status symbol as long as targeted incentives and social stigma remain in place. This will prevent them from switching to more sustainable forms of transportation.

However, there have been positive advancements resulting from increasing congestion pressures and new transportation infrastructure projects, such as the Riyadh Metro. Community-oriented options are becoming increasingly popular as the advantages of the mobility ecosystem are acknowledged and the conventional perception of public transportation solely serving the economically disadvantaged starts to change. Nevertheless, to expedite the acceptance by the general population, it is essential to execute specific measures that address significant inefficiencies, barriers to multimodal connectivity, and any sociocultural disparities. Addressing the complex social and technical barriers associated with the interaction between private transportation, urban lifestyles, and the physical infrastructure is essential for promoting sustainable mobility. It is crucial to prioritize cultural alignment, which includes addressing privacy concerns, providing targeted subsidies, and conducting public engagement campaigns that align with societal mobility values. These efforts should be accompanied by expanding networks and integrating different modes of transportation, as they are essential steps in the process. Efforts to enhance public transportation usage in Saudi cities are crucial, but they must be accompanied by comprehensive strategies that address efficiency, convenience, and societal obstacles. Otherwise, the drive for sustainability may impede further advancements.

Qualitative research has revealed that public transit can have a subtle impact on riders' movement habits through customized interventions that address their evolving lifestyle. Crucial measures beyond increasing infrastructure involve reorganizing services to enable seamless integration with existing mobility systems and encourage the adoption of multiple modes of transportation. More precisely, the pandemic has changed the requirements and anticipations for travel as a result of the increase in remote work and online shopping. The demand for flexible and efficient transportation within urban areas is increasing as commuting schedules and shopping habits become less rigid. Hence, public transportation companies should embrace dynamic scheduling models and flexible routing, akin to ride-sharing platforms, rather than depending on inflexible schedules and predetermined routes. An effective approach to achieve this equilibrium is by utilizing adaptable "mobility-as-a-service" structures that integrate on-demand transportation options for short distances at the beginning and end of a journey with efficient and large-scale transportation routes. It is imperative to reconsider the marketing and user experiences of public transportation in order to emphasize methods of enhancing individuals' quality of life, rather than solely focusing on transportation between two points. In addition to individuals who have no other options but to use public transportation, promoting voluntary adoption can be achieved by highlighting personal advantages such as maximizing productivity during travel, alleviating stress, and fostering interactive communities. To effectively address sociocultural barriers, it is crucial to prioritize the integration of environmentally friendly transportation as a fundamental part of progressive self-perception and social inclusion.

Transit hubs serve not only as transportation destinations, but also as communal spaces where individuals can engage in activities such as shopping, working, and leisure. Densification

policies aim to enhance visibility and promote early voluntary users by encouraging the development of mixed-use districts that are supported by multimodal connectivity. Creating lively public spaces with both commercial and recreational attractions near transportation hubs can encourage a shift in transportation modes, resulting in mutually beneficial outcomes. A shift towards mobility ecosystems focused on people requires a platform mentality that extends beyond network expansion. It is more important to restructure infrastructure, operations, and engagement around improving the user journey in the built environment than to focus solely on technological enhancements. To achieve the desired level of sustainable systemic disruption, it is necessary to prioritize people over vehicles and to see mobility as an integral part of people's lives.

As more and more people use new options, such as the Riyadh Metro, signs of change are becoming apparent. The promise, however, can only be realized with the advancement of integrated platforms that span adaptable networks, user-oriented experiences, and contextually-tailored messaging. The need for human-centered reconfiguration in Saudi Arabia is growing as a result of the possibility of distant trends altering mobility requirements. Involving communities as active participants, rather than passive recipients, is essential to making the vision a reality. Emotional and practical value propositions that give people a stake in sustainable mobility advancements are necessary to mobilize public interest and ownership. As a result, messages need to appeal to both measurable efficiency gains and aspirational lifestyles and a sense of community through cultural branding.

One way is through gamification projects that focus on transportation while encouraging people to connect with one another, whether it's on a personal or community level. Using apps that track different modes of transportation, carbon savings, and healthy habits can be a great way to

encourage people to use public transportation and make their sustainability efforts more concrete. Additional positive peer pressure can be injected through leader boards that promote friendly competition amongst colleagues, offices, or districts. Grassroots momentum can be fuelled by viral strategies that tap into people's natural desire for social validation and fulfilment. Furthermore, resonance relies on humanizing mobility platforms. Services that prioritize the needs of their customers, such as neighbourhood rideshares on demand, coaches specifically for families or women, and customization options that respect their privacy and cultural preferences, demonstrate empathy that is in line with Saudi values. Social equity principles are further advanced by accommodating special needs and incorporating accessibility into network and vehicle designs. To encourage public funding, it is critical to demonstrate how public transportation unites development and spares no one.

Additionally, engagement models should prioritize riders' recognition as multi-dimensional humans with rich life experiences, rather than merely as captive commuters. Human stories that are easy to relate to and that encourage voluntary involvement are highlighted as they show how diverse Saudi residents use their new mobilities to improve their careers, relationships, and personal development. Public transportation cultures grounded in people's aspirations are fostered by such compassionate framing. Successfully addressing long-standing mobility behaviours requires a comprehensive approach that addresses both functional and sociocultural barriers. However, the basis is also made up of citizen-focused visions that are adjusted to local nuances. For this reason, achieving sustainability on a large scale requires a combination of top-down policies and bottom-up collaboration to co-create human-centered mobility ecosystems. Aspirational messaging, operational efficiencies, and infrastructure

advancements should be harnessed as components of integrated mobility platforms, according to the blueprint.

A once-in-a-generation chance to rethink mobility in Saudi Arabia in light of humanistic principles has presented itself as the country's mobility demands are being transformed by changes in lifestyle. Affordable, environmentally friendly, and highly adaptable public transportation options will be in high demand in the aftermath of the pandemic. The potential for mobility innovation is abundant in NEOM's futuristic model. New mobility behaviours and collective mind-sets in line with Vision 2030 are being propelled by encouraging tailwinds, despite the persistence of entrenched obstacles. However, developing mobility systems that are interwoven with sociocultural fabric is the key to achieving the promise, rather than relying solely on technology. A shift toward a focus on people must occur immediately. Integrating mobility governance across systemic and human dimensions is necessary to realize the promise. It is crucial to establish specialized oversight bodies that prioritize user-centric advancements over infrastructure improvements alone. In order to understand changing mobility expectations, their mandate must include ongoing qualitative engagements with diverse citizen segments. Maintenance of citizen-centricity can be achieved through regular audits that measure alignment with human-focused key performance indicators on reliability, convenience, and experiential factors. In addition, these groups can plan community-specific nudge campaigns and unified messaging.

To finance large-scale network expansion and service enhancements, it is necessary to explore new funding models such as mobility fees and public-private partnerships. One way to capture value is through congestion charges, parking levies, or license plate auctions. These measures discourage the use of private automobiles and fund public transportation. In addition,

new funds and innovations can be introduced through public-private partnerships that combine the efficiency of the private sector with public supervision. But governance frameworks should deliberately strike a balance between market-based models and equity protections to make sure everyone can afford it. It is crucial to include anti-discrimination language, fair usage rights, and targeted aid for disadvantaged groups in government policies and contracts with service providers. Ethical and efficient business models should be managed in a way that takes community feedback into account at all times.

Proprietary leadership that prioritizes improvements driven by users and protects the rights of citizens is essential for public transportation to soar. Both structural mobility problems and societal obstacles to adoption need to be addressed by the underlying institutional frameworks. Infrastructure development, financial sustainability, and cultural resonance can all be orchestrated through integrated governance with people-centric visions as the starting point. To achieve its sustainability goals, Saudi Arabia must combine top-down supervision with bottom-up cooperation and private sector innovations to shape its transportation systems around people's experiences. Maintaining mobility ecosystems in which people are respected, given agency, and have a stake in the community's future is the ultimate aim of governance.

5.0 Chapter Five: Findings

The findings of this study indicate several factors that contribute to the promotion of public transportation usage in the Kingdom of Saudi Arabia. These factors include expanding the coverage of public transport stations to all areas, increasing the frequency of trips, minimizing frequent stops for buses and trains, ensuring privacy in public transportation, reducing the cost of public transport services, and providing adequate information on bus routes and schedules. These results have been categorized based on the main ideas and themes extracted from the study's questions, and they have shed significant light on this phenomenon.

Motivation Factors

According to the participants' responses, there are several factors that act as motivators for them to use public transportation and encourage them to rely on it as their primary mode of transportation.

Comprehensive coverage of public transportation

The participants emphasized the significance of comprehensive coverage of public transportation in vital areas within cities. It is one of the key factors that motivates people to use public transportation, as it facilitates the true benefit of using it. Without adequate transportation coverage reaching desired destinations, it becomes a significant hindrance to the adoption of public transportation. One participant mentioned the following:

“In my opinion, I believe that public transportation in Saudi Arabia is good, but it needs significant improvements and coverage across all regions of the Kingdom. We need to connect all areas with one comprehensive network, and we also need an international network for

traveling to Gulf countries through trains, as it would be a more cost-effective option compared to other modes of transportation”.

(with prior experience of public transportation)

The opinions of participants who do not have prior experience with public transportation aligned with this point, as one of them stated:

“In my opinion public transportation needs to be in more geographic areas”

(without prior experience of public transportation)

Increasing the frequency of trips

The number and availability of trips are crucial in encouraging people to use public transportation. A significant percentage of participants affirmed this point, mentioning that the current number of trips is inadequate, especially during peak hours.

“The number of trips for trains is limited, and they fill up quickly, so they are not always available”.

(with prior experience of public transportation)

“The number of trips for trains is limited, and they fill up quickly, so they are not always available”.

(with prior experience of public transportation)

Lowering the prices of public transportation services

The pricing of the service proved to be of utmost importance in the motivators that encourage participants to use public transportation in Saudi Arabia. Many participants considered it a decisive factor in their decision to opt for public transport for their commuting needs.

“The affordability of bus fares is a significant consideration for me as it is a cost-effective option”.

(with prior experience of public transportation)

“For me, the cost is a crucial factor”.

(with prior experience of public transportation)

“Well If they offer a monthly card with discounts and for students and old people it must be free”.

(without prior experience of public transportation)

Providing privacy

Privacy is an essential element for participants, as it served as a significant motivator.

Considering the societal norms, customs, and traditions, privacy is regarded as an important factor to be taken into consideration.

“We need separate seats for women until they get used to it and until the society get used to it since it is new now and we need time to get comfortable to send our families by their own”.

(without prior experience of public transportation)

“I think they needs to separate men from women I have seen many case women ask to change seats specially on trains so it will better make it available online when booking to choose women or man side”.

(with prior experience of public transportation)

Obstacles

Reducing Frequent Stops for Buses and Trains

Frequent stops in public transportation pose a significant barrier to its usage. This results in delays in reaching the final destination and causes inconvenience and fatigue during the commute.

“Buses stop at many stations, causing significant delays in reaching the destination”.

(with prior experience of public transportation)

“The number of stops bothers me a bit for that I use private car”.

(without prior experience of public transportation)

Lack of information availability

Difficulty in obtaining information related to schedules, arrival and departure times has been a significant concern, making it challenging for individuals to make decisions regarding public

transportation usage. Participants mentioned that information is not readily accessible and lacks clarity.

“The bus schedules are often unclear and not easily accessible, making it difficult to know when the next bus will arrive and depart”.

(with prior experience of public transportation)

“As for buses, I haven't used them because their stations are far from where I live, and I am not aware of their schedules”.

(without prior experience of public transportation)

Lack of public transportation availability

Many participants considered the absence of public transportation in their areas as a primary reason for not using it. Numerous cities within Saudi Arabia lack public transportation services.

“There is also a lack of public transportation options in that area, so I would have to resort to renting a private car, which results in higher costs compared to traveling with my own car”.

(without prior experience of public transportation)

“Not available at my city”.

(without prior experience of public transportation)

6.0 Chapter Six: Conclusion

The goal of this study was to find out what stops a lot of people from using public transportation in Saudi Arabian cities, even though sustainability is becoming more and more important. The goal was to shed light on the complex web of issues that prevents the voluntary shift away from private transportation dominance, including infrastructure constraints, reliability worries, and conflicts with existing mobility cultures. The study utilized an inductive qualitative method, involving 26 residents who were interviewed using semi-structured questions to explore their perspectives and experiences related to obstacles in relying on mass transit. The purposive sampling method targeted residents of major cities such as Riyadh and Jeddah who continue to rely on cars for transportation, despite the presence of bus and metro networks that aim to alleviate traffic congestion. An iterative thematic analysis of textual narratives identified systemic sociotechnical barriers as the fundamental cause of ongoing underutilization of public transit. The findings emphasize the enduring nature of convenience and direct connectivity habits that have been developed over many years of prioritizing automobiles in urban planning, which are now being exploited by ride-hailing platforms. The persistence of urban built fabric misalignments and extensive low-density morphologies without transit-oriented development creates obstacles for first and last-mile access, contributing to compounding behaviour inertia. Furthermore, the cultural aspect is evident in various ways, including concerns related to privacy, gender, and social stigma, which are influenced by existing social norms and limit the widespread acceptance of public transportation without any reservations. These perspectives, whether stemming from discomfort with being physically close to strangers or the perception of buses and trains being associated with marginalized individuals, contribute to people's reluctance. Hence, it is crucial to have a comprehensive strategy that includes the re-evaluation

and improvement of policies, infrastructure, and communication in order to achieve a revival in transportation. The findings justify promoting modifications in four domains. To address accessibility and reliability issues and achieve a level of flexibility similar to private transportation, it is beneficial to integrate feeder connections with parking and circulation provisions in a multimodal manner. Furthermore, enhancements to decision attributes such as cooling, seating, and segregation arrangements can intensify cultural alignment.

Furthermore, the utilization of gamified engagement platforms that offer incentives for adopting eco-friendly modes of transportation and promote desirable lifestyles can expedite the process of cultural transformation, particularly among young people. Ultimately, the key to achieving sustainable large-scale network expansion lies in implementing centralized governance that simplifies transit-oriented development, value capture funding, and citizen participation.

In its simplest form fostering public transportation systems requires addressing the interconnected obstacles that arise from both the physical infrastructure and cultural aspects.

However, achieving long-term acceleration in adoption also depends on humanizing transportation by prioritizing people over vehicles. This involves creating services and messages that align with lifestyle motivations. The future requires a comprehensive rethinking of transportation that encompasses both physical infrastructure and community involvement.

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Appendix

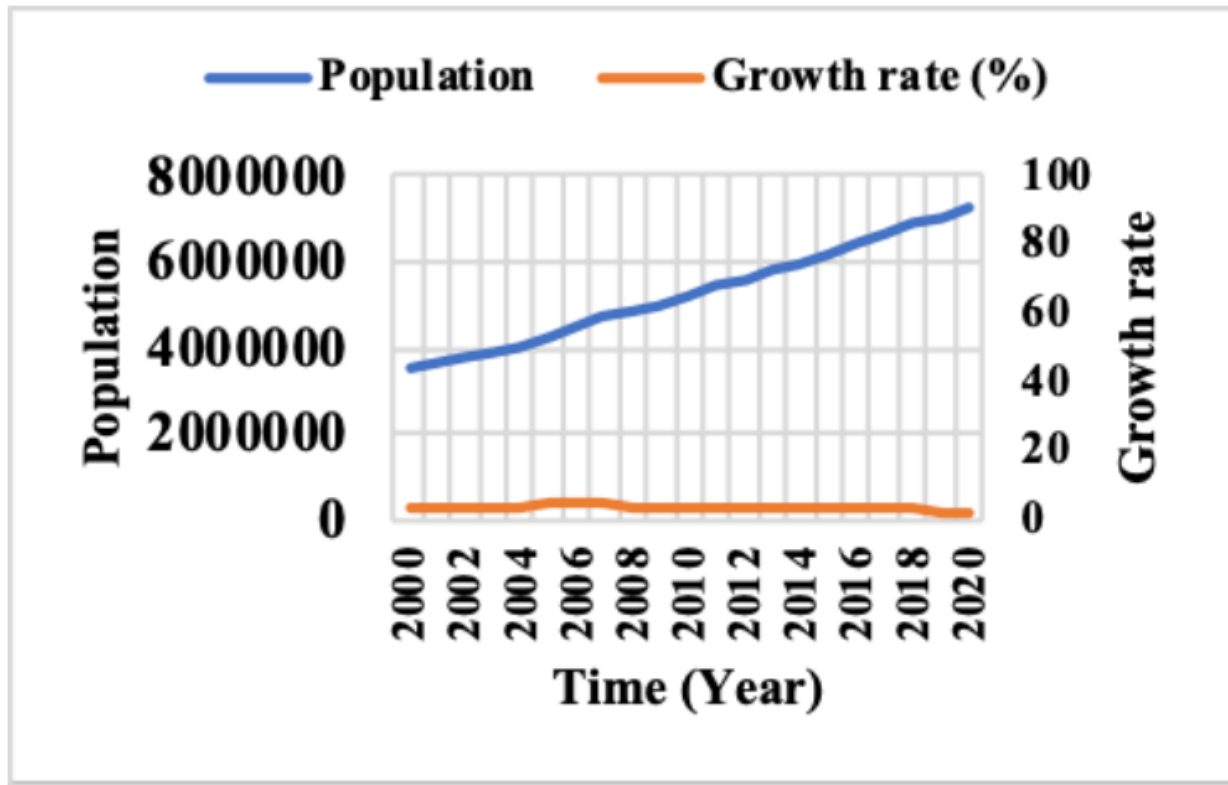


Figure 2: Riyadh's metropolitan population and growth rate for past two decades (Al Zohbi, 2021)

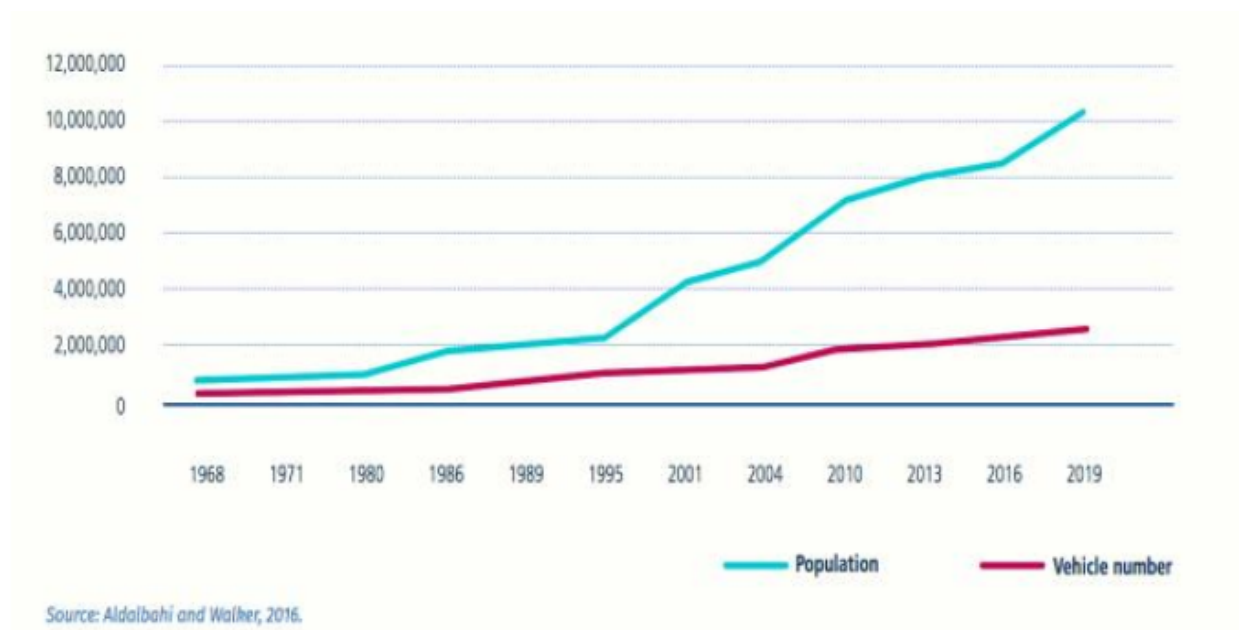


Figure 3: Number of vehicles and inhabitants in Riyadh from 1968 to 2019.

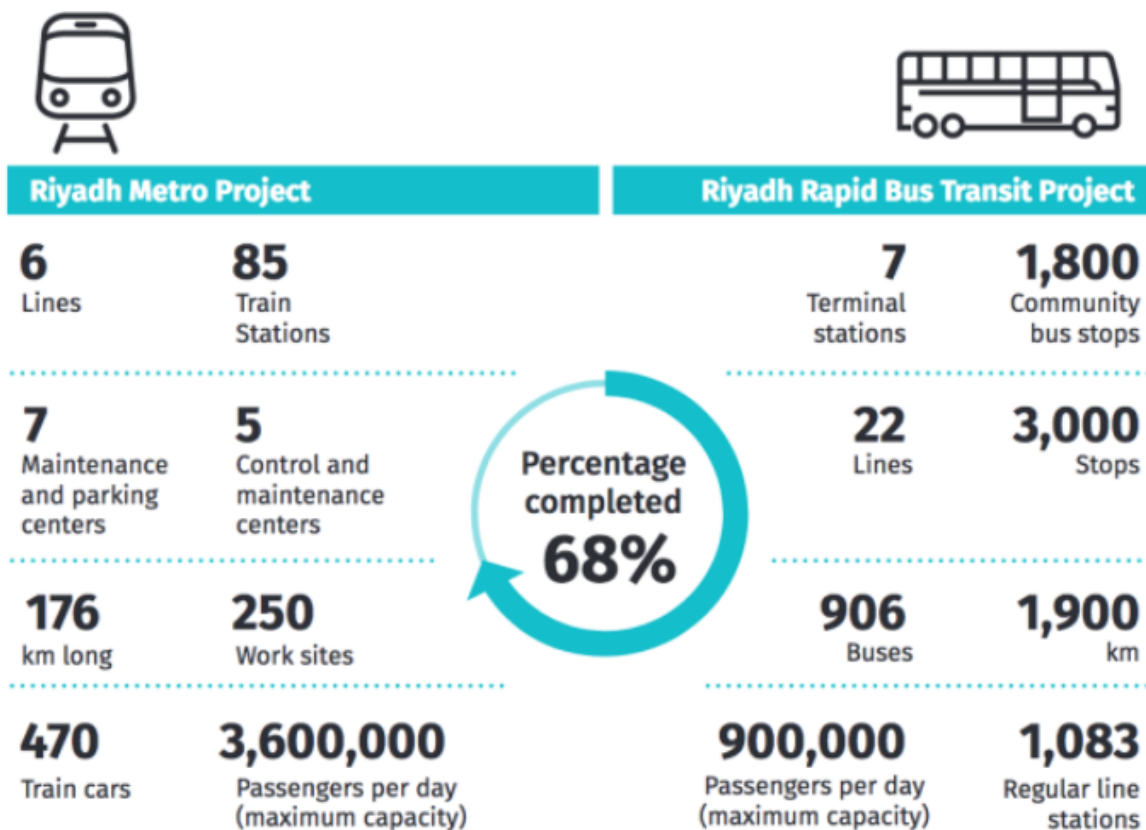


Figure 4: King Abdul-Aziz project for Riyadh public transport system (Almatar, 2022)

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