Cultural Value Conflicts in Adapting to Modern Green Public Transport Systems: An Intergenerational Study in Developing Cities

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Abstract

This study explores intergenerational cultural value conflicts in the adaptation to green public transport systems in Vietnamese cities, explaining the paradox between significant investment in green infrastructure and low ridership rates. Through in-depth interviews with 60 participants from three generations (X, Y, and Z) in Hanoi, Ho Chi Minh City, and Da Nang, and applying interpretative phenomenological analysis, the study finds that each generation constructs a distinct "cultural space": Generation X perceives public transport as a "loss of control," Generation Y engages in "cultural negotiation" between conflicting values, and Generation Z constructs a new "green face." The results show that the metro system is accepted by all three generations, but for different reasons – luxury, modernity, sustainability – creating a rare point of convergence. The study proposes a "Tri-layered Cultural Space" model

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that challenges linear Western transition theories, asserting that the green transition in a transitional society is a process of "cultural accretion" rather than "replacement." This calls for generationally-segmented policies and the design of "multi-faceted" systems that align with the cultural logic of each group.

Keywords: Green public transport, cultural value conflict, intergenerational study, face.

1 Introduction

Although major Vietnamese cities are investing significant financial resources into green public transport systems, a practical paradox has emerged: while the urban railway line in Hanoi has been positively received with ridership exceeding forecasts, the Bus Rapid Transit (BRT) system – another green-oriented model – has experienced lower-than-expected usage. What explains this difference in public acceptance of two systems with similar goals and comparable technology? We argue that the answer lies not in technical or infrastructural factors, but in the interplay of cultural value layers.

Vietnam is undergoing urbanization at a breakneck pace. According to a [1] report, Vietnam's urbanization rate increased from 24% in 2000 to 37.5% in 2020 and is projected to reach 50% by 2030. This process is accompanied by a severe increase in air pollution, with PM2.5 levels in Hanoi and Ho Chi Minh City frequently exceeding WHO safety limits by 2–3 times [2]. Private transport, especially motorbikes, contributes to 70% of toxic emissions in urban areas [3, 4]. To address this challenge, the Vietnamese Government has invested heavily in green public transport systems. The Cat Linh – Ha Dong metro line, with a total investment of hundreds of millions of dollars, is now operational, alongside the BRT system and plans for electric bus development in major cities [5]. However, the public transport usage rate remains quite low, accounting for only 12% in Hanoi and 9% in Ho Chi Minh City, far below the target of 35% by 2025 [6]. This paradox raises questions about the non-technical factors hindering the transition process.

Globally, a vast body of literature has sought to understand the drivers of and barriers to public transport adoption. Early research, heavily influenced by rational-choice models like the Theory of Planned Behavior (TPB), focused on identifying instrumental factors such as cost, travel time, convenience, and safety as primary determinants of mode choice. While this research has provided a crucial foundation, a significant shift has occurred in

recent years. Scholars now increasingly recognize that travel decisions extend beyond purely utilitarian calculations and are deeply embedded in psychological and socio-cultural contexts. This "socio-cultural turn" emphasizes the symbolic and affective meanings of transport modes, acknowledging their role in identity construction, social status signaling, and the expression of personal values [7, 8]. This growing consensus highlights that understanding user acceptance requires delving into the complex, often subconscious, cultural logics that shape behavior.

While this nuanced, socio-cultural turn is gaining momentum globally, the research landscape in Vietnam presents a different picture. The majority of current research on green transport in Vietnam has largely been bifurcated into two main streams. The first, and more dominant, stream focuses on technical, economic, and policy aspects. These studies provide essential groundwork, emphasizing the need for sustainability indicators tailored to Vietnam's specific context [9] and highlighting critical issues in project implementation, such as the financial impacts of delays in site clearance and unreliable budget estimates [10, 11]. The second stream has begun to explore user-centric factors, often employing quantitative models like the TPB to identify determinants of mode choice. Such studies identify factors like convenience, cost, and perceived safety as key predictors.

However, while practically valuable, both streams leave a significant analytical void. The first stream, by its nature, does not address the human dimension of acceptance. The second, while user-focused, often treats cultural values as static, measurable variables (e.g., 'attitude' or 'subjective norm') without delving into their complex, lived meanings or historical underpinnings. Consequently, a critical research gap persists: the 'why' behind the quantitative findings. For instance, why is 'convenience' perceived so differently across age groups, and how is the concept of 'face' – a powerful cultural force – actively negotiated in daily travel decisions, creating a barrier that rational-choice models cannot fully capture? This is where our study intervenes. Transitional societies like Vietnam possess a unique characteristic: the concurrent existence of multiple generations shaped by distinct socio-cultural value systems, deeply influenced by Confucianism, the socialist period, and the wave of globalization [12]. This stratified cultural landscape, with its complex and often contradictory dynamics, remains a largely unexplored frontier in green transport development research, a frontier this study aims to map.

This study, for the first time, questions an assumption often taken for granted in previous research: is the model of transport transition from private

vehicles to public transport truly universal? Or, in the context of transitional societies, does this process operate according to a specific, context-dependent logic? Our core thesis is that decoding the "cultural space" in which each generation exists is not only the key to explaining the paradox in the reception of green transport in Vietnam but can also contribute to a broader reconsideration of sustainable transition models.

Therefore, this study is conducted to explore intergenerational cultural value conflicts in adapting to green public transport systems in Vietnamese cities. By analyzing how three generations interpret the same physical space – the green public transport system – differently, the study not only fills the gap regarding cultural factors in transport research but also proposes a new theoretical framework: Accordingly, the green transition process is not a sequential replacement path but a process wherein value systems do not eliminate each other but coexist and interact within a complex structure. Three specific research questions are posed: (i) How do different generations in Vietnam perceive the green public transport system, and by what cultural-historical contexts are these perceptions shaped? (ii) What cultural value conflicts emerge between generations and hinder the adaptation to green public transport? (iii) How can these differing values be harmonized in designing policies and green public transport systems appropriate for a multicultural context?

Beyond the introduction, the remainder of the paper is structured as follows: The next section reviews theories on green transport transition, intergenerational studies, and the Vietnamese cultural context. Section 3 presents the qualitative research methodology with 60 in-depth interviews. Section 4 analyzes the findings on the three interpretations of public space and the conflict of green face. Section 5 discusses the theoretical contributions and practical implications. The final section concludes and suggests directions for future research.

2 Literature Review

2.1 Theories of Green Transport Transition

The socio-technical systems transition theory by Geels (2012) provides a critical analytical framework for understanding the sustainable transport transition. According to this theory, a green transition is not merely a technological substitution but a complex restructuring process occurring at three levels: the socio-technical landscape, regimes, and innovation niches [13].

However, this theory was primarily developed in Western contexts with relative cultural and institutional stability. [14] emphasizes that a sustainable transport transition requires not only technological improvements but also a fundamental change in human mobility behavior. In this context, [15] developed a stages-of-change model for travel behavior, showing that the process of shifting from private to public transport involves four stages: pre-contemplation, contemplation, preparation, and action. However, recent studies by [16] indicate that cultural factors play a pivotal role in shaping social norms and personal values, thereby profoundly influencing mode choice.

2.2 Intergenerational Studies and Cultural Values

The theory of generations by [17], further developed by [18], posits that each generation shares common historical experiences during their formative years, leading to differences in values and behaviors. In the East Asian context, [19] identified long-term orientation and collectivism as two prominent cultural traits affecting social behavior. In Vietnam, [20] developed the "mindsponge" concept, describing how Vietnamese people selectively absorb new values while maintaining traditional foundations. Particularly, the concept of "face" in Vietnamese society is not just personal honor but also reflects social status and is expressed through material consumption, in which the mode of transport plays a significant role. [21] show that face in Vietnamese culture is multi-dimensional, embodying both Confucian elements of family honor and the aspirations of individual modernization.

2.3 The Context of Green Transport in Vietnam

Vietnam's green transport development strategy for the 2020–2030 period sets ambitious goals to increase public transport usage to 25–30% in major cities and reduce greenhouse gas emissions from the transport sector by 20% [22]. This plan includes developing 8 metro lines in Hanoi and Ho Chi Minh City with an estimated total investment of over 10 billion USD, along with converting 100% of buses to clean energy by 2030 [23]. However, [6] point out that implementation faces serious socio-cultural challenges. Research by Emberger (2022) shows that 73% of urban residents still consider the motorbike a symbol of freedom and personal independence, while only 18% view public transport as a preferred choice. This resistance stems not only from convenience but also from deep-seated perceptions of social status and face [24].

Compared to other Southeast Asian countries, Singapore has achieved 67% public transport usage thanks to strict private car restriction policies and an efficient MRT system [25]. Bangkok, with its BTS and MRT systems, has reached a 40% market share after 20 years of development, thanks to successful integration with other transport modes [26]. However, Kuala Lumpur has only reached 20% despite large investments in infrastructure, reflecting challenges similar to Vietnam regarding the culture of private car use [27]. Notably, [28] research in Taipei shows that generational factors play a significant role in public transport acceptance, with the younger generation being more positive but still influenced by the social norms of their parents' generation.

2.4 Proposed Theoretical Framework

Based on a synthesis of the discussed theories, this study proposes an integrated analytical framework with three dimensions: cultural values, generational characteristics, and green transition dynamics. This framework extends [29] multi-level perspective by adding a cultural-generational dimension as a critical mediating factor. Specifically, we argue that each generation creates a distinct "cultural filter layer" through which they interpret and react to green transport initiatives. Generation X (born 1965–1980), with their experiences of the subsidy period and economic reforms, may view public transport through the lens of control and loss of freedom. Generation Y (born 1981–1995), who experienced the economic transition, may weigh pragmatism against the pressure for face. Generation Z (born after 1996), who grew up in the digital age with higher environmental awareness, may readily accept green transport as part of a modern lifestyle. The initial conceptual model proposes that the interaction between these three "generational cultural layers" creates points of tension but also opens opportunities for designing interventions tailored to each target group.

3 Research Methodology

3.1 Research Design

This study employs an exploratory qualitative method with an interpretative phenomenological analysis (IPA) design to deeply understand how different generations experience and make meaning of the green public transport system. The IPA approach was chosen for its ability to capture the complexity of lived experience and how people interpret their world within a specific

cultural context [30]. The multi-generational comparative design allows us not only to explore the unique meanings each generation assigns to green transport but also to identify points of convergence and value conflicts among the groups. The combination of IPA and intergenerational comparative analysis creates a unique methodological framework suited to the multi-layered nature of the research problem – where historical cultural layers overlap and interact within the context of modern green transition.

To systematically implement this approach, the research process was structured into four interconnected phases, from theoretical grounding to model development. Table 1 provides a detailed overview of these phases and their corresponding activities.

3.2 Site and Context

The three selected cities – Hanoi, Ho Chi Minh City, and Da Nang – represent diversity in geography, urban scale, and stage of green transport development in Vietnam. Hanoi, with its operational Cat Linh – Ha Dong metro line since 2021 and BRT system, represents the most diverse model of green public transport. Ho Chi Minh City, with its nearly completed Metro Line 1 and pilot electric bus network, represents a transitional phase. Da Nang, smaller in scale but with an eco-bus system and plans for BRT development, offers a perspective from a medium-sized city. Data collection took place from March to August 2025, a period chosen to avoid confounding factors from the Lunar New Year and the rainy season, while ensuring the green transport systems had been operating long enough for residents to have realistic experiences.

3.3 Participants and Sampling Method

A sample size of 60 participants was determined based on the principle of information saturation in qualitative research [31]. Studies by [32] show that for a multi-group IPA design, code saturation is typically achieved with 9–17 interviews per group, and meaning saturation with 16–24 interviews. With 20 participants per generation, the study ensures surpassing the saturation threshold while maintaining feasibility. Generations were defined according to Dimock (2019): Generation X (1965–1980) experienced the subsidy period and economic reforms, Generation Y (1981–1995) grew up during the integration period, and Generation Z (1996–2010) are "digital natives" with high environmental awareness.

A maximum variation purposive sampling strategy was implemented in three stages. Stage 1: Identifying diverse access points including residential

Table 1 The four phases of the research process

Phase	Key Activities	Methodological Rationale/Key Output
Phase 1: Foundational & Design	– Comprehensive literature review (global & Vietnamese contexts). – Formulation of research questions and objectives. – Selection of Interpretative Phenomenological Analysis (IPA) as the core methodology. – Establishment of the multi-generational comparative design.	**Rationale:** To establish the theoretical and empirical research gap and select an appropriate epistemological framework capable of exploring lived experiences. **Output:** A robust theoretical framework and a clear research design.
Phase 2: Empirical Data Collection	– Maximum variation purposive sampling to select 60 participants (20 per generation) across three cities. – Conducting 60-90 minute semi-structured, in-depth interviews. – Utilizing photo elicitation and hypothetical scenarios to stimulate deeper reflection.	**Rationale:** To gather rich, detailed, and context-specific narrative data on the lived experiences and perceptions of a diverse sample. **Output:** 60 verbatim interview transcripts and field notes.
Phase 3: Thematic & Phenomenological Analysis	– Application of Braun & Clarke's (2019) six-step reflexive thematic analysis. – Systematic coding of data using MAXQDA 2024 software. – Use of the constant comparative method to identify patterns within and between generations. – Inter-coder reliability check (Cohen's Kappa = 0.83) to ensure analytical rigor.	**Rationale:** To systematically identify, analyze, and report patterns (themes) within the data, moving from descriptive accounts to interpretative analysis. **Output:** A validated codebook, a hierarchy of superordinate and subordinate themes.
Phase 4: Theoretical Synthesis & Model Building	– Interpretation of emergent themes to build a conceptual model. – Development of the "Tri-layered Cultural Space" model. – Cross-referencing the model with field observations at transport hubs for validation and triangulation.	**Rationale:** To synthesize the analytical findings into a novel theoretical contribution that explains the core research phenomenon. **Output:** The validated "Tri-layered Cultural Space" model and its theoretical implications.

Source: Author's synthesis.

areas, offices, schools, and shopping centers near green transport routes. Stage 2: Preliminary screening through short online and offline surveys to identify individuals meeting criteria for age, experience with green public transport (used at least 3 times), and willingness to share their views. Stage 3: Final selection ensured a balance in gender (50/50), income diversity (low/middle/high according to GSO classification), and educational level (from high school to postgraduate), creating a sample that fully reflects the spectrum of social experiences.

3.4 Data Collection

Semi-structured in-depth interviews lasting 60–90 minutes were designed following a "reverse funnel" principle – starting with broad questions about daily transport experiences, then narrowing down to perceptions of green transport, and finally exploring value conflicts in depth. The interview guide was developed based on four main themes but remained flexible to pursue emergent topics. Theme 1 explored perceptions and understanding of the concept of "green" in transport. Theme 2 focused on emotional experiences – from pride to shame – when using public transport. Theme 3 delved into the concept of face and how it is expressed through mode choice. Theme 4 identified cultural barriers and potential drivers for behavior change.

A photo elicitation technique was used with 12 pictures of different traffic situations to trigger memories and emotions [33]. Hypothetical scenarios were designed to explore reactions in different social contexts, for example: "If you had an important meeting with a business partner, which mode of transport would you choose and why?". All interviews were audio-recorded with consent, transcribed verbatim, and personally identifiable information was coded to ensure anonymity in accordance with research ethics regulations.

3.5 Data Analysis

The analysis process followed the six steps of [34] for reflexive thematic analysis. Step 1: Familiarizing with the data through repeated reading and initial note-taking. Step 2: Systematically coding interesting features. Step 3: Searching for potential themes. Step 4: Reviewing themes against the coded data and the entire dataset. Step 5: Defining and naming themes. Step 6: Writing the report. The constant comparative method was applied throughout to identify patterns within and between generations [35].

MAXQDA 2024 software was used to manage and analyze the data, allowing for hierarchical coding, creating comparison matrices, and visualizing relationships between themes. To ensure reliability, 30% of the data was independently coded by two researchers, achieving a Cohen's Kappa coefficient of 0.83, which exceeds the recommended threshold of 0.80 for qualitative research [36]. Disagreements were discussed and resolved through a consensus process involving a third coder. Reflexivity was maintained through a research journal and regular team discussions to check and challenge the researchers' assumptions.

4 Research Findings

The analysis of data from 60 in-depth interviews reveals distinct cultural logics that each generation applies when interpreting and interacting with green public transport. These findings are multifaceted, encompassing core perceptions of public space, underlying value conflicts, and specific attitudes towards modern systems like the metro. To provide a clear, comparative overview, the key findings are synthesized in Table 2. The subsequent sections will then elaborate on these points with rich narrative data from the participants.

4.1 Perceptions of Public Space Across Three Generations

Generation X: A "space of lost control"

Analysis of data from 20 participants of Generation X reveals a consistent pattern of perceiving public transport as a space that threatens personal autonomy and face. A 58-year-old female manager in Hanoi shared: "I tried the metro once, but the feeling of being crammed with strangers made me very uncomfortable. At this age, I need my own space, not to be standing so close to people that I can hear them breathe. My private car is a place where I can control everything – the temperature, the music, when to stop." This viewpoint deeply reflects the influence of Confucian culture on social boundaries and the importance of maintaining appropriate distance in social relations.

The experience of the subsidy period also strongly shapes how this generation views public space. A 56-year-old male engineer in Ho Chi Minh City recalled: "When I was young, the bus was the only option, but it's associated with memories of scarcity and inconvenience. We had to queue from early morning, jostle for a spot, and sometimes wait for an hour. Now that I have the means, why should I return to that miserable time?" For this generation,

Table 2 Comparative synthesis of intergenerational perceptions and conflicts

Analytical Dimension	Generation X (The Inheritors of Memory)	Generation Y (The Cultural Negotiators)	Generation Z (The Global Citizens)
4.1. Core Metaphor for Public Transport	A "Space of Lost Control": Perceived as a regression to a past of scarcity and a threat to personal autonomy and established social boundaries.	A "Space of Compromise": A pragmatic but ambivalent space where the benefits of convenience are weighed against the pressures of social image.	A "Space of Global Connection": An exciting, modern space for social interaction, identity expression, and connection to a larger, progressive community.
4.2. Primary Value Conflict	Traditional Face vs. Modernity: Conflict between maintaining a status demonstrated by material ownership (private car) and adapting to new, modern transport options.	Personal Values vs. Social Pressure: Conflict between an internal desire for a green lifestyle and the external pressure to project an image of success defined by peers.	Generational Gap vs. Aspirational Future: Conflict between understanding their parents' values and actively constructing a new definition of success based on sustainability and social impact.
4.3. Key Perception of the Metro System	Luxury & Status: Accepted because its modernity, cleanliness, and association with developed nations neutralize the "loss of face" associated with traditional public transport.	Modernity & Efficiency: Valued as a symbol of an intelligent, dynamic, and globally integrated lifestyle that optimizes time and enhances personal productivity.	Sustainability & Activism: Embraced as a tangible tool for environmental protection, a declaration of personal values, and a platform for creative and social expression.
Illustrative Quote	*"Now that I have the means, why should I return to that miserable time [of the subsidy period]?"*	*"It's how I balance the different worlds I belong to."*	*"Every time I choose the bus over my motorbike, I feel like I'm voting for the future I want."*

Source: Author's synthesis.

a private vehicle is not just a mode of transport but a symbol of escaping a difficult past and affirming their current social status.

Notably, the concept of "losing face" appeared repeatedly in the interviews. A 54-year-old female teacher in Da Nang explained: "If my students or their parents see me on a bus, what will they think? That I can't afford a car? That affects my professional prestige. In Vietnam, people judge you by such external things." This concern is not merely about vanity but reflects a social reality where the mode of transport is considered part of one's "symbolic capital" in professional and social networks.

Generation Y: A "space of compromise"

Generation Y exhibits a complex, ambivalent psychology, oscillating between an awareness of the benefits of green transport and the pressure to maintain a successful image. A 35-year-old male bank employee in Hanoi expressed this conflict: "The metro is actually very convenient, fast, and avoids traffic jams. I use it occasionally when I'm alone. But when I have a meeting with a client or go out with friends, I still have to drive. It's not that I don't want to protect the environment, but in business, image is still important. A financial consultant arriving at a client meeting by subway doesn't look very convincing."

The tension between personal values and social expectations is clearly illustrated by the story of a 38-year-old female marketing manager: "I really want to set a green lifestyle example for my children. At my company, I'm also in charge of social responsibility campaigns. But every time I post a story of me on the metro, I have to explain that 'my car is in for maintenance' or 'just trying it out for fun.' It sounds ridiculous, but the pressure is real. My friends are all competing to buy luxury cars and post check-in photos. If I only use public transport, people will think I'm facing financial difficulties."

This generation has also developed unique "cultural negotiation" strategies. A 32-year-old male startup founder in Ho Chi Minh City shared: "I own both a car and a motorbike, but I also use the metro frequently. With my traditional group of friends, I drive. With foreign partners or younger friends, I'm comfortable taking the metro and even boast about living a green lifestyle. It's how I balance the different worlds I belong to." This ability to switch flexibly reflects the characteristics of a generation that has learned to navigate multiple cultural codes in a globalized context.

Generation Z: A "space of global connection"

Generation Z demonstrates a marked shift in how public space is perceived. A 22-year-old student in Hanoi enthusiastically shared: "The metro is cool! My

friends and I often meet up to take the metro to chat and take pictures. The space inside is clean, air-conditioned, with free wifi. I also love the feeling of being connected to the whole city, seeing people from different walks of life moving together. It makes me feel like I'm part of something bigger, not just a separate individual."

The influence of social media strongly shapes how this generation makes meaning of using green transport. A 24-year-old female content creator explained: "Posting check-in photos at the metro or on an electric bus gets a lot of likes! My followers, especially my international friends, really appreciate it. I even created a series called 'Exploring the City with Public Transport' and have been invited to collaborate with many environmental brands. Using green transport is no longer 'poor' but 'woke' and 'socially conscious'."

Gen Z's environmental awareness is not just a perception but is internalized as part of their identity. A 26-year-old male graphic designer in Da Nang affirmed: "For me, choosing public transport is a statement about who I am and what I believe in. I don't want my future children to live in a polluted city. Every time I choose the bus over my motorbike, I feel like I'm voting for the future I want. It's not a sacrifice but a conscious choice. I feel proud when my international friends know that Vietnam has young people who care about the environment like this."

However, Gen Z is also aware of the generational gap. A 20-year-old female student confided: "I understand why my parents don't like using public transport. For their generation, a private car is a lifetime achievement. I don't judge them, but I hope my generation can redefine success not just through material possessions but through the impact we make on society and the environment."

4.2 Conflicts over the Concept of "Green Face"

Traditional face and modern face

The study uncovered a quiet but profound contrast between two value systems of face coexisting in contemporary Vietnamese society. Traditional face, primarily upheld by Generation X, is closely tied to the ability to own and control material assets. A 55-year-old male entrepreneur in Hanoi explained: "In our culture, face is built through decades of hard work. A car isn't just a vehicle; it's proof that I have succeeded, that I can provide for my family. When I drive to a wedding or a class reunion, it's how I show respect to the host and affirm my status. Taking a bus or train on such occasions isn't being humble; it's being disrespectful."

Conversely, the younger generation is constructing a new concept of face linked to social consciousness and responsibility. A 28-year-old female journalist in Ho Chi Minh City shared: "Our generation's face isn't about what you own, but what you contribute. When I post about using the metro to reduce my carbon footprint, I gain respect from my community. My international friends value this. In today's flat world, face is no longer local but global. A young Vietnamese person driving a luxury car but indifferent to the environment would be seen as backward in the eyes of the world."

The collision of these two value systems creates paradoxical situations within families. A 42-year-old male lecturer confided: "My daughter, after studying abroad, constantly criticizes our family for using two cars. But when I suggested selling one, my wife vehemently objected, fearing the neighbors would think our family was in financial trouble. We are stuck between wanting to support our daughter and the pressure to maintain our social image. In the end, we kept both cars but try to use the metro when traveling alone – a half-measure, but it's the only way no one in the family feels hurt."

Ownership and sharing

The concept of ownership in Vietnamese culture carries deep-seated meanings of autonomy and psychological security, especially for generations that experienced the subsidy period. A 52-year-old female accountant in Da Nang shared: "My motorbike may be old, but it's mine. I decide when to go, where to go, where to stop. With public transport, I have to depend on someone else's schedule, which makes me feel like I'm losing control of my life. Our generation is used to being self-reliant, not depending on anyone."

Generation Y shows a transition in the perception of ownership. A 36-year-old male architect analyzed: "I understand that the sharing economy is an inevitable trend. I use ride-hailing services, and co-working spaces. But for personal transport, I still need to own it. Not for face, but for flexibility in my work. However, I'm starting to see owning multiple vehicles as a burden. Perhaps in the future, when public transport infrastructure is more complete, I'll reconsider."

A 21-year-old female economics student from Generation Z enthusiastically explained: "Ownership is an outdated concept! Why spend hundreds of millions on a car and then worry about maintenance, parking, and insurance when I can use various modes of transport depending on my needs? Metro in the morning, bus in the afternoon, ride-hailing at night. I use the money I

save for experiences, travel, and learning new skills. Our generation defines wealth not by assets, but by experiences and access."

Individual and community

The relationship between the individual and the community in the context of green transport reflects a profound shift in Vietnam's social structure. Generation X, who grew up in a collectivist society but experienced individualization during the *Đổi Mới* period, exhibits a contradiction. A 59-year-old retired male official shared: "I support green transport policies for the common good, but when it applies to me personally, it's different. After years of dedicating myself to the collective, now in retirement, I want to enjoy my privacy. My private car gives me space to think and relax without worrying about those around me."

Generation Y struggles to balance personal aspirations with social expectations of community responsibility. A 34-year-old female project manager confessed: "I'm torn between wanting personal success and my responsibility to the environment. At work, I promote green values, but in reality, I still drive to work every day. I know it's hypocritical, but the competitive pressure at work makes it impossible for me to give up the convenience of a private car. Maybe when I reach a more stable position, I'll have enough confidence to live by the values I believe in."

Meanwhile, Gen Z naturally connects personal benefits with the global community. A 23-year-old male technology student asserted: "We don't see a dichotomy between the individual and the community. When I choose green transport, I'm saving my own money, helping to reduce pollution in my city, and connecting with a global community that shares a vision for a sustainable future. Social media helps us see ourselves as part of a larger movement. Each small individual action, when shared and spread, creates a new collective power."

4.3 Points of Convergence

Luxury for generation X

A notable finding of the study is that elevated trains and subways, unlike traditional public transport, are received by Generation X with considerable positivity when positioned as a luxurious and modern space. A 57-year-old female doctor in Hanoi shared: "The train is completely different from the bus. The stations are clean, air-conditioned, the ride is smooth, and there's no smell of gasoline. When I step into a carriage with clean seats and soft

lighting, I don't feel like I'm using a common public vehicle but rather experiencing a premium service. Importantly, I see many well-dressed people, civil servants, and business people using it, not just students or manual laborers".

The technological and modern elements of the rail system create a crucial cultural bridge. A 54-year-old male director analyzed: "When I travel for work in Singapore or Tokyo, I see the subway as the transport of successful people. Now that Vietnam has it, it's a source of national pride. I'm not hesitant to take foreign partners on the Hanoi metro because it showcases the country's development. With domestic clients, I can say that taking the metro is a modern technological experience, not because I don't have a car." The association of the metro with the image of developed cities helps neutralize this generation's concerns about face.

However, this acceptance is still conditional and limited. A 51-year-old female chief accountant clarified: "I'm willing to take the metro to destinations along the line, especially in the central areas where parking is difficult. But these have to be planned trips, not daily commutes. For me, the metro is like a smart choice in specific circumstances, not a complete replacement for my private car. The important thing is that I have the right to choose, it's not compulsory."

Modernity for generation Y

Generation Y perceives the train as a symbol of modernization and international integration, fitting their aspiration to build a contemporary self-image. A 35-year-old male designer in Ho Chi Minh City shared: "The metro is part of the modern urban lifestyle I pursue. When I post a photo of myself working on my laptop on the train, it sends a message of a dynamic, time-optimizing lifestyle. I can work, read, or listen to a podcast while commuting instead of having to focus on driving in traffic. It's the smart way of working that our generation aspires to."

The subway is also seen by this generation as a new networking space. A 33-year-old female marketing manager recounted: "I've met many interesting people on the metro – from startup founders to artists. A community of young professionals is forming around metro usage. We even have a group chat to share information about events and job opportunities. The metro is not just a means of transport but a new social connection space, different from being isolated in a private car."

The ability to flexibly combine different modes of transport is particularly appealing to Generation Y. A 37-year-old male project manager explained:

"I've developed a multi-modal transport system. In the morning, I take the metro to avoid traffic and prepare mentally for the workday. At noon, I might use a Grab bike for quick meetings. In the evening, a Grab car to relax. On weekends, I drive my own car for family outings. Each vehicle serves a different purpose in my life. The metro is the backbone of this system because of its time reliability."

Sustainability for generation Z

For Generation Z, the train is not just a vehicle but a declaration of values and future orientation. A 22-year-old female environmental student affirmed: "Every time I choose the metro over a Grab bike, I'm voting for my city's green future. I've calculated that using the metro reduces my carbon emissions by 70% compared to a motorbike. That's not an abstract number; it's my tangible contribution to fighting climate change. My international friends are very impressed to learn that Vietnam has young people who are serious about environmental issues."

This generation has also created its own culture around metro usage. A 24-year-old male content creator shared: "We have a whole subculture around the metro. From taking artistic photos in the stations, making videos about 'a carbon-free day,' to organizing flash mob events. The metro is a canvas for us to express our creativity and activism. I see young people in Korea and Japan doing similar things. It's how we connect with global youth culture".

However, Generation Z also shows sophistication in recognizing the limitations of the current system. A 25-year-old female programmer analyzed: "The current metro doesn't cover the whole city, but it's a start. We support it not just because it's green, but because we want to send a signal to the government and society that there is a real demand for sustainable transport. The more people use it, the more reason there is to expand the system. We are investing in the future, not just using a current service. Our generation understands that change takes time and persistence".

The intersection of these three interpretations of the train – as luxurious, modern, and sustainable – creates a rare common ground where the three generations can meet without losing their face or core values. A three-generation family in Hanoi is a living testament. The 62-year-old grandfather shared: "When the whole family takes the metro to the shopping mall, I feel proud of the modern system, my son likes the convenience, and my grandchild is happy to be protecting the environment. Each person has their own reason, but we act together. It's a rare moment when we completely agree on something."

4.4 The "Tri-layered Cultural Space" Model

Presenting the model established from the data

The analysis of data from 60 in-depth interviews has given rise to a new theoretical model of how different generations construct cultural space in the context of green transport. The "Tri-layered Cultural Space" model consists of: (i) The Foundational Layer – The Space of Historical Memory, (ii) The Transitional Layer – The Space of Cultural Negotiation, and (iii) The Future-Oriented Layer – The Space of New Identity Construction. Each generation primarily exists in one layer but has the ability to move between layers depending on the specific social context.

The foundational layer is shaped by the collective memory of the subsidy period and the early years of *Đổi Mới*, where private vehicles symbolized liberation from the constraints of the past. A 60-year-old retired male official in Hanoi illustrated: "When I see a crowded bus, I remember the times I had to wake up at 4 AM to queue for it. That's not just a personal memory; it's the shared experience of an entire generation. My first private motorbike in 1995 wasn't just a vehicle; it was a declaration that I had overcome that difficult period. Now, being told to return to public transport, no matter how modern, still awakens the fear of losing the freedom that was so hard-won."

The transitional layer is a dynamic space where a continuous process of negotiation between traditional and modern values takes place. Generation Y operates primarily in this layer, constantly weighing and adjusting their behavior. A 34-year-old female lawyer described: "I live in a hybrid world. In the morning, I can take the metro to my international law firm, where it's appreciated. But in the afternoon, meeting a client from a traditional business, I have to drive a luxury car to meet their expectations. I'm like an actor playing multiple roles, each requiring a different cultural script. It's the only way to survive and succeed in this transitional society."

The future-oriented layer is constructed by Generation Z as an entirely new cultural space where old rules are rewritten. A 21-year-old male design student asserted: "We don't accept the 'either-or' logic of previous generations. For us, taking the metro doesn't mean you're poor, and driving a luxury car doesn't mean you're successful. We create a new value system based on social impact, creativity, and sustainability. In our world, someone riding an electric bike to a startup meeting might be more respected than someone driving a luxury car with no new ideas."

The relationship between the layers

The cultural space layers do not exist independently but have a complex interactive relationship, creating both conflicts and opportunities for convergence. Permeation between layers occurs primarily through intergenerational interactions within families and workplaces. A 45-year-old female teacher shared about the influence of her daughter: "My daughter, after studying in Australia, always tries to convince me of the benefits of green transport. Initially, I resisted, fearing I would lose face with my colleagues. But when I saw her proudly posting a photo of the two of us on the metro with the hashtag 'my mom is a progressive woman,' I started to reconsider. Maybe face in my daughter's world is different from mine, and I need to learn to live in both".

The most significant point of intersection between the layers is the concept of "cultural safe spaces" – specific contexts where generations can experiment with new behaviors without fear of judgment. A 52-year-old male entrepreneur explained: "When I travel abroad for business or with international partners, I'm comfortable using public transport because it's their norm. Back home, at tech or environmental events, I can also take the metro because it's considered progressive there. But at family gatherings or with peers, I still have to drive to avoid awkward questions."

Movement between layers is also driven by external factors such as policy, technology, and economic pressure. A 38-year-old female bank employee analyzed: "When my company switched to a carbon-neutral policy and rewarded employees for using green transport, many of my Gen X colleagues started trying the metro. At first, they justified it was for the bonus, but gradually some admitted it was genuinely convenient. The policy created a legitimate reason for them to change without losing face".

Validation through data

The model's validity was verified through cross-referencing with field observations at metro stations during peak hours. The results showed a generational distribution consistent with the model's predictions: 65% of users were under 35, 25% were between 35–50, and only 10% were over 50. Interestingly, we observed how each age group used the station space differently. Young people gathered, took photos, and socialized. Middle-aged individuals often stood alone, working on their phones. Older people tended to find a seat and observe their surroundings.

The model also predicts potential future points of tension. As green transport systems expand and become more mandatory through policy, the

conflict between the foundational and future-oriented layers will intensify. A 48-year-old male transport expert warned: "If the government imposes changes too quickly without considering cultural-generational factors, there will be a backlash. We need a gradual transition strategy that allows each generation to find its own way to embrace green transport without feeling their cultural identity is being stripped away."

5 Discussion

5.1 Theoretical Contributions

Extending green transition theory

The findings of this study challenge and extend [29] socio-technical systems transition theory by clarifying the pivotal role of generational cultural layers as a critical mediating factor in the transition process. While Geels emphasizes three levels of transition (landscape, regime, and innovation niche), our study shows that in transitional societies like Vietnam, each generation creates a distinct "cultural filter layer" through which they interpret and react differently to the same green transport initiative. This means a green technology can simultaneously exist at different stages of the transition process depending on the generation under consideration – for Gen Z, the metro may already be in the "stabilization" phase, while for Generation X, it may still be in the "experimentation" or even "resistance" phase.

The cultural factor in this study is not merely "context," as in previous research, but acts as a structural "systemic resistance." The "space of lost control" concept of Generation X is not simple ignorance or conservatism, but reflects a deep cultural logic shaped by historical experiences of collectivization and the process of individual re-assertion during the *Đổi Mới* period. This resistance cannot be overcome merely by technological improvements or propaganda, but requires a gradual "cultural shift" through the creation of "cultural safe spaces" where generations can experiment with new behaviors without threatening their cultural identity.

Developing the "green face" concept

This study contributes to face theory by developing the concept of "green face" – a new form of face emerging in the context of the global sustainability transition. Unlike the traditional concept of face in East Asian cultures, which is closely tied to material possessions and social status [19], green face is constructed through the demonstration of environmental consciousness and

social responsibility. However, what is unique in the Vietnamese context is the coexistence of these two face systems, creating a "dual face market" where individuals must constantly negotiate and balance between conflicting demands.

The concept of "face negotiation" is best exemplified by the strategies of Generation Y – they neither completely abandon traditional face nor fully embrace green face, but develop the ability to flexibly "code-switch" culturally depending on the social context. This extends [37] theory of impression management by showing that in transitional societies, individuals do not just manage a single social face but must maintain multiple, parallel "face portfolios." This complexity explains why simple intervention strategies like propaganda or financial incentives often fail – they do not address the multi-dimensional nature of face in contemporary society.

The "cultural layering transition" theory

The "Tri-layered Cultural Space" model from this study challenges the linear transition model often seen in Western research. Instead of a uniform transition from "traditional" to "modern," the study shows that in Vietnam, and possibly in other transitional societies, the process occurs in "cultural layers," with each generation moving within its own cultural space. The three layers – historical memory, cultural negotiation, and new identity construction – are not sequential stages but coexisting and interacting spaces.

Crucially, this model suggests that the green transition in developing societies is not a process of "replacement" but one of "cultural accretion." New values do not erase old ones but are superimposed upon them, creating a complex, multi-layered structure. This has significant implications for policy design: instead of trying to comprehensively change the behavior of all groups, it is necessary to develop "multi-point access" strategies that align with the cultural logic of each layer. For example, for Generation X, positioning the metro as a "luxurious" and "controllable" space may be more effective than emphasizing environmental benefits.

5.2 Comparison with Previous Research

The results of this study share similarities with [16] research on the role of social norms in transport behavior but extend it by showing that in Vietnam, there is not a single set of norms but multiple, coexisting, and competing norm systems. While [15] propose a linear four-stage model of behavior change, our study reveals that in Vietnam, individuals can move back and

forth between stages depending on the social context, even simultaneously maintaining contradictory behaviors – using the metro with international partners but driving a luxury car to meet traditional clients.

The most notable difference from studies in Singapore [25] or Bangkok [26] is that in Vietnam, the acceptance of green transport depends not only on infrastructure quality but also on the system's ability to meet the diverse face needs of different generations. While Singapore succeeded through strong coercive policies, Vietnam's cultural context, with its generational and value diversity, requires a more nuanced approach. The finding that the metro is accepted by all three generations but for different reasons (luxury, modernity, sustainability) suggests the potential of "polysemic design" – creating systems that can be interpreted positively from multiple cultural perspectives.

Particularly, unlike [28] study in Taipei, which showed a one-way influence from the older to the younger generation, this study finds a complex, two-way interaction between generations in Vietnam. Generation Z is not only influenced by their parents' norms but also actively influences them in return through social media and the pressure of global "green face." This creates a multi-directional dynamic of change, where transformation can be initiated by any generation and spread in various directions throughout the social structure.

5.3 Practical Implications

Our research findings offer three key implications for the development of green public transport systems in Vietnamese cities:

Generationally-Segmented Policies. Instead of applying uniform policies, planners need to develop stratified intervention strategies that align with the cultural logic of each generation. For Generation X, the focus should be on improving service quality and creating private spaces on public transport, such as senior-only cabins, business-class sections, or reserved seating. For Generation Y, corporate incentives like green travel subsidies or carbon reward points can provide them with a legitimate reason to switch without losing face. For Generation Z, integrating digital technology and creating shareable experiences on social media will reinforce their trend of using green transport.

Culture-Based Marketing Strategies. Communication campaigns should be designed with distinct messages for each target group. For Generation X, emphasize the "luxury" and "modernity" of the metro; for Generation Y,

position green transport as an expression of "urban intelligence"; for Generation Z, connect it to the values of "global citizenship" and "trendsetting."

Designing "Multi-Faceted" Public Transport Systems. New systems should be designed to simultaneously meet multiple face needs by diversifying services, creating flexible spaces that can serve multiple purposes, and developing features that allow users to customize their experience.

6 Conclusion

To answer the three research questions regarding intergenerational perceptions, cultural value conflicts, and how to harmonize these values in developing green public transport in Vietnam, we conducted in-depth interviews with 60 individuals from three generations in three major cities. Second, we analyzed the data using interpretative phenomenological analysis to capture how each generation makes meaning of the green transport system. Third, we constructed the "Tri-layered Cultural Space" model to understand the complex relationship between value layers. Finally, we validated the model through field observations and participant feedback.

Based on these steps, we conclude that the acceptance of green public transport in Vietnam is not a linear transition process but a complex interplay of three generational cultural spaces. Generation X views public transport through a lens of "lost control," Generation Y negotiates between conflicting values, while Generation Z constructs a new "green face." The metro emerges as a rare point of convergence, accepted by all three generations but for different reasons – luxury, modernity, and sustainability. This finding indicates the need to design multi-layered policies and "multi-faceted" systems that align with the cultural logic of each generation.

Limitations and Future Research Directions: While achieving its stated research objectives, we recognize that our study is limited to three major cities and has not surveyed provincial cities where cultural dynamics may differ. Future research could expand the geographical scope, conduct longitudinal tracking of perceptual changes over time, and quantify the "Tri-layered Cultural Space" model to test it on a larger scale.

Appendix

Semi-structured In-depth Interview Guide

The table below presents the interview guide used for data collection. The guide was designed following a "reverse funnel" principle, starting with

general questions and delving into specific topics, while remaining flexible to allow the interviewer to pursue emergent ideas from the participants.

Section/Theme	Questions/Probes
Opening Section	– Introduce self and the purpose of the research. – Request permission to record and assure absolute confidentiality of personal information. – Emphasize that there are no right or wrong answers, only personal perspectives and experiences.
Part 1: Warm-up & General Context	– Could you describe a typical travel day for you? – What modes of transport do you use most often? Why? – How do you feel about the current traffic situation in your city?
Part 2: Perceptions & Experiences with Green Public Transport (PT)	– When you hear "green transport" (like the metro, electric buses), what comes to mind? – What experiences have you had with these modes of transport? (metro, BRT, electric bus). – Compared to private vehicles, what do you see as the pros and cons of using green PT?
Part 3: In-depth Exploration of Cultural Values & "Face"	– In Vietnam, there's a saying that "the vehicle reflects the person." What are your thoughts on this view? – How do you feel when using public transport? (e.g., proud, neutral, a bit embarrassed, uncomfortable?). Could you share a specific story? – Hypothetical Scenario 1: If you had a very important meeting with a business partner, which mode of transport would you choose? Why? – Hypothetical Scenario 2: What about when meeting close friends? Or when attending an important family event like a wedding? – In your opinion, does using public transport affect a person's social image/status? How so?
Part 4: Photo Elicitation	– Now, I'm going to show you a few pictures (e.g., a modern metro station, a person in business attire on the metro, a crowded scene on a bus, a person driving a luxury car, a young person 'checking in' on an electric bus…). – What thoughts or feelings does this picture evoke in you? – What could be the story behind this picture?

(*Continued*)

Section/Theme	Questions/Probes
Part 5: Barriers, Motivators & Future Vision	– What is the biggest barrier that prevents you (or those around you) from using public transport more often? – In your opinion, what changes are needed (in policy, service, culture) for more people to choose green PT? – How do you envision the ideal transport system for your city in the next 10 years?
Concluding Section	– Is there anything else you would like to share that we haven't covered? – Thank you for your time and for sharing such valuable information for this research.

Source: Developed by the author(s) for the purpose of this study (2025).

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Biography

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