

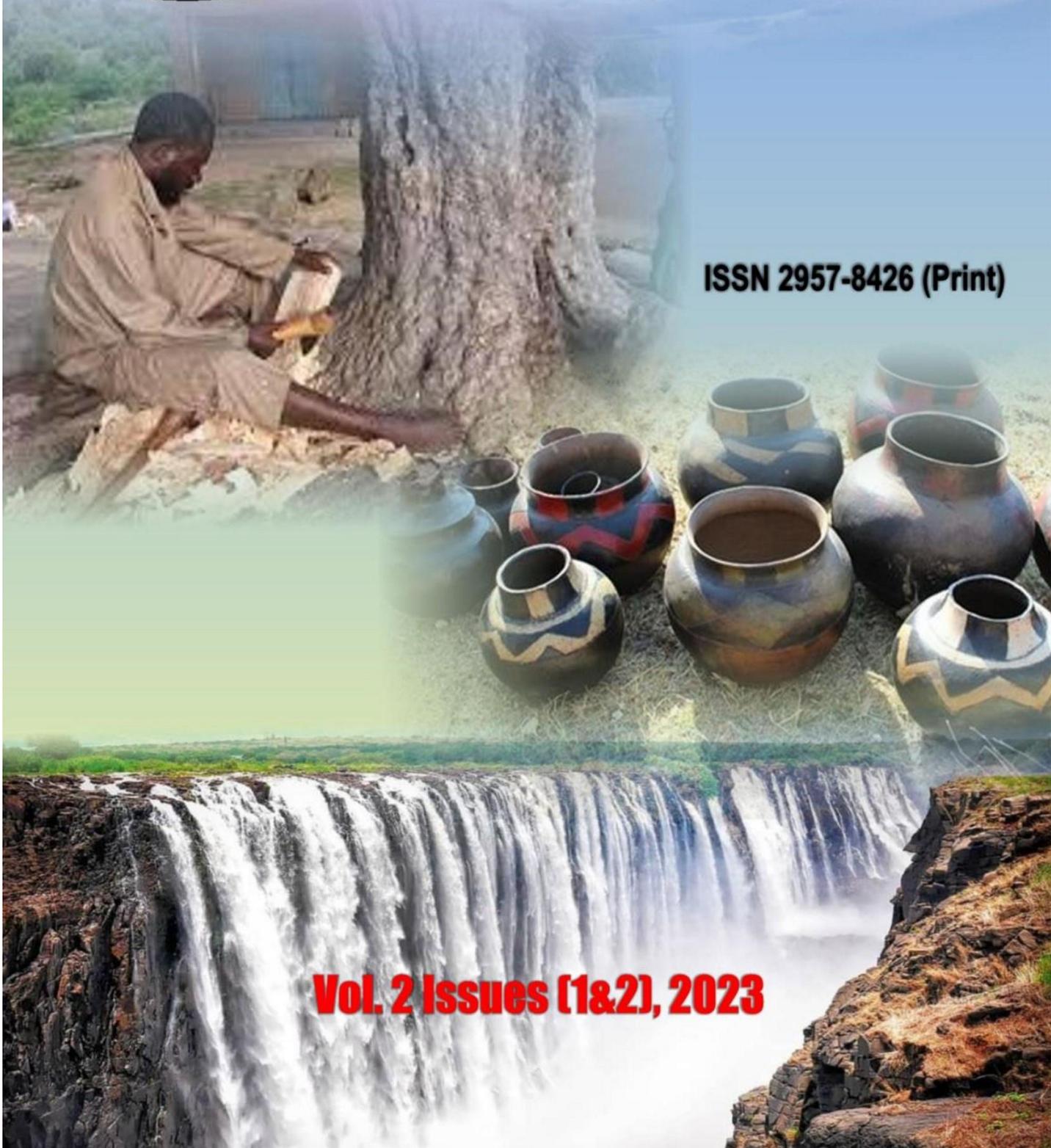


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# **Integrating Land use and Transport Planning in Harare, Zimbabwe: Challenges, Gaps and Opportunities**

ADMIRE MUDAWU<sup>1</sup> AND ENOCK MUSARA<sup>2</sup>

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## **Abstract**

*Most Harare residents depend on public transportation to participate in the economy and meet their life needs. However, the existing urban transport system does not provide sufficient and reliable access to destinations. The current strides to solve the transport problems are failing in such endeavours. There is need for innovative and alternative planning methods to deal with transport poverty. The study evaluated the prospects of one such innovative planning model to achieve sustainable mobility and accessibility. It explored the prospects of integrated land-use and transport planning in Harare. The study employed qualitative research tools to gather data. Key informants were engaged through interviews. The qualitative data analysis was done using N-vivo. This study concluded that the prospect of integrated land-use and transport planning in Harare is bleak although there is high consciousness of the concept. This is due mainly to lack of political will, lack of financial resources, poor institutional integration and weak regulatory and legal frameworks.*

**Keywords:** land-use planning, mobility, accessibility, public transport, transport poverty

## **INTRODUCTION**

While transport systems enable economies to grow, they can slow down growth and efficient delivery of essential social services, if not well-managed,. Moeckel and Nagel (2016) posit that negative economic and environmental impacts of transport are linked to lack of planning. Planning solutions to current transport challenges in most urban areas include optimising the use of the private car, promoting sustainable modes of mobility (public transport, walking, cycling) and increasing the use of Intelligent Transport Systems (ITS) (Litman and Steele, 2017). Further, the use of alternative sources of energy, such as electricity in the transport system, has been introduced and is picking up pace in developed

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countries while in developing countries, the growth is very slow (Lubida *et al.*, 2019). Dumba (2017) observes the safety and reliability of urban transport and changes in public commuting behaviour by influencing how urban travellers perceive transport as a critical factor.

Most Harare residents depend on public transportation to participate in the economy. However, the existing urban transport system does not provide sufficient and reliable access to destinations. The current strides to solve the transport problems are failing in such endeavours, innovative and alternative planning methods to deal with transport poverty must be part of the package. Acheampong and Silva (2015) perceive that the physical distribution of land-uses determines the travelling patterns, modes and frequency of the people. Therefore, land-use plans can be effective tools to achieve sustainable mobility in cities. Further, Batty and Marshall (2017) conceptualise that transport problems cannot be dealt with in isolation, but in the broader sense of the urban form. However, the idea of using the urban built-up form as an explicit strategy to solve urban transport problems in developing countries has attracted little attention (Giuliano, *et al.*, 2012).

Although the rapidly growing literature has explicitly outlined the importance of integrated land-use and transport planning in promoting sustainable urban public transport, it is not good at explaining the prerequisites of the implementation of integrated land-use and transport planning in settings such as those in developing countries. The present study, therefore, seeks to evaluate how integrated land-use and transport planning can be a tool to promote sustainable urban transport in Harare. This study is an academic effort that captures the prospects of the practical application of the integrated planning model in solving the transport challenges in Harare.

## **CONCEPTUALISING THE RELATIONSHIP BETWEEN URBAN FORM AND TRANSPORT**

Mashayekh (2013) defines urban form as the physical makeup of built-up areas, including the shape, size, density and configuration of settlements. Litman and Steele (2017) define urban form as the description of a city's physical characteristics expressed by street patterns, block lengths, building heights, building setbacks, average residential density and average nonresidential intensity. A common feature in the numerous definitions of urban form is the concept of physical expression of land-use plans. Thus, the urban form is a product of the physical planner through land-use planning (Lee and Bencekri, 2020). Historically, land-use planning was motivated by a concern to promote the

orderly development of the landscape, preserve some open spaces and provide consistency among developments (Batty and Marshall, 2017). For example, in the UK, industrial urban forms were brought about predominantly by planning that sought to achieve housing, health, transport and economic objectives. Most such settlements have concentric densities contained by green belts and protected land, a product of careful land-use planning.

While acknowledging that urban form is the domain of planning, it is also noted that urban forms continually evolve, responding to social, environmental, economic and technological pressures. Contemporary cities are subjected to various pressures, which may not be planning, that result in unmethodical expansion of form, thereby creating new challenges and problems (Batty and Marshall, 2017). For example, it has been noted that cities in developing countries are growing organically due to informality and wanton disregard for laws, planning laws included. This could be a sign that the governance and planning of land development are struggling to cope with the unpredictable growth of the population in cities. Chirisa *et al.* (2019) reveal that the existing urban land-use plans are not responding adequately to the needs of the population in urban areas because they are in pursuit of elitist colonial development codes.

Lubida *et al.* (2019) suggest that transportation planning is the planning required in the operation, provision and management of facilities and services for the modes of transport to achieve safer, faster, more comfortable, convenient, economical and environment-friendly movement of people and goods. As the term ‘\_planning’ implies, there is the forecasting of transport demand due to future travel needs and putting in place all necessary facilities and services to cater for that demand beforehand. Transport planning is also critical in shaping cities, enabling economic activities, promoting community interaction and enhancing the quality of life. It is also essential for sustainable development and ensuring safe accessibility at various levels for all individuals.

The relationship that exists between land-use planning (urban form) and transport planning is intricate and can never be sustainably managed if the projections are done separately (Anjomani, 2021). The development of any urban form is hinged on the transport network. In the past, movement within cities was restricted to walking due to the unavailability of vehicles. Activity nodes were agglomerated to reduce the need for mobility. This resulted in compact urban forms with mixed uses. Locating urban land-uses away from each other caused inefficient and time-consuming urban mobility, hence this was avoided (Moeckel, 2017). However, innovations in transport systems influenced the spatial form of modern cities. For example, cities in Australia and America, among others, have dispersed urban forms. This is mainly because there is high motorisation that can support long-distance travel (*ibid.*). Therefore, the urban forms present are encouraging vehicle

dependency and are linked with high levels of mobility. The emergence of suburbanisation in peripheral areas is a response to increased motorisation and it expresses new relationships between elements of these urban sub-systems (Battya and Marshall, 2017).

Master plans or land-use plans, through zoning, prescribe the desired patterns of traffic circulation, bulk and density levels, and necessary public improvements (Massey, 2015). Lee and Bencekri (2020) assert that every change in land-use of an area, either in terms of intensity or type of use, has a corresponding change in the flow of people to and from that area. Every landuse either generates new trips originating from that area or attracts new trips to that area, or even both (Schwanen *et al.*, 2016). Similarly, for every change in the flow of people, vehicles and goods along certain routes adjacent to any site, there is a corresponding change in accessibility to the site and its attractiveness to the present use, or for some other potential use (Cevero, 2017). Thus, many people are attracted to locate in areas with high accessibility to different modes of transport. Further, transport infrastructure occupies urban land which also makes it a land-use.

While the knowledge that the land-use system affects transportation systems has improved and impacted positively in reforming planning paradigms in other developed countries, there is no evidence of integrated or coordinated planning in many developing countries. On top of various social, political, ecological and economic challenges, planning in Africa is heavily influenced by the colonial ideology of segregation, for example, the apartheid regime in South Africa left a separatist planning philosophy (Matamanda, 2019). The different racial groups lived separately and consequently developed unequally (Battya and Marshall, 2017). In these cities, the poor live mainly on the fringes, a contradiction to Alonso's (1964) Residential Location Theory (Matamanda, 2019). The dangers of this arrangement are manifesting in ever-rising traffic challenges and growing transport poverty.

## **THE CONCEPT OF INTEGRATED LAND-USE AND TRANSPORT PLANNING**

The intricate relationship between transportation and land-use bore the concept of integrated land-use and transport planning in the broad sustainable development agenda. Giuliano *et al.* (2012) argue that integrated land-use and transport planning is a process that coordinates the land-use planning efforts and those of transport planning to achieve the land-use and transport objectives simultaneously. Similarly, Moyo *et al.* (2021) say integrated land-use and



transport planning is the alignment of transport infrastructure and services plans with land-uses plans in ways that reduce private-vehicle travel and increase mass transit usage and mixing of compatible land-use and higher densities inaccessible locations. Therefore, integrated land-use and transport planning defines a process where land-use policies and programmes are done in liaison with transport system investment policies and programmes. This brings about an urban form that improves accessibility, not just mobility, and efficient use of the space.

The integration of land-use planning and transport planning stemmed from a realisation that the extant urban settlement trends and the associated travel patterns are very unsustainable. Many urban settlements are characterised by low-density fringe expansion and vehicle-dependent travel. Batty and Marshall (2017) suggest that to redress this anomaly, it requires that spatial planning and transport planning share the same strategic objectives through integrated decision-making and physical implementation. The integrated planning model, therefore, consciously plans to mutually reinforce land-use and transport systems (Moyo *et al.*, 2021). The emphasis shifts from offering unlimited transport and landuse options that are mutually negating and in competition for resources.

## **IMPORTANT ELEMENTS IN INTEGRATING LAND-USE AND TRANSPORT PLANNING**

There is a broad and growing consensus that an integrated land-use and transport planning strategy is an effective tool for the establishment of efficient and sustainable urban environments (Aljoufiea *et al.*, 2013; Acheampong and Silva, 2015; Bandauko, *et al.*, 2016). However, studies so far have shown that such integration is hard to achieve in daily planning practice, especially in developing countries, due to many institutional barriers and substantive differences. Precisely, the tools developed to support integrated land-use and planning strategy development have very low implementation rates in daily planning practice (Dumba *et al.*, 2017). In the reviewed literature, there is no comprehensive text that covers the prerequisites for the implementation of integrated land-use and transport planning. These could have helped many countries to assess their capacity, identify their weaknesses and capacitate themselves towards integrated land-use planning.

Murphy *et al.* (2021) suggest that political will is one of the important requirements for integrating land-use and transport planning. Kramarz *et al.* (2021) describe political will as having a sufficient set of decision-makers who have a common understanding of a particular problem and who are committed to supporting a commonly perceived, potentially effective policy solution. The

analysis of political will is mainly about whether there are enough people in positions of power who support the desired reform (Murphy *et al.*, 2021). Thus, it is imperative to have committed leadership to see integrated land-use and transport planning implemented. Thoughtful leadership should put up incentives to have innovative ideas adopted and implemented (Moeckel, 2017). For example, Lerner, mayor of Curitiba, provided political capital that saw the successful implementation of innovative ideas. Lerner provided the required leadership and support that saw the development of Curitiba's 1968 Master Plan that transformed the city into a sustainable, thriving, efficient place to live in. Curitiba is, many times, mentioned as one of the most sustainable cities in the world and is arguably considered the greenest city in a middleincome country (Anjomani, 2021).

Institutional and regulatory frameworks also play an important role in integrating land-use and transport planning. Batty and Marshall (2017) argue that policy outcomes are the product of different streams of interacting legal frameworks, policies and governance structures. Thus, enabling laws and government policies should be there to specify the role of the state and the philosophy of management and control in public authorities charged with urban development management. Policies and legislative frameworks mould the working practices of local authorities that are understood to be the steering cultures with the potential to facilitate the implementation of integrated landuse and public transport planning approaches (Massey, 2015). For example, the success of Curitiba's transit-oriented development was anchored on zoning regulations (planning laws) that emphasised high-density mixed-use neighbourhoods along the main public transport corridors. The regulations also provided incentives to people who developed in the prescribed ways. This is very important in achieving a change of mindset towards an integrated approach.

Huzzard (2021) also suggests stakeholder engagement as another prerequisite for integrated land-use and transport planning implementation. Integrated land-use and transportation planning depends on the direct involvement of the stakeholders as partners (Murphy *et al.*, 2021). Stakeholder participation embraces the complex interactions among government entities, citizen groups, industry leaders, local departments and planners as this can generate commonly accepted solutions (Lubida *et al.*, 2019). Land use and transport planning are collaborative processes that need to incorporate the input of many other urban stakeholders. For example, within the municipality of Amsterdam, planners work together with other stakeholders in several planning projects in teams, either thematic or geographical (Lee and Bencekri, 2020). The municipality benefits from current research from the university.

Finance is another important requirement for the successful implementation of integrated land-use and transport planning. Massey (2015) points out that a city needs adequate financial resources to integrate urban systems, develop plans and implement and maintain the plans. Thus, a planning authority must be endowed with adequate financial resources to fund institutional and professional integration, acquisition of the latest technologies and contacting researchers. This would assist in crafting evidence-based policies and the implementation of plans to meet existing and future urban needs. Funding constraints inhibit the creation of institutional mechanisms for collaboration and cooperation among agencies, including relevant government departments. In this situation, integrating land-use and transport planning remains a challenge. Also noting that integrated land-use and transport planning is not an end in itself, achieving the integration without funding does not result in an improved urban transport system or sustainability.

Institutional integration is also an essential requirement to achieve integrated land-use and transport planning. In the transport context, it refers to the connection of all organisations, departments and professionals in the built environment. Huzzard (2021) notes that some of the barriers faced in integrating land-use and transport planning include distinctive budgets among institutions, different procedures, weak or contradictory incentives for cooperation, reluctant departmental culture and the lack of efficient management mechanisms. Thus, this institutional integration achieves a common understanding of strategic urban outcomes by traffic or road engineering professionals, transport planners and landuse planning professionals, championed by a unified authority with effective operational control. Moeckel (2017), Batty and Marshall (2017) and Anjomani (2021) observe that many urban authorities have policy coordination rather than integration. There are substantive differences between the domains of landuse and transport planning in planning objects, including the tools and instruments used, operational modes and educational carriers (Anjomani, 2021). Collaboration during strategy development and goal visioning can potentially produce shared policy goals that would promote mutually reinforcing (instead of obstructing) land-use and transport measures.

## **RESEARCH METHODOLOGY**

The study adopted a qualitative research methodology. Purposive sampling was used in the selection of the organisations and the key informants that participated. The data needs for this study included both primary and secondary data. Accordingly, the collection of the data was done using both primary and secondary data collection methods. The qualitative data was analysed through inductive analysis.

## **FINDINGS**

The extant urban form (product of land-use planning) has had negative effects on the urban transport system performance in Harare. Literature supports the notion that transport challenges being faced in present-day urban areas can be best dealt with when the two, land-use and transport, are planned in an integrated fashion. This proves the importance of understanding what needs to be done to integrate land-use planning and transport planning to achieve sustainable development in Harare.

## **THE FACILITATORS OF INTEGRATED LANDUSE AND TRANSPORT PLANNING IN HARARE**

Fischer, Smith and Sykes (2014) define facilitators as favourable factors or conditions available within a system that promote integration. The study identified two key enablers to integrating land-use and transport planning in Harare, these being concept comprehension and stakeholder willingness and acceptance.

### ***CONCEPT COMPREHENSION***

Effective implementation of any programme starts with concept comprehension, including the knowledge of what the concept is all about, the advantages derived therefrom and the preconditions and working modalities of the concept (Dawadi *et al.*, 2021). Similarly, it is very crucial for the people who have the responsibility of land-use and transport planning in Harare to have an understanding of the integrated land-use and transport planning concept. The study established that key stakeholders have a profound understanding of the integrated land-use and transport planning concept, the importance of the concept in dealing with both the land-use and transport issues in cities and some of the requirements for effective implementation. The definitions and explanations about the concept by key informants indicated that there is improved knowledge of the concept and its essence in the current planning practices. This knowledge does not stem from practice but elsewhere, because this concept is still foreign in Harare.

The informants indicated that it is imperative to disband the existing planning institutions and rebuild them in a way that promotes cohesion among the planners from all departments, including development planning, transport planning, housing and environmental planning. Although there is clear evidence that the concept among the various players in the spatial planning field, the uptake of integrated planning is still worryingly low and the advocacy for this concept by the planners is not vibrant. Despite some indications in policy documents, like the Zimbabwe National Human Settlement Policy, to adopt integrated land-use and

transport planning, there is no sign of reform towards integration. This indicates that while there is a profound knowledge of the concept and its role in addressing some of the obtaining transport challenges, knowledge alone is not sufficient to drive the adoption of the same. The comprehension of the concept forms one step in the whole puzzle. It is imperative to get the other drivers right for the adoption and effective integration of land-use and transport planning.

## **COMMUNITY ACCEPTANCE AND WILLINGNESS TO PARTICIPATE**

Human beings are wired to resist change. Huzzard (2021) argues that human beings are resistant to change, they prefer to maintain the status quo. Thus, stakeholder buy-in or positive participation is a pre-condition for any successful reform process or project. Similarly, the integrated land-use and transport planning, as a reform process, needs stakeholder buyin and positive participation to be successful. The study evaluated the level to which urban stakeholders, including the residents, participate in urban planning issues and the willingness of the participants to be involved in planning processes. The study also gauged the perceptions on the suitability of the current planning practices.

These residents of Harare have bought into the idea that the current planning practice has to be reformed to include other critical players during plan formulation and that they are willing to participate should they be asked to participate. The major reason for residents to long for reform of the current planning norms is that they are facing multitudes of challenges, including the inadequacy of transport, housing and water and sanitation facilities. Sustainable urban forms address these ills. The stakeholders accept that the current planning practice has to be reformed to effectively deal with emerging urban challenges.

The results also indicate there is limited or poor stakeholder participation and engagement in plan-making. Although many urban stakeholders have never been included in any planmaking process, there is a high willingness to participate. The citizens are willing to give their input should the local planning authorities invite them. Many other stakeholders, such as universities, civil society organisations and the business community, are also willing to participate in urban planning issues. The informants singled out universities as critical players in sustainable plan-making through their research infrastructure. Universities are a hub of knowledge and competencies that if harnessed well can transform the country. As a sign of willingness to partake in projects of national interest, the University of

Zimbabwe is leading in the preparation of the master plan for the new city to be located in the Mt Hampden area.

## **THE BARRIERS TO INTEGRATED LANDUSE AND TRANSPORT PLANNING IN HARARE**

Fischer, *et al.* (2014) says a barrier is a factor that generates difficulties when attempting to do something. The study found six barriers to the effective implementation of integrated landuse and transport planning. These include a lack of political will, insufficient resources, poor institutional architecture, bad politics, weak policy and legislative framework and rapid urbanisation.

### ***LACK OF POLITICAL WILL***

Political leadership, at the highest levels, is a critical agent in project success because it has the power to allocate resources. Thus, the lack of it is often the major reason for failure to formulate and implement plans, projects and/or reforms. Throughout the study, it was noted there is no political will in reforming the planning practices and adopting new paradigms, like the integrated land-use and transport planning. Thus, while there is increasing awareness of the merits of compact settlements, mixed-use and sustainable transport in the country, there has been no political leadership to put in place structures, modalities and frameworks that achieve these noble urban development concepts. There is a limited government initiative to promote integrated land-use and transport planning.

The study found that although the government, through its various agents, came up with noble policies, like the Zimbabwe National Human Settlement Policy, to achieve sustainable urban development, there is no impetus from the same to see these concepts being implemented. It is believed that the government is not providing the necessary institutions, resources and empowerment to see noble ideas being practically implemented. This resonates with the views expressed by Matamanda (2019), that there are no well-crafted sanctions to push planners to reform the planning practices towards the envisioned urban form. To push for reform in planning, it is imperative for effective, proportionate and enforced sanctions.

### ***INSUFFICIENT RESOURCES***

Finance is a critical resource that makes other resources available for the integration of integrated land-use and transport planning. It is imperative to have sustainable funding to support institutional restructuring, staffing and training,

technology acquisition and maintaining integrated planning systems (Batty and Marshall, 2017). The study sought to understand if the local authority or government has or can mobilise financial resources to finance integrated land-use and transport planning.

The key informants concurred that financing in Zimbabwe is a challenge, whether to support the efficient running of public institutions and/or service delivery. There is no readily available funding to create institutional mechanisms for collaboration among institutions in the built environment. The planning departments are underfunded to meet their operational requirements, thereby exposing them to manipulation. They are exposed to capture as the possible funders (private players) may sway plans to further their business interests. Further, Harare does not have the technologies that support innovative solutions. This hi-tech era has seen the adoption of the latest technologies, like Geographical Information Systems, in planning output delivery. However, this is not the case in Harare. Dumba (2017) highlights that city-wide transport planning needs to be done under the Traffic Operations Management System or Framework, comprising six components, namely organisational structure, workforce, procedures, standards, state-of-the-art equipment and comprehensive database. However, due to funding challenges, all the above components are said to be absent or in shambles.

### ***POOR INSTITUTIONAL ARCHITECTURE***

The study evaluated the institutional governance, focusing on the relationships existing among various institutions working to deliver a sustainable Harare, both on the land-use planning front and transport planning. The informants indicated that the current institutional organisation is fragmented and punctuated by overlaps and duplications. Mbara and Pisa (2019) also identified institutional governance as another impediment to delivering sustainable urban transport in Harare. There are many players in urban land-use and transport matters, including government ministries (the Ministry of Local Government and Public Works, the Ministry of National Housing and Social Amenities, the Ministry of Transport and Infrastructure Development, the Ministry of Energy and Power

Development, the Ministry of Finance), the City of Harare, the Zimbabwe Republic Police (ZRP), the Environmental Management Agency (EMA), the Traffic Safety Council of Zimbabwe (TSCZ), the Zimbabwe National Roads Administration (ZINARA) and the Urban Development Cooperation (UDCORP), among others. The planning and operations of these institutions are disjointed and incoherent, and a systematic approach is missing (Dumba, 2017).

There is lack of coordination and good relations among these players and information is not readily shared to make informed decisions, decisions are made in silos. The poor institutional relations and coordination end up creating antagonism among key players in the transport sector. There are administrative integration barriers culminating in inconsistent policies and plans of various departments and institutions that have impacts on the built environment (Matamanda, 2019). Thus, if the issue of administrative relationships is not addressed and reflected in the application of planning instruments, tools and implementation by all spheres of government and professions involved, the issue of integrating land-use and transport planning remains a pipe dream. Mbara and Pisa (2019) suggest that an urban transport authority should be created to get rid of the obtaining institutional dysfunctional challenges. While the suggestion is plausible, the authority can succeed only if it is given support and autonomy to perform its duties without political interference.

### ***BAD POLITICS***

Politics affects the efficient running of planning institutions and the planning and implementation of various planning programmes (Mapuva, 2011). The informants concurred that planning in Harare, and Zimbabwe at large, is negatively impacted by the unsettled national and local politics. Muchadenyika and Williams (2016) also mention that the contested politics in Zimbabwe has distorted the planning system, swaying planners to assent to spatial plans that advance political interests. There are observed political squabbles between the central government and local government. These squabbles are affecting the professional and administrative integration of the land-use and transport planning institutions in the government and the council.

The Zimbabwe African National Unity – Patriotic Front (ZANUPF) is in charge of the government while the Movement for Democratic Change–Alliance (MDC-A) is in charge of Harare City Council affairs. These are political opponents who, at every turn, try to outsmart each other (*ibid.*). While these political games should be in the political arena during elections, they are played every day and it has affected service delivery in the local authorities. The key informants identified that there is a frosty relationship that has affected the professional relationships between the workers in the council and those in government as they are serving different bosses. Further, the sprawl development in Harare is also blamed on organic settlement growth pushed by housing cooperatives which are mainly ZANU-PF supporters (Mapuva, 2011). The impact of this is increased urban sprawl and vehicle dependency as the residents in such settlements will be going somewhere to look for economic opportunities using these vehicles. Integrated land-use and transport planning require professional, institutional and administrative cohesion (Perraa *et al.*, 2017). Thus, without good political



relations and cohesion, as happening currently, there is no integration to talk about. The integration in these conditions can never achieve efficient integration.

### ***WEAK POLICY AND LEGISLATIVE FRAMEWORK***

The study, through documentary review and key informant interviews, evaluated the policy and legislative framework guiding land-use and transport planning in Zimbabwe. The key informants endorsed the view that the existing policy and legislative framework governing land-use and transport planning is not specific and strong to push for integrated landuse and transport planning in Zimbabwe. Thus, a weak policy and regulatory framework is an inhibitor to the full integration of land-use planning and transport planning. The local policies concentrate much on the outcomes of an integrated spatial planning framework, for example, compact city form. Scholars like Matamanda (2019) castigate this legislation as prescriptive and rigid that fails to integrate various facets of societal needs. This Act leads to plans produced through prescribed approaches to plan-making. This defines a methodological or procedural integration barrier that is defined by Fischer *et al.* (2014) as the challenge associated with prescriptive decisionmaking processes, methods and techniques. He notes, for example, that if the plan preparation processes are too drawn out, just like in the Regional, Town Country Planning Act (RTCPA) (1990), they may struggle to achieve the timely resolution of problems making this process come up with outdated solutions.

### ***RAPID URBANISATION***

The rapid rise in population and the constrained real economic growth usually result in unintended consequences on the economy, social fabric and the environment (Sultana and Weber, 2014; van Geet *et al.*, 2021). In Harare, the population is growing rapidly, yet economic opportunities are shrinking. This gave rise to informality and the public authorities lost some form of control over many issues without being called heavyhanded. For example, the council is not acting on people who are engaging in informal businesses like street vending which is affecting mobility in many streets in Harare. If the council enforces the by-laws that outlaw street vending, they are accused of being insensitive and heavy-handed. Further, rapid urbanisation has caused a shortage of affordable formal housing; many people have resorted to self-help housing projects in peri-urban areas where there are administrative loopholes (Muchadenyika and Williams, 2016). The resultant urban development trends are partly occurring outside the council or government's sanction which is problematic. The informality of many things in Harare has affected its revenues. This has also constrained the council's capacity to expand services and infrastructure. For instance, the demand for formal public transport has grown and is growing rapidly to the level where the council and government cannot efficiently meet. This

dearth of conventional public transport stimulated the growth of informal public transport which is one of the major problems that the country has endured and trying to correct now.

## **DISCUSSION**

There is a profound understanding and knowledge of integrated land-use and transport planning among the practitioners and stakeholders in the built environment in Harare. This becomes an enabler in line with Lubida *et al.* (2019) who suggest that the effective implementation of any programme starts with the comprehension of the concepts involved, including the advantages derived therefrom, and the pre-conditions and working modalities of the concept. The major stakeholders agree that any major changes in land-use patterns influence the number of trips, destinations and modes, and those changes in the transport system influence patterns of urban development and location choices of households and firms. This proves the value of integrating the two planning sections in Harare. Thus, the advocacy for integrated land-use and transport planning has positive signs of growing.

The knowledge among key personnel in urban planning of the important role of this concept in the ongoing urban renewal processes indicates that it may not be difficult to integrate land-

use and transport planning in Zimbabwe. Further, the acknowledgement that the present planning paradigm does not resemble the desired paradigm and that there is need for a reform. The acceptance by the planners and other key stakeholders in spatial planning in Harare is a positive gesture to the effective implementation of integrated land-use and transport planning. However, it can also be noted that a profound understanding of the concept is not sufficient to drive the adoption of the same but is just one of the many factors. Therefore, improving on other drivers for successful integration of land-use and transport planning is imperative.

The issue of stakeholder participation is very important for any planning reform to ever take place. Thus, the stakeholder acceptance and willingness to participate and collaborate in urban planning affairs is a positive prospect for integrated landuse and transport planning. This is mainly because stakeholder collaboration, through participation, is crucial in the successful integration of plans and implementation thereof. Although the current situation is that there is limited or tokenistic inclusion of these stakeholders in land-use or transport plan preparation, there is a high willingness by the residents and business people to contribute towards improving the transport system. Murphy (2021) says citizen participation is a very critical element for achieving integrated planning processes as it widens the scope of ideas, implementers, resources and protectors of the

development. Community buy-in is important for the success of any project, as there will be shared ownership of the planning processes, implementation process, maintenance of the outcomes and resourcing of all the processes involved. There is a common mistake observed in the current planning practices, that spatial planners plan for the people, instead of planning with the people. In Harare, the people are willing to be part of the planning process, which is a very encouraging position in terms of integrated land-use and transport planning.

There are several barriers found in this enquiry: lack of political will, insufficient resources, poor institutional architecture, weak policy and regulatory frameworks, bad politics and rapid urbanisation. These barriers can be further regrouped into three broad barriers, namely lack of political will, weak policy and regulatory frameworks and insufficient resources. Lack of political will is affecting the implementation of good policies and reform agenda. Although there have been many public debates and policy recommendations for reform in planning practices, there has been no movement on the ground to effect the necessary reforms and capacitation to achieve the new requirements coming from such reforms. According to

Schwanen *et al.* (2016), several actions should be visible to see if the political will is present. These include, among others, government/council initiatives, allocation of resources and application of credible sanctions. There is nothing to show in these respects, except the bringing in of piecemeal changes and requirements in the planning system. The lack of political will also covers poor institutional architecture and bad politics. The current administration, both local and national, has the power to restructure institutions and shun politicking, but they continue to the detriment of service delivery.

The issue of financial resource inadequacy compounds the capacity to acquire other critical resources in the integrated planning system. For effective integration, sustainable funding for institutional restructuring, staffing and training, technology acquisition, maintaining integrated planning systems, funds plan-making processes and implementation of the plans is critical. The municipality is in perpetual financial challenges that have crippled service delivery. The government has not reasonably assisted, financially, the council as is required by the constitution. However, it was also noted that if there is political will, the financial resources required can be mobilised and achieve integration.

The existing policy and legislative framework governing landuse and transport planning is not specific and not strong enough to push for integrated land-use and transport planning in Zimbabwe. The laws have dealt with aspects of integrated land-use and transport planning in a piecemeal fashion with no comprehensive

pieces of legislation that specifically deal with integrated land-use and transport planning. This is different from other countries that have made significant progress in integrating these two sets of urban planning. For example, in South Africa, there is the Development Facilitations Act (Act 67 of 1995) that emphasises the efficiency and promotion of integrated spatial planning; the Municipal Systems Act (Act 32 of 2000) mandates municipalities to be development-oriented through Integrated Development Plans and the National Land Transport Act (Act 22 of 2000) that states that land-use planning must be integrated with land development processes and the transport plans. These are part of the many policies and legislation that directly push for integrated land-use and transport planning. Thus, in the current state, the policy and legislative frameworks are too weak to promote integrated landuse and transport planning.

## **CONCLUSION AND RECOMMENDATIONS**

The prospect of integrated land-use and transport planning is bleak in Zimbabwe. Barriers outweigh the enablers of integrated land-use and transport planning, indicating there is still a long way to go to achieve integrated land-use and transport planning. There is no political will, insufficient resources, bad politics, poor institutional architecture, weak policy and legislative framework and rapid urbanisation militate against the integration of land-use and transport planning. Several policy implications, relating to the understanding of sustainability, can be drawn from this study on integrated landuse and transport planning in Zimbabwe. These include, among other things, the Government of Zimbabwe must enact policy and legislative frameworks that push for sustainable urban development, including laws that make integrated land-use and transport planning mandatory.

Through supportive policy and regulatory frameworks, the national government and councils can then implement institutional restructuring, taking into account the professional, departmental, organisational and sectorial integration as part of the development framework and promote genuine stakeholder participation with the potential to unlock partners and collaborators. Further, the national government, through law enforcement agencies, should maintain and enforce the rule of law to deal with issues of corruption, abuse of office, political influence on council business and disregard for planning laws and many other laws. To attract financiers, public authorities must strive to achieve transparency to guarantee potential funders of public projects that their resources are not going to be plundered. Public Private Partnerships (PPPs) are also another recent important financing mechanism for important sustainable development projects. The authorities should consider the PPPs in funding the spatial planning reforms and implementation of sustainable urban plans.

## REFERENCES

- Acheampong, R. A. and Silva, E. (2015). Land-Use–Transport Interaction Modelling: A Review of the Literature and Future Research Directions. *Journal of Transport and Land-use*, 8(3): 11–38.
- Aljoufiea, M. *et al.* (2013). Spatial-temporal Analysis of Urban Growth and Transportation in Jeddah City, Saudi Arabia. *Cities* 31, 57-68.
- Anjomani, A. (2021). An Integrated Land-Use/Transportation Forecasting and Planning Model: A Metropolitan Planning Support System. *Journal of Transport and Land Use*, 14(1): 65-86.
- Bandauko, E., Bobo, T. and Mandisvika, G. (2016). Towards Smart Urban Transportation in Harare, Zimbabwe. In: Hua, G. B. (ed.). *Smart Cities as a Solution for Reducing Urban Waste and Pollution*. Hershey PA: IGI Global.
- Batty, M. and Marshall, S. (2017). Thinking Organic, Acting Civic: The Paradox of Planning for Cities in Evolution. *Landscape and Urban Planning*, 166, 4–14.
- Chirisa, I. (2013). Housing and Stewardship in Peri-urban Settlements in Zimbabwe: A Case Study of Ruwa and Epworth. PhD Thesis. Harare: University of Zimbabwe.
- Chirisa, I. and Dumba, S. (2012). Spatial Planning, Legislation and the Historical and Contemporary Challenges in Zimbabwe: A Conjectural Approach. *Journal of African Studies and Development*, 4(1), 1-13.
- Chirisa, I. *et al.* (2016). Past, Present and Future Population Growth and Urban Management in Zimbabwe: Putting Institutions in Perspective. In: Benna, U.G., Bello, A.S. and Garba, S.B. (eds.) *Population Growth and Rapid Urbanisation in the Developing World*. Hershey, Pennsylvania: IGI Global
- Dawadi, S., Shrestha, S. and Giri, R. A. (2021). Mixed-Methods Research: A Discussion on its Types, Challenges, and Criticisms. *Journal of Practical Studies in Education*, 2(2), 25-36.
- Dumba, S. (2017). Informal Public Transport Driver Behaviour and Regulatory Policy Linkage: An Expose. *Journal of Transport and Supply Chain Management*, 11(0), 19955235.
- Dumba, S., Vassileva, L.D., and Gumbo, T. (2017). Methodological Issues in Modelling Signalised Intersection Capacity under Informal Public Transport Operations: Case Study, Harare, Zimbabwe. *Transportation Research Procedia* 25, 4891-4915.
- Fischer, T.B., Smith, M. and Sykes, O. (2014). Can Less Sometimes be More? Integrating Land Use and Transport Planning on Merseyside (1965–2008). *Urban, Planning and Transport Research*, 1(1), 1–27

- Giuliano, G. *et al.* (2012). Network Accessibility and Employment Centres. *Urban Studies*, 49(1), 77–95.
- Government of Zimbabwe (1992). *Harare Combination Master Plan*. Harare: Government of Zimbabwe.
- Government of Zimbabwe (1996). *Regional, Town and Country Planning Act [Chapter 29:12]*. Harare: Government of Zimbabwe.
- Government of Zimbabwe (2001). *Urban Councils Act [Chapter 29:15]*. Harare: Government of Zimbabwe.
- Government of Zimbabwe (2013). *Constitution of Zimbabwe Amendment (No 20)*. Harare: Government of Zimbabwe.
- Government of Zimbabwe (2018). *Zimbabwe National Human Settlement Policy*. Harare: Government of Zimbabwe.
- Huzzard, T. (2021). Achieving Impact: Exploring the Challenge of Stakeholder Engagement. *European Journal of Work and Organisational Psychology*, 30(3), 379-3893.
- Kramarz, M. *et al.* (2021). Stakeholders of the Multimodal Freight Transport Ecosystem in Polish–Czech–Slovak Cross-Border Area. *Energies*, 14(2242), 1-32.
- Lee, J. (2019). Reflecting on an Integrated Approach for Transport and Spatial Planning as a Pathway to Sustainable Urbanization. *Sustainability*, 12(10218), 1-6.
- Lee, S. and Bencekri, M. (2020). Urban Form and Public Transport Design. 10.1016/B978-0-12-819822-3.00018-3.
- Litman, T. and Steele, R. (2017). *Land Use Impacts on Transport*. Victoria, Canada: Victoria Transport Policy Institute.
- Lubida, A. *et al.* (2019). Land-use Planning for Sustainable Urban Development in Africa: A Spatial and MultiObjective Optimization Approach. *Geodesy and Cartography*, 45(1), 1–15.
- Mapuva, J. (2011). Enhancing Local Governance through Local Initiatives: Residents' Associations in Zimbabwe. *African Journal of History and Culture*, 3(1), 1-12.
- Mashayekh, Y. (2013). Land-use and Congestion Management Strategies to Promote Urban Environmental Sustainability. Unpublished Doctoral Thesis. Pittsburgh, Pennsylvania: Carnegie Mellon University.
- Massey, R. (2015). Integral Theory: A Tool for Mapping and Understanding Conflicting Governmentalities in the Upgrading of Cape Town's Informal Settlements. *Urban Forum*, 26, 303–319

- Matamanda, A. R., Chirisa I. (2018). Regional Planning: Dimensions, Continuity and Change. In: Chirisa, I (ed.). *Fundamentals of Planning and Real Estate Studies: A Primer for Zimbabwe*. Harare: University of Zimbabwe Publications.
- Matamanda, A. R. (2019). Battling the Informal Settlement Challenge through Sustainable City Framework: Experiences and Lessons from Harare, Zimbabwe. *Development Southern Africa*, 37(2), 217-231.
- Mbara, T. (2015). Achieving Sustainable Urban Transport in Harare, Zimbabwe: What are the Requirements to Reach the Milestone? A paper presented to the Conference in Istanbul, Turkey, 2-5 February 2015, themed Energy, Climate and Air Quality: The Role of Urban Transport Policies in Developing Countries. Accessed 05 July 2018 from [http://www.codatu.org/wpcontent/uploads/Ttenda-Mbara\\_.pdf](http://www.codatu.org/wpcontent/uploads/Ttenda-Mbara_.pdf).
- Mbara, T. and Noleen, P. (2014). An Analysis of Impediments to Deliver Sustainable Transport in Cities of Developing Countries: The Case of Harare, Zimbabwe. *WIT Transactions on the Built Environment*, 182, 241-252.
- Mbara. T. and Pisa, N. (2019). An Analysis of Impediments to Deliver Sustainable Transport in Cities of Developing Countries: The Case of Harare, Zimbabwe. *WIT Transactions on the Built Environment*, 12(182), 241-252
- Moeckel, R. (2017). Constraints in Household Relocation: Modeling Land-Use/Transport Interactions that Respect Time and Monetary Budgets. *Journal of Transport and Land Use*, 10(1), 211–228.
- Moeckel, R. and Nagel, K. (2016). Maintaining Mobility in Substantial Urban Growth Futures. *Transportation Research Procedia*, 19, 70–80.
- Moeckel, R. *et al.* (2018). Trends in Integrated LandUse/Transport Modelling: An Evaluation of the State of the Art. *The Journal of Transport and Land-use*, 11(1), 463-476.
- Moyo, H.T.T., Zuidgeest, M. and van Delden, H. (2021). Lessons Learned from Applying an Integrated Land Use Transport Planning Model to Address Issues of Social and Economic Exclusion of Marginalised Groups: The Case of Cape Town, South Africa. *Urban Science*, 5(10), 1-23.
- Moyo, W. (2014). *Urban Housing Policy and Its Implications on the Low-income Earners of a Harare Municipality, Zimbabwe*. Bulawayo: AESS Publications.
- Muchadenyika, D. and Williams, J.J. (2016). Politics and the Practice of Planning: The Case of Zimbabwean Cities. *Cities*, 63, 33 – 40.
- Murphy, J., Qureshi, O. and Endale, T. (2021). Barriers and

- Drivers to Stakeholder Engagement in Global Mental Health Projects. *Int J Ment Health Syst*, 15(30), 1-23.
- Perraa, V.M., Sdoukopoulosa, A. and Pitsiava-Latinopouloua, M. (2017). Evaluation of Sustainable Urban Mobility in the City of Thessaloniki. *Transportation Research Procedia*, 24, 329-336
- Saunders, M., Lewis, P. and Thornhill, A. (2012). *Research Methods for Business Students*. London: Prentice Hall.
- Schwanen, T., Dijst, M. and Dieleman, F. M. (2016). Policies for Urban Form and their Impact on Travel: The Netherlands Experience. *Urban Studies*, 41(3), 579-603.
- Stead, D. and Meijers, E. (2009). Spatial Planning and Policy Integration: Concepts, Facilitators and Inhibitors. *Planning Theory & Practice*, 10(3), 317-332.
- Sultana, S. and Weber, J. (2014). The Nature of Urban Growth and the Commuting Transition: Endless Sprawl or a Growth Wave? *Urban Studies* 51(3), 544-576.
- van Geet, M. T. *et al.* (2021). Finding the Right Tools for the Job: Instrument Mixes for Land Use and Transport Integration in the Netherlands. *Journal of Transport and Land Use*, 14(1), 125–149.