

7. Conclusions

7.1. Introduction

The following figure illustrates the structure of Chapter 7.

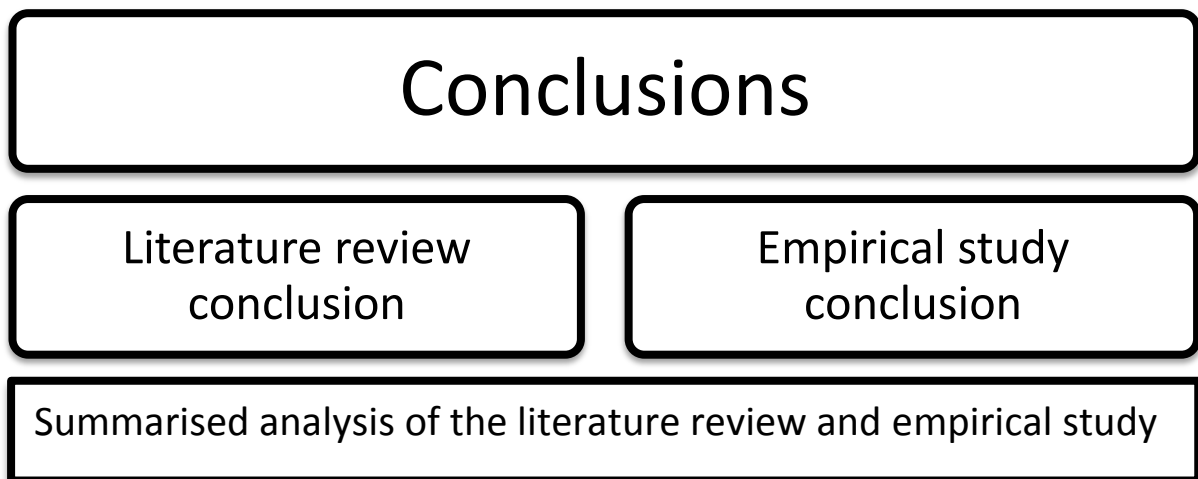


Figure 39: Chapter 7 layout

Source: Own Creation (2013).

This chapter provides an overview and summary of the Literature review and Empirical study respectively. Thereafter a study analysis of both the Literature review and Empirical study are summarised in a table.

7.2. Literature study conclusion

The research study was primarily focussed on two main elements, namely the problem statement and hypothesis. The problem statement was substantiated by research conducted in the literature chapter, whilst also addressing alternatives for the current private vehicle oriented problem. The hypothesis read that “a non-motorised transportation system, within the CBD of Upington, would be more sustainable to the larger community of Upington, as opposed to the current private vehicle dependent system”. Therefore the emphasis of the research conducted ultimately focussed on non-motorised transportation systems and the influences thereof.

The literature chapter concluded with the following core results:

- Urban areas are complex systems, from the first settlement to the cities we have today.
- Urbanisation is a worldwide phenomenon including both developed and developing areas.
- The population in urban areas is increasing, more so in developing than developed areas.

- The private vehicle in cities has numerous negative influences on; inter alia, infrastructure, living conditions of residents, the economy and health and safety.
- Private vehicle ownership in developed countries is high, but is stabilising and experienced a slight decrease of 0.8% between 2005 and 2010 (Worldbank, 2013).
- Even though the private vehicle orientated system was the preferred transportation system the developed world is moving towards non-motorised and public transportation systems. Notwithstanding this phenomenon, the developing world is increasingly becoming more dependent on the private vehicle. Pardo (2011) stated the following: “With rapid urbanisation and economic growth, motorisation has been accelerating in cities in developing countries. For example, in Asia region, the number of motor vehicles per one thousand people has more than tripled in the past thirty years. Owning a private car or a motorised two-wheeler is a major aspiration for people in these cities, in particular, where public transportation service is often inadequate and unsafe.” (Pardo, 2011:3).
- Vehicle ownership levels in developing countries are low, but they are experiencing high growth levels (Worldbank, 2013).
- South Africa is also experiencing high urbanisation levels as well as growth. In 2010 the urbanisation level was 61.5% and the growing rate 1.21% (United Nations, 2010).
- In addition to population growth, urbanisation and increasing private vehicle ownership in urban areas in South Africa, the country must also address past segregation planning (see Table 6) (Turok, 2012:26).

To address the urban problems mentioned above, three planning theories were identified and discussed, namely:

- The Smart growth theory.
- New urbanism.
- Pedestrian mall developments.

Each of the above identified ten core principles which prescribed what should be done to improve urban areas. Seven principles are shared between the three possible solutions and three are unique. The core principles specifically emphasised for this research study are shared and can be described as:

- Walkable Cities.
- Variety of Transport Modes.

These principles accentuates the fact that in order to improve urban areas, a city must be accommodating towards pedestrians, cyclists and all other non-motorised transport modes. Secondly, the city must offer residents, as well as tourists, a variety of modes to reach their destination and dwellings/accommodation. The additional eight principles identified, while not addressing transportation directly, are crucial in the overhauling of a city and cannot be implemented separately from one another.

Chapter 4 addressed policies on an international, national, provincial and local level, with non-motorised transportation as the common factor between all. On an international level the policies dealt with can be categorised as overarching, general, transport and non-motorised transport policies. Locally, policies pertaining to non-motorised and relevant to the study area (CBD of Uppington) policies or part thereof were scrutinised.

From the South African policies discussed it is clear that non-motorised transportation is a relatively new concept to plan for in advanced urban areas (in rural South Africa walking, cycling and horse drawn vehicles are common). None of the documents, excluding the Draft National Non-Motorised Transport Policy document (2008), deal with non-motorised transportation in detail. Contrary to this fact, non-motorised transportation is described in detail on an international level. *Share the road: Invest in Walking and Cycling Road Infrastructure* (2010) is an example of a global publication by the United Nations (UN) that demonstrates the benefits of investing in NMT.

7.3. Empirical study conclusion

The empirical study consists of two sections. Firstly, pilot studies were discussed and scrutinised in order to obtain valuable information and secondly the study area was demarcated and the status quo determined and analysed in the case study. Inputs from town planners practicing in the Uppington area were also obtained to ensure a multi-dimensional point of view.

For the pilot studies, Copenhagen, Denmark and Ghent, Belgium were identified to represent pedestrianised CBD's or portions thereof. Strøget, the main street of Copenhagen was pedestrianised on 17 November 1962. This marked the beginning of a gradual transformation that has continued since. Currently, (2013) the city centre of Copenhagen has over 96 000m² (9.6ha) of car-free space (Wallström, 2009:14). Today, Strøget Street, which is between 10 and 12 metres in width, accommodates pedestrian traffic equal to the most travelled of the national highways in Denmark within a 24 hour period (Gemzøe, 1996).

The first step to transforming the CBD of Ghent was taken in 1993 (Ghent Bicycle Plan, 1993) with the adoption of a cycling strategy comprising a number of measures to improve cycling and cycling

infrastructure in the city. The comprehensive mobility plan for Ghent city centre followed in 1997 (Wallström, 2009:39). The main aim of the Mobility Plan (1997) was to create a liveable city in which attention is given to all modes of transport and priority to pedestrians, cyclists and public transportation (Wallström, 2009:40). Today despite some criticism at the beginning, the large pedestrian area in the inner city has created a pleasant and lively city centre. Numerous events (open-air arts festival, open-air music events) are now possible in fine surroundings. The atmosphere for shopping was also improved, as no cars can possibly bother shoppers (Wallström, 2009:41).

Pedestrian mall developments were addressed in general and 3rd Street Promenade in Santa Monica was studied. Feedback as obtained from Tripadvisor.com was also overwhelmingly positive for pedestrian mall developments in the USA and Australia. According to Smith (2007:560), several hundred towns and cities in the United States converted their main streets into pedestrian malls in the 1960's, 1970's and 1980's in an effort to bring shoppers back to older downtown (CBD) areas, and to improve the management of downtown traffic congestion. The majority of these developments were unsuccessful and were subsequently opened to motorised traffic again.

According to Schmidt (2010) however the pedestrian mall is gaining popularity again in the United States, but this time the motive for developing these vehicle-free areas is to promote sustainability, healthy living and to get people out of their cars; resulting in the creation of sense of place. This expected outcome stands in contrast with previous reasoning behind the development of pedestrian malls, which was to save a dying CBD. In South Africa, the most famous and successful of this type of developments is St. Georges Mall in Cape Town. The second part of the empirical study consists of the case study. The exact study area within the CBD of Upington was delineated and the status quo determined and analysed.

7.4. Summarised analysis of the literature review and empirical study

The following table analyses the policies (literature review), pilot study (empirical study) and case study (empirical study) against the shared principles as represented in the three planning theories: Smart growth theory, New urbanism and Pedestrian mall developments.

“Yes” indicates that the relevant principal is represented in the policy, pilot study and/or case study, whereas “No” indicates discrepancies that the principle was not applicable to the policy, pilot study and/or case study.

Table 28: Analysis of literature review and empirical study

Principles derived from theories of New urbanism, Smart growth and Pedestrian mall developments	Policies	Pilot study	Case study
Walkable neighbourhoods	Yes – International policies. No – South African policies do not address walkable neighbourhoods sufficiently, especially on local and provincial spheres.	Yes	No – Currently motorised transportation is relevant to 100% of the roads in the study area. The study area could not be considered a walkable neighbourhood.
Variety of transport choices	Yes – International policies address the situation. No – South African policies in a national sphere address the variety of transport modes, it is however, not locally and provincially implemented.	Yes	No – although all types of transportation is allowed, the private vehicle enjoy preference above all. Private vehicles and taxi's dominate the transportation scene.
Mixed land uses	No – Numerous policies promote isolation planning especially on a local level.	Yes	No – Isolation planning exists.
Compact design	No – Policies do not	Yes	No – The study area

	address the matter sufficiently.		needs to be designed compactly. Currently this is not the situation.
A range of housing opportunities	No – This aspect is not addressed sufficiently.	No – This aspect is not addressed sufficiently.	No – Few housing opportunities exist in the study area.
Distinctive, attractive communities with a strong sense-of-place	Yes	Yes	No – private vehicles dominate the study area, hence a strong sense-of-place does not exist.
Direct development towards existing communities	Yes	Yes	Yes

Source: Own construction (2013).

From the table above it is clear that the policies do not address the specific principles, especially at local and provincial spheres. The pilot studies addressed the principles and therefore it can be concluded that the planning theory principles were successfully tended to in the pilot study examples.

Few of the principles are relevant to the study area. In the next chapter recommendations in line with the planning theory principles, relevant policies and pilot study examples are made in order to rectify the current unsustainable transportation system through implementing non-motorised transportation measures and principles.