Investigating the adoption of smart cities strategies for competitive advantage: MENA perspective

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Purpose

In the context of recently estimated trends, it is anticipated that the growth pattern of the populace in urban regions will be more significant in the first thirty years of the 21st century in comparison to the accumulative urban development patterns seen in previous data gathered from around the world. The Middle East and North Africa (MENA) is the region that consists of developing countries, out of which most are rapidly urbanising populations that are expected to double by the end of 2030. Although many of the major countries in the MENA region are becoming aware of their rapidly coupling populace, which not only consists of natives but also foreign expatriates, the evidence of a shift towards technology and competitiveness of being a benchmark of standardised culture and science mix has been witnessed only in economic centres. The successful initiatives by some MENA countries to pave their way forward in streamlining their future potential to facilitate sustainability through digitalisation help in laying out a baseline framework for the adoption of the guidelines for moving towards smartness.

Methodology approach

This research used a mixed method of research. Systematic Literature Review (SLR) was conducted. The SLR will aid in identifying research gaps and areas of ambiguity within the chosen field. Despite the reviewer's initial opinions, SLRs encompass a wide variety of material in connection to addressing a specific issue by generating a list of criteria for material to research, helping to avoid any bias (Xiao and Watson, 2019).

Semi-structured interviews were selected to backed up the collected data from SLR. A few numbers of professional that are expert in MENA region construction industry are invited to take part in the study. The research implemented purposive sampling method. This type of method is broadly used for exploratory research (Palinkas et al., 2015).

The key research question that was retain when searching was “what are the key elements that are employed in planning out strategies for adoption of smart city in MENA region for competitive advantage?”.The databases used for the literature search are ABI/INFORM EBSCOhost, Global, ICE Virtual Library, ProQuest, ScienceDirect and Scopus. Selecting research that are especially concerned with "adoption of smart cities strategies for competitive advantage " is crucial. The research projects must be of the highest calibre, have a solid study design, and produce valid findings (Lefebvre et al., 2019). To guarantee that the findings are trustworthy and credible, high-quality research investigations are required. The review's outcomes will be of greater assurance as it focused on studies with solid methods and reliable findings. Materials are also of current, with a preference given to the most recent studies.

Findings

The research investigates views on sustainable smart cities in the MENA region. Successively, previously adopted agendas in the region and their strategic frameworks were reviewed. Theseis a region that have experienced fast growth of urbanisation and resource demand comprise countries like UAE, Saudi Arabia, and Egypt. Therefore, understanding how they have gone about sustainability and a smarter city agenda may offer important lessons for other part of the region with equally complex problems. The results indicate that such research may showcase the specific issues as well as opportunities for developing sustainable smart cities in the MENA area. In addition, as the region that is often associated with oil production and high carbon emissions, such research may reveal the actions or advances that the cities in this region have taken towards sustainability. The tool will also help cities understand why they are struggling towards sustainability goals by identifying financial, cultural and political barriers.

Additionally, this research can act as a forum for discussion and information exchange amongst the cities in the region, encouraging cooperation and teamwork in the direction of sustainable development. Finally, the research's ramifications go beyond the MENA area and can offer guidance for other cities and areas globally. Understanding various viewpoints and methods for sustainable smart cities may help cities become more informed and efficient in their answers as global issues like climate change and physical and social infrastructure grow more significant.

Implications

This research is subject upon limitations, it is directed to MENA regions, subsequently summing up its outcomes will be relevant to this context. The sample size of this research may be extended by incorporating worldwide nations. This could empower analyst to compare the outcomes among a wide scope.

Value

The MENA is the region that constitutes of developing countries out of which most are rapidly urbanizing populations that is expected to get doubled by the end of 2030 (United Nations, 2022; WHO, 2022). Although many of the major countries in the Middle East are becoming aware of their rapidly coupling populace, i. e., Abu Dhabi, Dubai, etc., which not only consists of natives but also foreign expatriates, the evidence of shift towards technology and competitiveness of being a benchmark of standardized culture and science mix has been witnessed only in economic centers. Other MENA countries have been prone to social or political unrest which has made them hesitant in strategising their approach towards digitalising and not relying on natural fuels to avoid unrest. Nevertheless, the data from the World Bank further presses the needs of smart development to sustain the growth potential by the system that can manage the sudden population boom which is expected to double by 2050 (World Bank). However, the successful initiatives by some MENA countries to pave their way forward in streamlining their future potential to facilitate sustainability through digitalization can help in laying out a baseline framework for adoption of the guidelines for moving towards smartness. For instance, in Middle East, Saudi Arabia, Qatar, UAE have been successively introducing many initiatives like SQP in Qatar through TASMU and an application of 'one-stop shop' in United Arab Emirates (UAE) for smart inclusion and governmental techniques.

In North Africa, Morocco has taken its initiative by hosting the first smart city summit internationally in order to bring the policy makers and research organizations from around the world on the same table to plan the accessible and manageable strategies and scenarios in Africa (Khabara, 2014). Other MENA countries are also planning and prioritizing for formulating new strategies for technological advancements in infrastructures as well as other core sectors. Therefore, this research contributes to knowledge by identifying the drivers and challenges for implementing smart cities strategies in the MENA region.

SDG 9 – Industry, innovation, and infrastructure

The Sustainable Development Goals (SDGs) set out by the United Nation General Assembly (UNGA), has set out the 17 SDGs and each has their objectives. This research falls in SDG 9 Industry, innovation, and infrastructure which is define as "Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation".

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