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Comparing two pathways of strategic niche management in a developing economy; the cases of solar photovoltaic and solar thermal energy market development in Lebanon



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# Comparing two pathways of strategic niche management in a developing economy; the cases of solar photovoltaic and solar thermal energy market development in Lebanon

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#### 14 Abstract

There is abundant solar potential in the Middle East North Africa region. Yet access to 15 sustainable energy is still a fundamental challenge in many countries of this region. In this paper we 16 seek to understand the success and failure of the development and the diffusion of solar energy 17 technologies by analysing using a Strategic Niche Management framework to compare the niche 18 19 development of solar thermal energy and solar photovoltaics in Lebanon. This paper has two main questions: (1) How have the solar thermal niche and the solar photovoltaic niche developed in 20 Lebanon, and how do they compare? (2) In which ways does the Strategic Niche Management 21 framework help us to understand the development of solar energy niches in a developing country 22 context? To answer these questions, a cross case analysis of solar thermal and solar photovoltaic 23 systems was conducted. Due to the absence of research using Strategic Niche Management in Middle 24 Eastern developing countries, this study uses an illustrative case from a country in this region to 25 contribute new insights. Moreover, unlike the Strategic Niche Management research that only focuses 26 27 on single case studies, this paper presents the results of a comparative study of two niches. The main 28 Strategic Niche Management propositions were grouped and compared per item (i.e. on voicing and shaping expectations, social networks, and learning). The results show that the solar thermal niche 29 affected the solar photovoltaic niche to a large extent. This was especially in relation to the learning 30 31 and coordination processes. This has gradually contributed to establishing a clear vision. However, both niches lacked a niche manager who was able to coordinate, manage and maintain the dynamics 32 of the niche processes. It also lacked horizontal collaboration between key actors involved (i.e. 33 ministries). International donors were found to play a crucial role in initiating and shaping the market 34 with certain constraints of prioritization in the region. The paper ends with conclusions and ideas for 35 future research on solar energy niche development in the context of developing countries. 36

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