



Assessing energy policies drivers of the deployment of distributed generation: A review of influencing factors

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SUMMARY

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INTRODUCTION

21st century has witnessed an impressive rise in the deployment of photovoltaic distributed generation.

The force driving the success of this energy technology has relied on specific public policies.

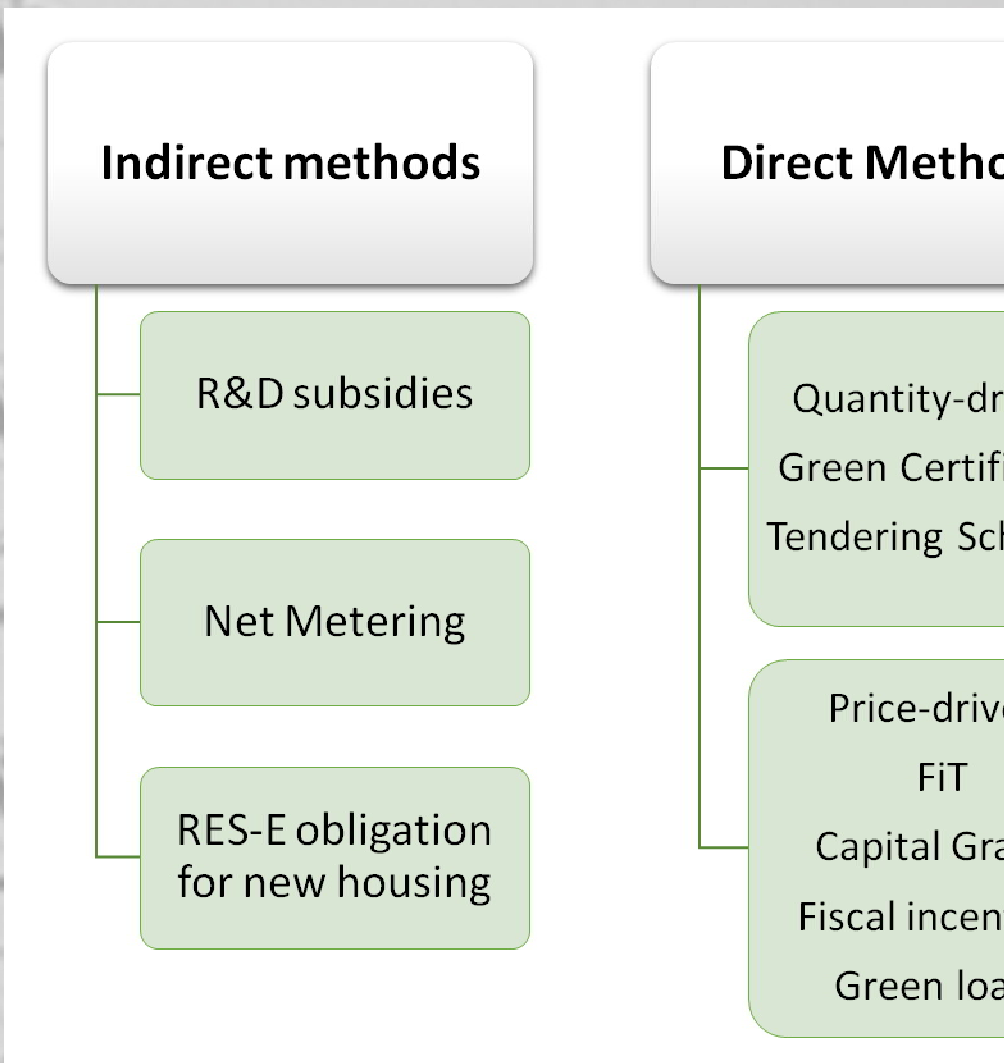
In this sense, the paper compares eight different cases (Belgium, Brazil, Italy, Japan, UK, Spain, California, Germany and Portugal) and their policy, in order to evaluate the factors responsible for their success rates.

PHOTOVOLTAIC ENERGY LITERATURE REVIEW

...ch of the debate over successful policies for photovoltaic have evaluated the policies through a many lens.

...erwise, the wider framework of instruments must be investigated.

... literature offers many ways of categorization. One outstanding one is the distinction between **direct and indirect methods**.



PHOTOVOLTAIC ENERGY LITERATURE REVIEW

Technology-specific vs. Technology neutral approaches

Important discussion is whether remuneration for renewables should be different on the basis of technology differences.

Technology neutral policies proponents argues that technology-specific approaches are necessarily costly.

has been challenged by pointing out the importance of technology-specific approaches in promoting technological development.

CASE STUDIES ANALYSIS

UK

In UK photovoltaic systems are profitable only for building-integrated segment, mainly due to the self-consumption regulatory scheme.

Belgium

In Flanders, PV was over-subsidized during the period considered. This explains the abolishment of green certificates, as they were no longer necessary to guarantee at least a 5% IRR.

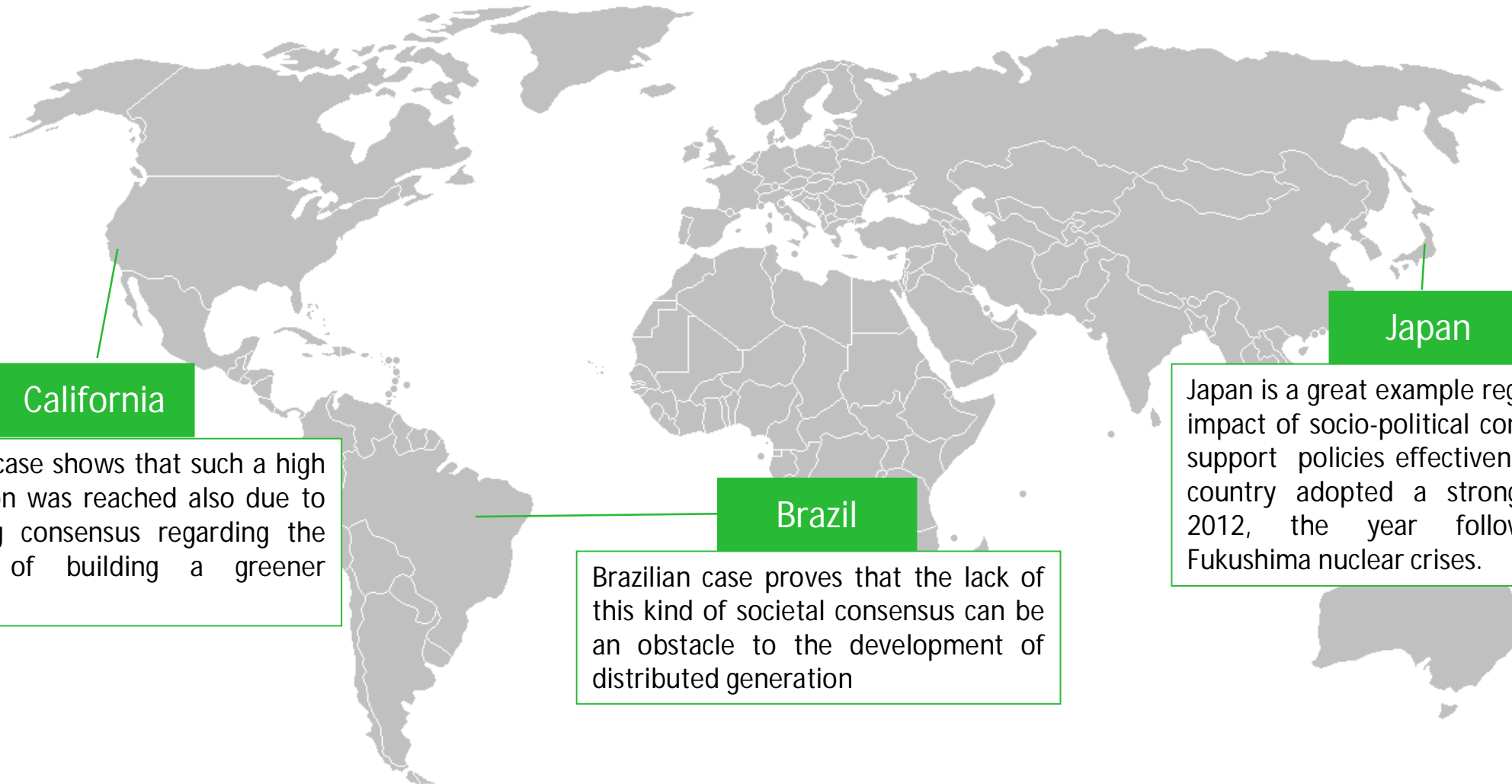
Germany

German presents the most stable scheme with the IRR at a constant level between 6-8%.

Italy

Considering the investment payback, Italy is the best performer, with a payback of only 6 years, being the most profitable for residential investors.

CASE STUDIES ANALYSIS



California

California case shows that such a high level of consensus was reached also due to a long consensus regarding the importance of building a greener economy.

Brazil

Brazilian case proves that the lack of this kind of societal consensus can be an obstacle to the development of distributed generation

Japan

Japan is a great example regarding the impact of socio-political consensus on support policies effectiveness, as a country adopted a stronger Feed-in Tariff (FIT) in 2012, the year following the Fukushima nuclear crisis.

CONCLUSIONS

countries have adopted a vast amount of different support policies and it is difficult to identify a standard, as even the policy designs can differ greatly from case to case.

Political motivation and context are also very particular to each specific case, and this makes it difficult to identify a single best-practice example.

Another difficulty arises in the attempt to identify a common definition for what a successful support mechanism looks like.

The main contribution of this work has been to exemplify the struggle and to identify the determining solitary factors that explain the success of support policies for distribution.