

Introduction

Megaprojects, also referred in literature as Large Engineering Projects (LEPs) or Major Projects – with some difference of significance – are generally defined as large-scale investment initiatives worthing 1b€/€ or more, facing similar problems independently from the country where they are implemented and the industry they belong to. Examples of megaproject are large infrastructure investments such as high speed railways, large dams and hydraulic works such as the MOSE project in Venice, space endeavors such as the ARIANE 6 project or even large events such as the Olympic Games.

Even if different researches and approaches have been developed in the last 20 years about this topic, there is still a lot of debate on it, and a holistic approach for effectively manage those initiatives is still missing. What is clear to all researchers and expert in this field is that a traditional-linear management approach is simply not enough, as, at many stages of a megaprojects, iterative and feedback effect occurs due to stakeholders' involvement increase and continuous interaction between them.

The Megaproject Research Interdisciplinary Team (MeRIT) – established in 2018 with the intention of combining the multiple aspects related to the design and implementation of megaprojects – aims to promote the debate around Megaprojects among all categories of stakeholders involved in a megaproject' supply chain, in order to increase the awareness of complex phenomena in charge of criticalities and common problems they face all over the world, and looking for improvement of performances on the whole life cycle (including the selection, design, construction, operation and de-commissioning).

The MeRIT's mission is:

- the promotion of the academic research involving a wide range of research fields, such as engineering, architecture, management, economics, sociology, laws, political sciences, etc.;
- being the reference point for stakeholders' debate;

- spreading awareness about megaprojects implementation toward public opinion;
- transferring the findings from the academic research and from the stakeholders debate to operators on the field.

The workshop “*A multidisciplinary approach to embrace complexity and sustainability*” – designed and created in collaboration between Piacenza Campuses of Università Cattolica del Sacro Cuore and Politecnico di Milano – has been, in 2019, the first public step of MeRIT, aiming to bring together experts with different backgrounds and perspectives to open a debate and a multidisciplinary discussion on the topic.

The second edition of the MeRIT Workshop – virtual due to CoVID pandemic restrictions – has given the participants the opportunity to discuss on several topics regarding megaprojects, from legal subject to new technologies that can help the megaprojects’ governance in the implementation and governance phase. The “fil rouge” that links most of authors is between the human factors and 3P sustainability, considered the keystone for megaproject management. In addition, a very relevant topic discussed is the success criteria to be applied to those initiatives, as it is clear to all researchers that the classic triple constrain success (Time-Cost-Quality) can’t be, alone, the proper answer.

About this, the selected short papers highlight the economic, sociological, organizational and legal aspects of megaprojects. Some of them report practical cases and empirical evidence while others describe and argue best practices to follow.

The seminars by Kathrin Köster from the Vienna University of Business and Economics (Austria) on the theme of leadership to master complex megaprojects, Gilbert Silvius LOI from the University of Applied Sciences (Netherlands) on the Human factor in Sustainable Project Management and Donald Lessard from the MIT Sloan School of Management (US) on the Redefinition of the Major Project Success and Failure lay the foundations for a multi-perspective collaboration where disciplines intertwine and collaborate with the sole objective of preventing megaprojects from encountering the “iron law” identified as the main challenge to megaproject management: “*Over budget, over time, under benefits, over and over again*”.

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Reshaping Tax Policies for Sustainable Megaprojects in the Post Pandemic Era

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Introduction: purpose of this work

Megaprojects are large-scale projects developed with the aim to manage public utilities. Among the most common types of megaprojects there are the infrastructure and aerospace ones. The decades-long planning of these projects can require more than \$1 billion of investment and has a macroeconomic impact on the overall interested Region. In detail, megaprojects have both positive and negative effects: they create employment and improve productivity, but they also involve diverse stakeholders with conflicting interests, such as contractors, investors, bankers and national Governments.

Supporting megaprojects means also preserving the environment: in this regard, the promotion of sustainable activities often contrasts with the pursuit of private interests, such as the stakeholders profit one. Therefore the States have the task of promoting high-level projects and – at the same time – public interests such as the environmental one: in a nutshell, promoting megaprojects in a sustainable way.

In this regard, the global experience with Covid-19 disease should lead national Governments to favor an economic restart within the sustainability

rules. If future investments in megaprojects are desirable as they give added value to the belonging Countries, their development is strategic mostly when they are designed to comply with economic, social and environmental sustainability. As stated also by the UN in its *2030 Agenda for Sustainable Development*, the promotion of sustainability in its broad sense should be regarded as a priority goal, so that megaprojects definitely will have to be included among those activities suitable to embody this sustainability concept. Lastly, in realizing megaprojects transparency should be used to enforce the reliability of decision-makers and to involve the whole community in their planning¹.

To sum up, the aim of this paper is to explore the existing relations between megaprojects and taxation, basing also on the implications derived from the Covid-19 pandemic.

Methodology and approach

This paper is based on legal and economic literature and focused on the sustainability concept, in order to emphasize the need of an “environmental view” also in megaprojects design.

Findings and research results

Taxation has always played a crucial role in promoting and deterring collective behavior, and this role is well-established in Italy and in the EU.

Tax systems are structured to reflect the “double role” taxation plays (notwithstanding the main role, tax revenue): on one hand, tax reliefs are usually introduced to support activities considered worthy of fiscal attention (e.g. building renovations); on the other, tax policies prevent activities apt to harm fundamental public interests, such as the environment protection. Referring to the latter, this scope is usually reached by introducing levies on polluting events.

The role of taxation in guiding the community is evident also in the

¹ Cfr. Pollack, J., Biesenthal, C., Sankaran, S. & Clegg, S. (2018), “Classics in megaproject management: A structured analysis of three major works”, in *International Journal of Project Management*, No. 36(2), p. 382.

American tax system: indeed a large amount of tax allowances have been introduced in the US to support sectoral activities, establishing a sort of “friendly” tax approach.

Originality: megaprojects and sustainability-oriented taxation in the post Covid-19 Era

Although ordinary tax rules are not applied to megaprojects due to their exceptional nature, the “double role” of taxation is equally needed during megaprojects planning.

Firstly, the large size of these projects requires complex financing schemes: the interested Country has to attract private investments in order to gain the community approval, and to reach this scope a wide range of tax benefits must be provided to the stakeholders (e.g. tax exemptions on financial returns). Stakeholders can indeed be defined “*as anybody ... who has an interest in the project, its work, output, outcomes or ultimate goals*”², so that they have great influence in determining the project success.

And this is the key-point: beyond tax incentives, the intervention of tax authorities is needed also to improve sustainability. As a matter of fact, megaprojects environmental impact must be planned for many years in advance: the projects have to proceed through a complex review process in order to find the most friendly environmental solution (e.g. the Channel Tunnel UK-France was gestated over more than 30 years)³. Megaprojects often result in irreversible environmental effects, and that is why taxation has to encourage their sustainable development. This means avoiding the introduction of indiscriminate tax reliefs and providing an appropriate environmental taxation to direct the fiscal burden towards activities harmful to the environment: the latter may be the only approach that complies with the *polluter-pays* principle⁴.

In conclusion, and looking at the present Covid-19 context, investments

² Travaglini, A., Dunovic Burcar, I. (2016), “Megaproject case studies: a stakeholder management perspective”, in Proceedings of the 2016 International Conference on Industrial Engineering and Operations Management, Kuala Lumpur, Malaysia, March 8-10, p. 1349.

³ Flyvbjerg, B. (2016), The Handbook of Megaprojects, Oxford University Press (Ed.), p. 11.

⁴ This principle was laid down in OECD Recommendation n. 128 dated 26th May 1972 and now is acknowledged in par. 191 TFEU.

aimed at favoring a sustainable restart will be of utmost importance. Tax systems will have to take part in the early-adopted programs of subsidies set out by EU: in this sense it is desirable that part of the mentioned investments are used to support new megaprojects, given their function of improving the overall image of the interested Country. In particular tax systems will be called to address properly the financial resources set by EU for the post Covid-19 Era, to ensure their combined destination in innovative projects and sustainability.

Research limitations and implications

This research is at preliminary stage and it is desirable a future in-depth analysis on the links between megaprojects and taxation, due to the lack of studies in this subject.

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