

The Petrochemical Complex as a Unit of Reference in Considering Companies' Relationships with the Local Community

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My approach to studying the petrochemical industry, from a management perspective, is rooted in an interest in assessing how economic and environmental dimensions interact through the lens of the local community, in a petrochemical complex located in Castellón (Spain) a few kilometers from my place of residence. This forms the starting point for research analysing how companies in the complex manage their relationships with the local community and how these relationships could be improved.

(Image: Hills in Minas)

Petrochemical industrial complexes (oil refineries are commonly located in industrial sites together with other chemical firms), frequently situated in port areas, constitute an important focus of pollution caused by chemical substances dumped into the water, air or soil. Considering the industrial



complex as a unit of reference is a relevant approach. From the viewpoint of the companies located in the complex it is important because of the interrelationships that arise among them, which influence the companies' competitiveness. At the local community level, a series of preliminary interviews with local residents in the first stages of our research revealed that its relevance lies in the way people conceive of the industrial complex as a whole and their perceptions are generally more closely associated with the entire industrial site than with the individual firms, which is undoubtedly an important factor in the traditional characterisation of the firm–local community relationship. Considering the industrial complex as a unit of reference is a relevant approach.

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When the companies located in the complex seek to legitimise their operations in the eyes of the local community, they focus their attention on the economic development the petrochemical site generates in the region. There is no doubt that the members of the community appreciate the benefits associated with the industry, particularly in terms of jobs. However, as evidenced in the abovementioned interviews, their wishes go further to include demands for a safe and healthy environment. Whatever the case, establishing appropriate management of relations between the companies and the local community must entail finding out citizens' perceptions of the industrial site both in terms of its benefits and the negative externalities deriving from it. In a recent article we analysed how residents' cognitive appraisal of the economic and environmental aspects leads to their affective responses, and how both elements – cognitive and affective– jointly explain their behavioural intention towards their place of residence

(<http://www.sciencedirect.com/science/article/pii/S0959652615003029>).



(Image: City of Minas)

Of particular note among the study's findings is the fact that local residents consider environmental aspects to be more important than economic aspects. Beyond the importance of the petrochemical industrial complex to the economic activity of the geographical area, the incidence of environmental appraisals and the negative

affects deriving from them are of greater consequence in determining the behavioural intentions of the residents towards their place of residence.

Prioritising environmental aspects in this manner in the context of the petrochemical complex should be central to the way the companies manage their relationships with the local community. Communication is a critical factor because it allows information asymmetries to be reduced and trust to be increased. Information asymmetry exists

because the firms have specific knowledge about the environmental impact of their products and processes to which the local community does not have access. However, in their communication policies the companies highlight their capabilities in technical terms, and their contribution to generating quality jobs, and only refer to their concern for environmental aspects in a general way. Their environmental concerns are bound up with their complying with regulations and there is a widespread adoption of voluntary certified environmental management systems (EMSs). Although these certificates have been highlighted as a tool to improve relations with local communities, in our case study they did not really appear to act as valid signals to the local community about appropriate corporate environmental conduct (<http://onlinelibrary.wiley.com/doi/10.1002/bse.1817/abstract>).

Moreover, the 'firm-local community' relationships are managed at the level of each company, without taking account the collective dimension represented by the petrochemical complex. However, people have a conception of the industrial site as a whole. As a result of the cumulative effects of the emissions of each company, the petrochemical complex is the truly relevant dimension for the local residents. In such a context, these companies have a 'collective environmental corporate responsibility' towards the local community. In fact, the undertaking, and especially the initial intention to publish and disseminate a recent eco-audit, which sets out the actions and improvements of major companies located in the industrial complex, could be a sign of the complex's poor image and of the need to communicate the companies' actions in the environmental field in a collective way.

This eco-audit might represent, despite the bias and significant limitations of its contents, an initial but important step by firms from the petrochemical complex to jointly disclose environmental information. However, although this eco-audit was drawn up and presented at a press conference, to date it has not been officially released and, consequently, the local community has not been properly informed of its results. In the end, this attitude reflects the companies' lack of interest in improving their relationship with the local community.

Residents in the vicinity of the petrochemical complex also consider the role of public institutions to be crucial in ensuring the appropriate management of its environmental issues, although these entities generally align with the companies in prioritising the economic benefits the industry offers for the economic development of the region. The public institutions are responsible for controlling the companies' activities, particularly regarding emissions and other possible environmental

contamination sources. They are responsible for monitoring and assuring not only that emissions of the companies installed remain below the legal limits, but that cumulative pollution in the frame of the industrial site does not exceed the limits considered safe to guarantee the health of the population. The information in this section is very scarce, however. There are currently two monitoring stations in the area, but they only measure a very limited, and therefore clearly insufficient, number of contaminants. Indeed, citizens' trust in public institutions, in their role as guarantor of the health and safety of the community, is even lower than the trust placed in the companies on the site (this information appears in the second of the abovementioned articles). This lack of trust, both in the companies and in the public institutions, is undoubtedly a determining factor in the local community perception of risk.

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Furthermore, and also at the level of the industrial complex, public institutions face the problem of expansion of already established companies or the introduction of new companies into the site, which is frequently a source of conflict with the local community. Public institutions responsible for sustainable territorial planning should also prompt reflection regarding such expansions, which are often presented as necessary to maintain the levels of competitiveness of the industrial complex and of the companies located in it. Indeed, new companies, with a related industrial activity, are currently being considered for incorporation into the petrochemical complex. The reason the complex has not developed more intensely in recent years is probably due to the severe economic crisis that has affected the country and brought many planned investments to a halt. But within the frame of the prevailing logic, expanding the industrial petrochemical site emerges as a key issue in promoting competitiveness in the region, leaving environmental sustainability very much in the background. However, the very nature of an industrial complex like this is such that it acts as a magnet for new companies with links to the petrochemical sector, and it is extremely complicated to develop initiatives that encourage diversification of the industrial activity, which hinders the flow of investment into other sector types. For this reason, and paradoxically, growth in economic activity is inextricably linked to high levels of pollution. Aside from the possible economic effects they might have, the acceptance of new facilities in the cluster should be analysed carefully, since their contribution to

the accumulated levels of pollution from the industrial complex could exceed the safety thresholds that guarantee citizens' health.

The importance of the complex as a reference point, and the design of a joint approach by the companies can be clearly seen in the case of the petrochemical complex in Tarragona (we have extended our research to carry out a comparative case study with the Tarragona complex). This collective action is largely managed through the Chemical Industry Association of Tarragona (AEQT). From its beginnings, this association's objectives are to generate synergies with the main stakeholders and to continually improve the sector's competitiveness and increase its contribution to the sustainable development of the territory. To a certain extent, a common approach of the petrochemical complex with the local community is organised around this association. The efforts put into organising and developing this common approach through an intermediary institution like the AEQT in the case of Tarragona have contributed to improving communication and relations with the local community.

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I would like to conclude this contribution by highlighting the relevance of the complex as a unit of reference in considering companies' relationships with the local community. It is a question of going beyond the traditional 'firm-local community' relationship to pursue the appropriate management of a 'petrochemical complex-local community' relationship. The importance of the complex has frequently been considered by public powers and corporations from the point of view of regional development. But in environmental terms the issues are restricted to the company level and even at that level the information can be unsatisfactory for the local community because in some cases companies with several plants (located in different places) do not provide detailed environmental information for each one of them. The local community needs information at the level of the industrial complex about the accumulated emissions it generates and the environmental actions it carries out, information that could be provided through, for example, a 'petrochemical complex sustainability report'. Environmental problems are generated in the complex and should be managed at the complex level.

(Featured images: credit Jacob Garcia)