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The present study demonstrated the relationship between plant technology, organizational size, organizational structure, structuring processes, and organizational performance in plant turnaround maintenance. Organizational size of turnaround maintenance is related to plant technology. Plant technology and size are found to influence the configurations of organizational structure and structuring processes of the turnaround maintenance. The statistical analyses confirmed that organizational structuring processes influence the organizational performance of turnaround maintenance. One of the most important contributions of the present study is the finding that the harmonious relationship between the organizational size of the turnaround maintenance and structuring processes enhances the organizational performance of turnaround maintenance. The findings indicate that organizational structuring processes are some of the important elements in organising plant turnaround maintenance. There is a need to design and establish appropriate structuring processes to cope with the environment of the turnaround to ensure high turnaround organizational performance.

From a managerial standpoint, turnaround maintenance organizations are established with the sole purpose of organising and managing the large volumes of turnaround activities. Inevitably, this leads to division of labour, which creates role differentiation and specialisation among the organizational members. As such, common direction, coordination, and control of organizational resources through the appropriate organizational structure and structuring processes are vital.

As the organizational structure and structuring processes are not isolated from the influence of organizational size, compatible relations between them are essential for the organizational performance of the turnaround maintenance. The matching between the size of the turnaround maintenance and the structuring processes in the turnaround organization is essential to the successful implementation of the turnaround maintenance. The corresponding relationship between size and structuring processes contributes to a well-managed and organised turnaround event. This will alleviate the chances of schedule slippages, cost overruns, untoward accidents, and quality non-compliance which can cause huge losses of organizational resources. Furthermore, well-executed turnaround maintenance will ensure the availability and reliability of assets. This is central to the companies' business operations as there is a direct link between profit and plant efficiency.

Although the managers of the turnaround maintenance do not have total control over many turnaround characteristics such as the availability of qualified and skilled labour, turnaround complexity, conditions of the plant and equipment, and area congestions, the understanding of these characteristics enable the managers to mitigate the implications of those turnaround characteristics on the turnaround organizational performance.

It was amply demonstrated that the size of turnaround matters. The duration of planning, the number of workforces required for the turnaround, the costs of the turnaround events, the turnaround organizational structure, structuring processes, length of the turnaround, and the level of involvement of contractors in the turnaround execution differ among the process-based plants included in the present study. As such, the turnaround maintenance events are managed and organised differently among the process-based plants. For instance, remarkable differences in the frequency of the turnaround and duration of the turnaround events were reported by the survey. The differences indicate variations in the way the companies organised and managed their plant turnaround maintenance organizational resources in accomplishing the turnaround events. Subsequently, differences in the size of the turnaround events and complexity of the turnaround undertakings prevailed. Even though turnaround maintenance is