









terminal services like the volume of containers handled, container transfer, resource services etc. Additional services can provide flexibility to the system to respond during uncertainties.

Information sharing within the transportation system is an important part to enhance the system's flexibility. It could be possible that the information sharing with supply chain actors are the part of the internal operating system (Moon et al., 2012). But, the information connectivity mediates the relationship between logistics programs, productivity and delivery competence (Closs, Swink, & Nair, 2005). Thus, it is believed that information system flexibility is an important construct and can be considered for both internal and external types of transport flexibility.

#### 4. Flexibility Focused Performance Mapping for Intermodal Transportation

The hierarchy is developed in figure 2 using different types of transport flexibility listed by M. M. Naim et al. (2006). The developed hierarchy in the context of Intermodal transportation highlights different levels involved in improving overall performance. Structural and infrastructural resources of Intermodal terminal facilitates to determine the degree of flexibility which can be measured in terms of both range and response (Slack, 1987). Especially the external types of transport flexibility at Intermodal terminal operations level — product flexibility, mix flexibility, volume flexibility, delivery flexibility, and access flexibility. Enhancement in external flexibility of transport flexibility gives a better operational performance in terms of availability, dependability and productivity. This enhancement in flexibility will result in improving business competitiveness. The hierarchy depicted in figure 2 is to help to define the development of resources through different levels. Desired levels of availability, dependability, and productivity which was chosen by the logistics company to be in a competitive position can be defined using the above hierarchy. This will facilitate to indicate the necessary flexibility elements such as range or response for external types of flexibility. The organization can set goals and in improve the internal flexibility types to improve its overall performance.

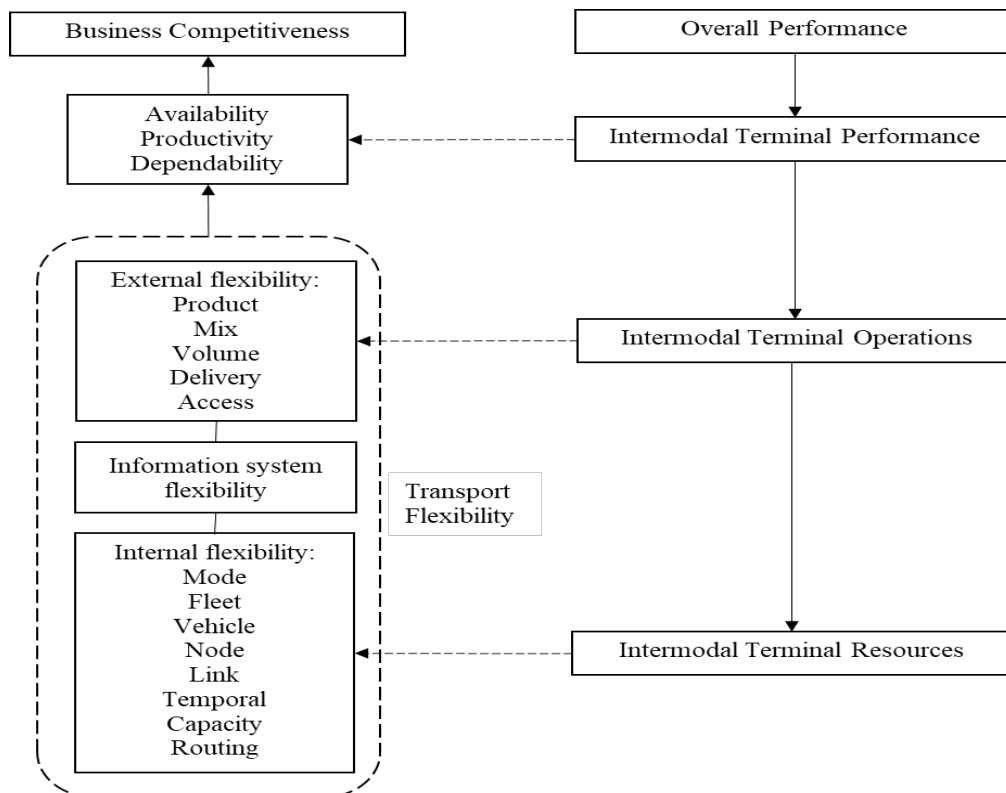


Figure 2. Transport flexibility hierarchy in Intermodal Transportation context.

## 5. Conclusion & Managerial Implications

The term flexibility is an equivocal term which is required to be redefined in an intermodal transportation context. Some authors used “flexibility” interchangeably with versatility and adaptability, while some asserted that flexibility is an antecedent of agility. Paper has enriched domain by proposing framework flexibility-enabled Intermodal Terminal decision framework. This model can simplify decision making and improve performance under uncertain conditions prone intermodal transportation system with further real-time data supplemented by the shipping industry in India. This study is in infancy and being supported by the Ministry of Shipping Govt of India. The potential success of flexible intermodal transportation will depend on competing actors, but also on the decision of competing modes, the shipping transport sector in particular. It is striking that with the emergence of cost-effective inland ports facilitated by Indian Government initiatives like Sagarmala and Bharatmala Projects. The decision makers still require improving their productivity by achieving a competitive position towards flexible intermodal transport in emerging scenario. Performance improvements can only be accomplished with more intelligent (flexible) planning systems and agreements. The proposed DIS-IFT will framework will surely benefit transport operators, planners, designers, policymakers by upbrining more clarity in understanding the flexibility of shipping transportation. Furthermore, the proposed model will assist to redefine coordinated flexibility capabilities. Finally, this framework can benefit managers to set their goals and develop strategies related to internal and external flexibilities to gain its competitive advantages.

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