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Although literature indicates that big data and predictive analytics (BDPA) convey a distinct organisational capability, little is known about their performance effects in particular contextual conditions (inter alia, national context and culture, and firm size). Grounding our investigation in the dynamic capability views and organisational culture and based on a sample of 205 Indian manufacturing organisations, we empirically investigate the effects of BDPA on social performance (SP) and environmental performance (EP) using variance based structural equation modelling (i.e. PLS). We find that BDPA has significant impact on SP/EP. However, we did not find evidence for moderating role of flexible orientation and control orientation in the links between BDPA and SP/EP. Our findings offer a more nuanced understanding of the performance implications of BDPA, thereby addressing the crucial questions of how and when BDPA can enhance social/environmental sustainability in supply chains.

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