Scientific research in universities is a critical and powerful component of knowledge creation for any society. However, for a country like Israel, one with no resources but its human capital ñ and that faces constant regional instability - scientific research is crucial for its existence. Historically, there was a fundamental understanding that in such a small country only universities can ensure viable, profound and high-caliber research, by critical mass of human capital and by optimising its resources. In this study, we look at the role of Israeli research universities in the National R&D System, why Israel is unique in its R&D structure, and how that structure is related to the universities' roles. We found that, despite Israel's outstanding ranking, in comparison to other OECD countries, for its R&D inputs and outputs, the Israeli universities' R&D output ñ measured in patents ñ is highly volatile and mostly affected by the country's strong business sector. This finding has implications regarding the strengthening of specific fields of research and the discussion about the role of universities in conducting applied vs basic research.