

SUCSESSES, PITFALLS, AND FAILURES OF CIVIL ENGINEERING RESEARCH FOR INDUSTRY: A PERSONAL PERSPECTIVE

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Abstract: The paper defines fundamental research and research for industry and highlights their benefits and shortcomings.

After describing the Civil Engineering research scenario around 1973 in Sri Lanka, the author highlights some successful Civil Engineering projects of research for industry done at Moratuwa. In addition similar projects done at Universities abroad are also presented. Although high rate of success can be seen as regards Civil Engineering research for industry, problems posed by few research sponsors can create insurmountable pitfalls as well as outright failures. A few examples of them are also presented. A total of 33 research projects dealing with Civil Engineering research for industry are presented.

Since 1980 substantial funding can be secured for research for industry from National Science Foundation, National Research Council, and the University arm for research funding, the Senate Research Committee. High demand for local research degrees has made more and more fresh engineering graduates to join the university to conduct projects on research for industry. Although the beginning of Civil Engineering research for industry was difficult in Sri Lanka, presently prospects are high for securing funding for conducting research for industry, as shown by the high output in current journals and annual publications of the Institution of Engineers (Sri Lanka), the Society of Structural Engineers and the Institute for Construction Training and Development.

Conclusions are: (a) during the early days of the university, when a research culture did not exist, obtaining limited sponsorships from Building Research Unit of the State Engineering Corporation yielded good results; (b) when the resources of S.E.C. for research sponsorships were not available, creation of a limited budget to fund building material costs from the university budget proved a successful strategy; and (c) above limitations can now be overcome by obtaining full funding for research from NSF, NRC or Senate Research Committee of the University of Moratuwa.