UNIVERSITY OF TECHNOLOGY SYDNEY

THE EFFECTS OF CROSS-FUNCTIONAL INTEGRATION MECHANISMS AND CUSTOMER CHARACTERISTICS ON THE OUTCOMES OF NEW PRODUCT DEVELOPMENT PROJECTS

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CERTIFICATE OF ORIGINAL AUTHORSHIP

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree except as fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

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ABSTRACT

Over the past numbers of years, the important role of new product development (NPD) has been acknowledged by both academics and practitioners. NPD is not only a crucial means for the survival and renewal of organizations, but also a valuable source of competitive advantage and prosperity of firms. New products have been found to account for up to 50% of sales and 50% of profits of firms. Firms, however, have to confront the high failure rates of new products, which range from 40% to 50%. The importance of NPD, coupled with the poor performance of new products, motivates us to look for the drivers of new product success.

The literature suggests that cross-functional integration mechanisms and customer involvement in NPD projects are crucial for new product success. Nonetheless, there is lack of research on the direct impact of cross-functional integration mechanisms and customer characteristics on NPD performance. Therefore, we aim to identify which cross-functional integration mechanisms and which customer characteristics directly affect NPD outcomes.

To this end, based upon the information processing perspective and resource dependence theory, we proposed a conceptual model and developed hypotheses of the relationships between cross-functional integration mechanisms, customer characteristics, and NPD outcomes. Data was collected from marketing managers, sales managers, product managers, brand managers, and the like who have been working in Australian firms and have been involved in NPD projects. The hypotheses were tested by employing variance-based structural equation modeling (PLS-SEM).

We find that five mechanisms, namely co-location, superordinate goals, the use of information and communication technology, cross-functional training, and joint reward systems have a positive impact on NPD outcomes (i.e. NPD speed, new product advantage, and new product success), whilst three other mechanisms, namely job rotation, the use of cross-functional teams, and informal coordination do not. Concerning the customer side, customers with product expertise, customers with lead user characteristics, and financially attractive customers can help firms enhance NPD speed, new product advantage, and new product success. Nevertheless, innovative customers and customers with price expertise have no influence on these three NPD outcomes.

Our study adds to the limited research on the direct effects of cross-functional integration mechanisms and customer characteristics on NPD outcomes, and provides a more comprehensive picture of the factors driving NPD performance than existing studies in the research stream. Our findings also enable firms to select the effective integration mechanisms as well as the right customers for NPD projects, thereby maximizing the success of new products.