

**Key Drivers of University-Industry Relationships and the Impact  
of Organisational Culture Difference; A Dyadic Study**

**by**

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## **Abstract**

This research examines the characteristics of successful university-industry relationships. By integrating the research areas of relationship marketing and technology transfer, it attempts to provide a unique contribution to both streams and the emerging literature on university-industry relationships. This thesis argues that conceptualising relationships beyond those between private sector organisations, the current central focus of relationship marketing theory development, is needed in order to mature the discipline. In particular, university-industry relationships offer research opportunities due to their incorporation of fundamentally different organisational cultures. The aim of this research is to identify key drivers of university-industry relationships by taking into account the impact of organisational culture difference and other relevant antecedents, such as individuals engaged in the relationship process.

Based on a literature review and initial qualitative research, two conceptual models were developed and subsequently tested using Structural Equation Modelling methods. The first generic model identified the key drivers of satisfaction and intention to renew and examined the influence of organisational compatibility and personal experience on university-industry relationships. The second dyadic model focused on identifying the impact of individual dimensions of organisational culture difference on relationship characteristics and success. Comprising the perspectives of both relationship parties, the dyadic data enabled an advanced reflection of cultural differences and relationship dynamics. Four dimensions were analysed, namely differences in time orientation, market orientation, employee empowerment and corporate flexibility. Both models were analysed in three steps, including path analysis and hypotheses testing, model re-specification and multi-group analysis.

Consistent with the literature, trust, commitment and integration were found to positively influence the primary outcome variable, satisfaction, and were thus confirmed as key drivers of successful university-industry relationships. While trust was identified as the strongest driver for satisfaction, commitment emerged as the strongest predictor of intention to renew. Also confirming relationship marketing theory, the results showed interrelationships between these relationship factors:

Trust positively affected commitment and integration and commitment strongly and positively influenced integration. The findings further demonstrated that organisational compatibility positively influenced all relationship characteristics. However, only two significant paths were confirmed between the individual dimensions of organisational culture difference and relationship characteristics: Differences in time orientation and corporate flexibility both impacted commitment negatively. Furthermore, market orientation difference directly and negatively affected the relationship outcome measure intention to renew. The results only showed a weak influence of personal experience, the variable measuring the relevance of individuals for university-industry relationships, on commitment.

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### List of Abbreviations

$\alpha$	Cronbach's coefficient alpha
$\rho_{\eta}$	Composite reliability
$\rho_{vc(\eta)}$	Average Variance Extracted (AVE)
$\chi^2$	Chi-Square
$\chi^2/df$	Normed Chi-Square
$\Delta\chi^2$	Chi-Square Difference
AGFI	Adjusted Goodness-of-Fit
ARC	Australian Research Council
CAIC	Consistent Akaike Information Criterion
CFI	Comparative Fit Index
CRC	Cooperative Research Centre
CRM	Customer Relationship Management
GFI	Goodness-of-Fit
IMP	Industrial Marketing and Purchasing
NFI	Normed Fit Index
OECD	Organisation for Economic Co-operation and Development
OCD	Organisational Culture Difference
R&D	Research and Development
RMSEA	Root Mean-Square Error of Approximation
SEM	Structural Equation Modelling
TLI	Tucker-Lewis Index
UIR	University-Industry Relationship

## **Statement of Declaration**

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person, except when due reference is made in the text of the thesis.

I give consent to the copy of my thesis, when deposited in the University Library, being available for loan and copying.

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## **Publications from this Thesis since Enrolment**

### ***1. Journal Articles - Refereed***

Plewa, C., Quester, P., and Baaken, T. (2005) "Relationship Marketing and University-Industry Linkages: A Conceptual Framework", *Marketing Theory*, 5 (4), pp. 431-454 (Appendix 1a).

Plewa, C., and Quester, P. (in press) "Satisfaction with University-Industry Relationships: The Impact of Commitment, Trust and Championship", *International Journal of Technology Transfer and Commercialisation* (Appendix 1b).

Varey, R.J., Baxter, R., Brodie, R.J., Brookes, R.W., Plewa, C., Quester, P., and Shembri, S. (2005) "Buyer-Seller Relationships: Australasian Research and Reflections", *Journal of Customer Behaviour*, 4 (1), 127-146.

Plewa, C., Quester, P., and Baaken, T. (conditionally accepted) „Organisational Culture Differences and Market Orientation: An Exploratory Study of Barriers to University-Industry Relationships", *International Journal of Technology Transfer and Commercialisation*.

### ***2. Book Section***

Plewa, C., and Quester, P. (forthcoming) "University-Industry Relationships: The Effect of Imbalance in Flexibility and Market Orientation", to be published in the *Anthology on Science Marketing*, Editor: Thomas Baaken, Germany.

### ***3. Conference Proceedings - Refereed***

Plewa, C. (2005) "Differences in Perceived Benefits from University-Industry Relationships", *Proceedings of the Australian and New Zealand Marketing Academy Conference*, Fremantle, (CDROM).

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### ***3. Conference Proceedings and Workshops - Non-Refereed***

Horner, N., and Plewa, C. (2005) "Public-private Sector Engagement: A Suppliers View", Presented at the KCA Annual Conference, Adelaide.

Plewa, C. (2004) "Characteristics and Key Success Factors of University-Industry Linkages: a Relationship Perspective", Proceedings of the 2<sup>nd</sup> and 3<sup>rd</sup> Conference on Science-to-Business Marketing and Successful Research Commercialisation, Muenster, Germany, and Brussels, Belgium, (CDROM).

Plewa, C., and Quester, P. (2004) "Organisational Culture Difference and University-Industry Relationships: An Exploratory Study", Proceedings of the Marketing Science Conference, Rotterdam, Netherlands, p.60.

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Plewa, C. (2003) "Characteristics and Key Success Factors of University-Industry Linkages: A Relationship Perspective", Proceedings of the Conference Science Marketing: A Talkfest on Successful Research Commercialisation New and Inspiring Aspects from Australia and Europe, Adelaide, (CDROM).

Plewa, C. (2003) "The Effect of Organisational Culture Distance on Relationship Performance: Introducing Relationship Marketing to University-Industry Relationships", Presented at the Australian and New Zealand Marketing Academy Conference (ANZMAC) Doctoral Colloquium, Adelaide.

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