
Editorial

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Biographical notes: Marina Dabic obtained her PhD from the University of Zagreb Croatia. She is a Full Professor at University of Zagreb. She has been an active Researcher over the last 20 years. In the last five years, she has published more than 20 scientific papers. Her current research interests include innovation, management of technology, entrepreneurship, technology transfer and the impact of innovation on CEE countries. She is a Reviewer for European Science Foundation. She has been the grant holder of EU International JP TEMPUS Project Fostering Entrepreneurships in Higher Education and several other EU projects.

This issue of *International Journal Technology Transfer and Commercialisation (IJTTC)* contains examples from the spectrum of approaches to the investigation and description of technology transfer from different countries but all of them are passionate about the opportunities, threats and challenges created by the process of transition in their countries.

Knowledge has the highest value, the most human contribution, the greatest relevance to decisions and actions and the greatest influence on a specific situation or context. It is also the most difficult of content types to manage and transfer, because it originates and is applied in the minds of human beings. People who are knowledgeable have the ability to integrate and frame it within the context of their experience, expertise and even more to transfer it. While doing so, they can expand the state of possibilities and, in turn, allow further interaction with experience, expertise and modifications. Therefore, in a transition context, all knowledge stems from people. Some knowledge is incorporated in organisational artefacts like processes, structures and technology. The authors of this special issue investigate how transfer technology and R&D activities encourage growth in transition countries. Why should it be so hard for executives in transition countries to remain interested in the results of innovation and to take the all necessary actions to build in innovation into a corporate culture? It is because in spite of all the innovation rhetoric, there is not a clear understanding of what transfer technology and innovation truly are. To many, innovation means simply increasing research and development (R&D) spending. To others, a corporate commitment to innovation is expressed by slogans on the wall. On the other hand, innovation is a fundamental pillar upon which competition is built (Ulusoy, 2003). Modern dynamic theories of competition (Dickson, 1996; Hunt and Morgan, 1995; Drazin and Schoonhoven, 1996; Hunt, 2000) point that the central role of technology and innovation in catching up process in transition countries for achieving and implementing knowledge (Cui et al., 2006; Kiessling et al., 2009) and in superior

financial performance [Hunt, (2000), p.138]. In this dynamic, competitive environment that drives the need for technology and innovation, so that firms can improve or maintain their market positions relative to their competitors by offering more value to customer or lower cost. The mid to late 1980s brought a more proactive approach to transfer technology filed under the umbrella term of strategic management. Transfer technology is in focus of a different cross – disciplinary meta approach research (Reismann, 2005). Technological competencies have been theoretically and empirically verified by Penrose (1995), Mansfield et al. (1979) and Prahalad and Hamel (1990) as likely to be central to the creation of ownership advantages for many MNEs. Technology acquisition decisions have traditionally examined the firm's choice either to use internal technology or to acquire technology from outside sources (Teece, 1975; Murray et al., 1995; Millar and Choi, 2009). While globalisation of markets and the consequent changes in competitive and technological environments, R&D internationalisation (Freeman and Soete, 1990) and the new perspectives of international technology management (Child and Rodrigues, 2005) have moved up on the technology research agenda (Chiesa, 2000; Gassman and von Zedtwitz, 1998), there is scope for further exploration of current quantitative and qualitative research.

Dahlman and Westphal (1983, p.7), among others, distinguish between three levels of technology transfer:

- 1 the capability required to operate a technology
- 2 investment capability that required creating new productive capacity and innovation capability
- 3 the ability to modify and improve methods and products.

These requires different types and levels of skill, different supporting institutions and because of that, in terms of this journal and this special issue, the economic growth in transition county might be described and a capability to acceptance of change of absorptive capacity and supply of new technology.

This special issue is based upon the contributions of authors and reviewers. The list of contributing authors and their manuscripts are as follows: Andrea Szalavetz, 'Developing entrepreneurial universities to enhance technology transfer in transition economies'; Jadranka Švarc, 'Does Croatian national innovation system (NIS) follow the path towards knowledge economy?'; Francois Jacobus Janse van Vuuren, Marthinus Pretorius and Tugrul U. Daim, 'Exploring technology licensing in the South African manufacturing industry'; Đuro Kutlača, 'Business and technology incubators in autonomous province of Vojvodina: from feasibility studies to evaluation of performance – case study of Business Incubator Zrenjanin'; Jiang Yu, 'Acquiring external technology or building indigenous capability? Partnership strategy with MNCs in China'; Sonja Radas, 'Factors influencing NPD process type: analysis of leading Croatian enterprises'; and Tugrul U. Daim and Patt Suntharasaj, 'Management of technology transfer: an overview of Thailand Science Park'.

Szalavetz compares and examines industry-university relationship and emergence of entrepreneurial university in Hungary. Her research gives a meaningful conclusion on relevance of higher education expenditures on R&D by firms as it places specific bargaining power to firms to direct research in their area of interest, especially from the demand-side factors stimulated by public policy incentives. Her finding supports Rodrik's (2007) claims and calls for an increase in public policies which enhance

research activities. Developing entrepreneurial universities in transition economies to enhance technology transfer is a valuable contribution to the analysis of importance of public policies for development of entrepreneurial university and other industry-university relationships.

Švarc disapproves the practical concept of Croatian institutional infrastructure and exemplifies it with the list of factors that obstruct their appropriate conduct. 'Does Croatian national innovation system (NIS) follow the path towards knowledge economy?' presents the negative effects the government technology transfer policies could have in transitional economies and is useful for understanding the transition environment, its difficulties and exploitations.

Van Vuuren et al. place important role on licensing but question to what extent are companies able to organise in order to incite licensing activities and which activities have the greatest impact on technology transfer. Their finding includes determinants of licensing such as intellectual property, innovative activities, use of information, economic ethos, sensitivity to the future and techno-economic networks by South African companies. Activities are then grouped into those significant for in- (technology followers) or out- (technology leaders) licensing and can be analysed as a next important step in a development of technology transfer strategies.

Kutlača's article 'Business and technology incubators in autonomous province of Vojvodina: from feasibility studies to evaluation of performance – case study of Business Incubator Zrenjanin' describes the institutions and their aims that facilitate economic development and growth entrenched with technology and, consequently, knowledge transfer.

China is one of the best examples of underlying growth originating in technology transfer activities occurred by means of its economic policies and absorbing capacity. Yu's 'Acquiring external technology or building indigenous capability? Partnership strategy with MNCs in China' provides insight into China as a 'trading market for technology' by giving critiques as well as illustrations of international partnership strategies that emphasis the competition among domestic and foreign firms to facilitate technology transfer which benefits mutual knowledge flow.

Radas' article 'Factors influencing NPD process type: analysis of leading Croatian enterprises' expects that the ownership structure, foreign ownership, the firm size, competitive intensity, the percentage of income earned from new products as well as speed of the market entrance, large product variety and improvement of business functions will impact the new product development process type. Apart from the last three, a significant relationship between assumed determinants and NPD process type has not been proven. This finding offers a useful base for the future research in the area of knowledge transfer and new product development process type policies.

In the paper 'Management of technology transfer: an overview of Thailand Science Park', Suntharasaj and Daim begin with the history of science parks, its definitions and stress the role of technology incubators for promotion of business growth for transfer of innovation from knowledge experts to venture capitalists. They then give information on the Thailand specific Technology Science Park and explain the country's strategy to evolve from labour intensive to skill intensive, and on, to technology and R&D intensive which is done through implementation of government's science and technology policy, funded by government support and facilitated by government incentives. They predict the latter might be the reason of forthcoming difficulties.

In this issue of *IJTTC* we have tried to combine country specific research and examples on technology transfer on transitional economies. By reviewing the given articles, the reader and researcher can develop an understanding on technology transfer's impact on transitional economy, economic policies and praxis as well as a scope for the future research in terms of the impact and development of entrepreneurial universities and their comparisons in transitional economy.

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References

- Chiesa, V. (2000) 'Global R&D project management and organization: a taxonomy', *Journal of Product Innovation Management*, Vol. 17, No. 5, pp.341–359.
- Child, J. and Rodrigues, S.B. (2005) 'The internationalization of Chinese firms: a case for theoretical extension?', *Management and Organization Review*, Vol. 1, No. 3, pp.381–410.
- Cui, A., Griffith, D.A., Cavusgil, T. and Dabic, M. (2006) 'The influence of market and cultural environmental factors on technology transfer between foreign MNCs and local subsidiaries: a Croatian illustration', *Journal of World Business*, Vol. 41, pp.100–111.
- Dahlman, C.J. and Westphal, L.E. (1983) 'The transfer of technology – issues in the acquisition of technological capability by developing countries', *Finance & Development*, pp.6–9.
- Dickson, P. (1996) 'The static and dynamic mechanics of competition: a comment on Hunt and Morgan's comparative advantage theory', *Journal of Marketing*, pp.102–106.
- Drazin, R. and Schoonhoven, C.B. (1996) 'Community, population and organization effects on innovation: a multilevel perspective', *Academy of Management Journal*, Vol. 39, pp.1065–1083.
- Freeman, C. and Soete, L.L.G. (1990) *New Explorations in the Economics of Technical Change*, Frances Pinter, London.
- Gassmann, O. and von Zedtwitz, M. (1998) *Organizing Industrial R&D on a Global Scale*.
- Hunt, S.D. (2000) *A General Theory of Competition*, Sage Publications, Inc., Thousand Oaks, London, New Dehli.
- Hunt, S.D. and Morgan, R.M. (1995) 'The comparative advantage theory of competition', *Journal of Marketing*, Vol. 59, pp.1–15.
- Kiessling, T., Richey, J.G., Meng, J. and Dabić, M. (2009) 'Exploring knowledge management to organizational performance outcomes in a transitional economy', *Journal of World Business*, Vol. 44, No. 4, pp.421–433.
- Mansfield, E., Romeo, A. and Teece, D.J. (1979) *Overseas Research and Development by US Based Firms Economic*, Vol. 46.

- Millar, C.C.C.J. and Choi, C.J. (2009) 'Reverse knowledge and technology transfer: imbalances caused by cognitive barriers in asymmetric relationships', *Int. J. Technology Management*, Vol. 48, No. 3, pp.389–402.
- Murray, Y., Kotabe, M. and Wildt, A.R. (1995) 'Strategic and financial performance implications of global sourcing strategy: a contingency analysis', *Journal of International Business Studies*, pp.181–202.
- Penrose, E. (1995) *The Theory of the Growth of the Firm*, Oxford, UK.
- Prahalad, C.K. and Hamel, G. (1990) 'The core competence of the corporation', *Harvard Business Review*, May–June, pp.79–91.
- Reismann, A. (2005) 'Transfer of technologies: a cross-disciplinary taxonomy', *Omega*, June, Vol. 33, No. 3, pp.189–202.
- Rodrik, D. (2007) 'Industrial policy for the twenty-first century', in *One Economics, Many Recipes: Globalization, Institutions, and Economic Growth*, pp.99–152, Princeton University Press, Princeton.
- Teece, D.J. (1975) 'The multinational corporation and the resource cost of international technology transfer', Dissertations available from ProQuest, 1 January, Paper AAI7524137.
- Ulusoy, G. (2003) 'An assessment of supply chain and innovation management practices in the manufacturing industries in Turkey', *International Journal of Production Economics*, Vol. 85, No. 3, pp.251–270.