REFERENCES

Abbott, P.G., (1985). Technology Transfer in the construction Industry Infrastructure and Industrial development. Special repeat no.223, The Economist Intelligence unit, The Economist Publications Ltd.

About Our Company. MAST Industries, Inc. Retrieved 15 October 2009 from < http://www.mast.com/about/about.htm>

Agarwal, S. and Rmaswami, S., (1992). Choice of Foreign market entry mode: Impact of ownership, location and internationalization factors, Journal of International business studies, vol. 23, pp. 1-27

Auster, E.R., (1994). Macro and strategic perspectives an interorganizational linkages: a comparative analysis and review with suggestions for re orientation, Advances in strategic management, vol. 10B, pp. 3-40

Company Profile. Prym Group. (2007). Retrieved 15 October 2009 from < http://www.prym.com/prym/proc/docs/0H04001JL.html>

Cooper, R.G., (2001). Winning at new products: accelerating the process from idea to launch, Perseus, Massachusetts.

Courtaulds. WIKIPEDIA The Free Encyclopedia. Retrieved 10 October 2009 from http://en.wikipedia.org/wiki/Courtaulds

Doz, Y., and Hamel, G., 1999, Alliance Advantage: The art of creating value through partnering, Harvard Business School Press, Boston, MA.

Doz, Y.L., Olk, P.M. and Ring P.S., 2000, Formation process of R&D consortia: which part to take? Where does it lead?, Strategic management journal, vol. 21, pp.239-66

Dogi International Fabrics. Retrieved 10 October 2009 from < http://www.dogi.com/english/>

FRANCE: Lace maker Noyon goes into administration. Just-Style (10 October 2008) Retrieved 15 October 2009 from http://www.just-style.com/article.aspx?id=102204

Floyd, C., (1997). Managing Technology for Corporate Success, Gower, Aldershot.

Farrukh, C.J.P, Phaal R, and Probert, D.R., (2001), A framework for supporting the management of technology innovation, Proceedings of ECIS conference, The future of Innovation Studies, 20-23 September, Eindhoven

Farrukh, C., Phaal, R, and Probert, D., (2003), Technology Roadmapping: Linking technology resources into business planning, International Journal of Technology Management, Vol. 26, No. 1, pp. 2-19

Franclin, (1999). The real world of technology, 1989 CBC Massey lectures series

Groenveld, P., (1997). Roadmapping integrates business and technology, Research Technology Management, Vol. 40, No. 5, pp. 48-55.

Harrigan, K.R., (1988a). Joint ventures and competitive strategy, Strategic management Journal, Vol. 9, pp. 141-58

Hemachandra, D.G. and Jayawardane, A.K.W. (2007). Successes and Failures of Sri Lanka Railways in International Technology Transfer. The institution of Engineers, Sri Lanka ENGINEER – Vol XXXX, No. 02, pp. 19-28

Hennart, J.F., (1991). A transaction cost theory of joint ventures: an empirical study of Japanese subsidiaries in the United States, Management Science, Vol. 37, pp. 483-97

Jagoda, K., Ramanathan K., (2003). A Stage-Gate Model for Guiding International Technology Transfer, CD-ROM proceedings of PICMET 2003, Portland, Oregon, July 20-24.

Jagoda, K., K. Ramanathan, (2005). Critical Success and Failure factors in planning and implementing international technology transfer: A case study from Sri Lanka, CD-ROM proceedings of PICMET 2005, Portland, Oregon, July 31- Aug 4.

Joint venture with Noyon in Calais, France: MAS Holdings to set up Rs. 4 b lace factory in Biyagama. (9 July 2004). Daily News. Retrieved 15 October 2009 from < http://www.dailynews.lk/2004/07/09/bus02.html>

Kaplan, R.S. and Norton, D.P. (1996), The Balanced Scorecard: measures that drive performance, Harvard Business Review, January/February, pp.71-9

Kaplan, R.S. and Norton, D.P. (1996), Linking the balanced scorecard to strategy, California Management Review, Vol. 39 No. 1, p. 54.

Kaplan, R.S. and Noton, D.P. (1997), Using the balanced scorecard as a strategic management system, Harvard Business Review, January/February, pp.75-85.

Kappel, T.A., (2001). Perspective on roadmaps: now organizations talk about the future, Journal of product Innovations Management, Vol. 18, No. 1, pp. 39-50

Lall, S., (1987). Learning to Industrialize: The Acquisition of Technological capability by India, Macmillan Press Ltd., London.

Lacy Trimming. LBO. (11 October 2003) Retrieved 15 October 2009 from http://www.lankabusinessonline.com/mobile/fullstory.php?nid=1375255795

Lee, S. and Park, Y., (2005). Customization of technology roadmaps according to roadmapping purposes: Overall process and detailed modules, Technological Forecasting and Social change, Vol. 40, No. 5, pp. 48-55.

Limited Brands. Retrieved 10 October 2009 from < http://www.limitedbrands.com/about/mission.jsp>

Lorange, P. and Roos J., (1993). Strategic Alliance: Formation, Implementation and Evaluation, Blackwell Business, Cambridge, MA.

Lonseth R.J., Lonseth A.A. and Jagoda K.K.,(2009),Efficacious Management of Technology Transfer Projects: Lessons from a Canadian Case Study, POMS 20th Annual Conference Orlando, Florida U.S.A. 1-4 May

MAS Fabric – Leading Innovation in the Apparel. (May 2008).LMD, 98

Mathews, W.H., (1992). Conceptual framework for integrating technology into business strategy, Int.J. of Vehicle Design, Vol. 13, Nos 516, ppp 524-532

Menna, P., F.P. Ciorba, K. Kombo, J. Song, K. Kurokoua, (2003). Analysis of impact of transferring a photovoltaic modules manufacturing facility. Solar Energy Material and Solar cells, 75 (3-4), pp. 519-528

Metz, P.D., (1996). Integrating Technology Planning with Business Planning, Research Technology Management, Vol 39, No. 3, pp, 19-22

Mumullage, B.,(2007). Technology Transfers in the Sri Lankan Textile Industry: MAS Case Study, MBA dissertation, University of Moratuwa

News. MAS Holdings. Retrieved 10 October 2009 from http://www.masholdings.com/news/archives.html

Noyon Lanka wins coveted 2008 Taiki Akimoto 5S Award. (11 December 2008) fibre2fashion. Retrieved 15 October 2009 from http://www.fibre2fashion.com/news/apparel-news/newsdetails.aspx?news id=66989

Ramanathan, K., (1994). The Polytrophic Components of Manufacturing Technology. Technology Forecasting and Social Change, 46(1), XX.

Ramanathan, K., (2007). The Role of Information and Communication Technology (ICT) in Enhancing Technological Capabilities. United Nations ESCAP

Royston Ellis, Robin Hiney and Anila Hettiarachchi. 20 Years Uncovered The MAS Story: Pyxle Pvt. Ltd publisher

Sara Lee Corporation. WIKIPEDIA The Free Encyclopedia. Retrieved 10 October 2009 from < http://en.wikipedia.org/wiki/Sara_Lee_Corporation>

Sharif, M. N., (1994a). Integrating Business and Technology Strategies in Developing Countries. Technological Forecasting and Social Change. 45, 151-167.

Sharif, M.N. and Ramanathan, K., (1995). Overall Report, Technology Transfer and Development. Asian Development Bank, Manila.

Sharif, M.N., (1995). The Evolution of Technology Management, Asian Institute of Technology, Bangkok, Thailand.

Slimline creates value, wins accolades and awards. (2003). Daily News Online. Retrieved 10 October 2009 from http://www.dailynews.lk/2005/10/04/bus11.htm

SL must review outdated trade practices. The Nation on Sunday. Retrieved 22 October 2009 from < http://www.nation.lk/2009/09/06/busi3.htm>

Sri Lanka Apparel. A beginning of a new order with MAS and NIKE (23, September, 2009). Retrieved 10 October 2009 from http://srilanka-apparel.com/index.php?option=com_content&task=view&id=213&Itemid=2>

Strategic Management Vale Chain. NetMBA Retrieved 10 October 2009 from http://www.netmba.com/strategy/value-chain/

Stretchline. Retrieved 15 October 2009 from < http://www.stretchline.com/flash_home.html> Thomas, H. (2007). Business school strategy and the metrics for success. Journal of Management Development, Vol. 26, No.1, pp 33-42

Todeva, E. and Knoke, D. (2005) Strategic alliances and models of collaboration. Management Decision, Vol. 43, No. 1, pp 123-148

TradeCard-MAS deal to speed financial transactions. (20 August 2009). Retrieved 22 October 2009 from < http://www.jaafsl.com/aNewsView.cfm?nID=146>

Triumph. Retrieved 15 October 2009 from http://www.triumph.com/lk/en/191.html

Watson, N., (2006). MAS Holdings: Strategic corporate social responsibility in the Apparel Industry, case study, INSEAD Business School

Yu,X.Y., (1990). International Economic Law. Nanjing: University Press



V.

APPENDIX A- QUESTIONNAIRE

Joint Venture Plant	:
Year of Establishment	:
Joint Venture Partners	:

Competitive environment assessment

- 1. What were the political factors which significantly influenced the company before the joint venture?
- 2. What were the economical factors which significantly influenced the company before the joint venture?
- 3. What were the social factors which significantly influenced the company before the joint venture?
- 4. What were the technological factors which significantly influenced the company before the joint venture?
- 5. What were the strengths of MAS Holdings before the joint venture?
- 6. What were the weaknesses of MAS Holdings before the joint venture?
- 7. What were the opportunities for MAS Holdings before the joint venture?
- 8. What were the threats for MAS Holdings before the joint venture?
- 9. What were the market conditions?
- 10. What were the potential customer characteristics?
- 11. What were the potential product characteristics?
- 12. What was the nature of competition/competitive forces?
- a. Rivalry among competitive firms in the industry?
- b. Threat of substitutes?
- c. Threat of new entrants?
- d. Bargaining power of suppliers?
- e. Bargaining power of customers?
- 13. What was the vision of the company?

Focused technology search

1. State clear set of specifications for the technology being sought through the joint venture

			Technology specification							
		Value to the							Product	Product
Products	Customers	customers/				Technoware	Humanwar	Orgaware	design	usage
		competitveness	Technow	Humanw	Orgaw	specific	e specific	specific	inforwar	inforwa
			are	are	are	inforware	inforware	inforware	e	re

- 2. State the extent to which abilities to use the technology were available in-house, the gaps that had to be bridged & the resource commitments needed.
- 3. What was the profile of the JV partner (technological capabilities, experience in technology transfer projects, business strategy, past performance & cross-cultural expertise).
- 4. What were the core competencies & the competitive advantage expected through the joint venture?

Negotiation for Joint Venture W.lib.mrt.ac.lk

- 1. What were the motives of MAS for the JV?
- 2. What were the motives of the JV partner?
- 3. What were the risks & what was the perception of MAS towards risks?
- 4. What were the contributions & responsibilities of MAS toward the JV?
- 5. What were the contributions & responsibilities of the JV partner towards the JV?
- 6. What were the critical issues MAS highlighted in the negotiation?
- 7. What were the channel s of communication between both parties?
- 8. What was the schedule of visits agreed upon to each others facilities?
- 9. What were the steps take to ensure concurrence with government policies & identify possible barriers, likely policy changes & government support available?
- 10. What were the agreements reached upon payment amounts, procedures & time frames?
- 11. What were the intellectual property arrangements?

Preparing joint venture implementation plan

- 1. What were the changes made to the organizational structure & work design to accommodate the new technologies?
- 2. What were the changes made in the knowledge management systems & policy regimes to accommodate the new technology?
- 3. What was the training & education schedule for the work force that matches with the technology components to be transferred?
- 4. What were he measures formulated to build good relationships between the transfer personnel?
- 5. What was the implementation plan that formed the basis of a working relationship between the partners?
- 6. What were the milestones agreed upon?

Implementation

- 1. What were the changes made to the products or processes to suit local conditions?
- 2. To what extent were recruiting skilled personnel not already available within the organization & conducting training programs for existing staff carried out?
- 3. What was the improved remuneration plan developed to facilitate change management?
- 4. What were the arrangements formulated with ancillary suppliers of materials, & services?
- 5. What were the links maintained with government authorities to keep track of policy changes?

Technology transfer impact assessment

Success factor	Measure	1986	1987	1988	2009
Customer perspective	Turnover				
	Ontime performance				
	Nonlant				
	Number of customer complaints				
T ALLEMANT	Number of strategic				
	partnerships				
	New key intitiatives undertaken				
	with customer				
	Factory rating				
	Defect rate				
Financial perspective	Total OH				
	Total earnings				
	Working capital				
	Working capital cycle				
Business process perspective	Machine utilization				
	Overall efficiency				
	RM write offs				
:	Air freights				
	Number of MOS intitiatives				
	Phase on MOS road map				
	Savings through method				
	improvement & innovations	of Mor	atuwa,	Sri Lanka	
Learning & growth perspective	First time through			sertations	
	Average machine set up time	1116262	Ø D123	seriamons	İ
	Number of training programs	rt.ac.lk			İ
	Number of people trained				
	overseas				
	Number of people trained				
	locally				
	Number of innovations				
	Number of expatriates in the				
	company				

- 1. What were the variances if any from expected outcomes and the reasons for the variances?
- 2. What were the corrective measures that were implemented to correct adverse variances?
- 3. What were the new or complementary technologies that were transferred to consolidate the gains made if any?

APPENDIX B- LIST OF INTERVIEWEES

Murad Rajudin - CEO of Noyon Lanka

Edwin Sambells - CEO of DOGIEFA

Asanka Wimalaratne - General Manager of Textprint Lanka

Niranjan Wijesekera – CEO of Stretchline

Krishan Weerawansa – Director of Stretchline

Vasu Wijegoonawardena – CEO of Prym Intimates

Sarinda Unamboowe – CEO of Linea Aqua

Dinesh De Silva - Operations Director - Local Manufacturing of MAS Active

Suren Fernando - Financial Director of MAS Intimates

Kanil Wijeyeratne – Director at MAS Intimates

Ranil Vitharana – Director of MAS Research and Innovation Sri Lanka.

Lelanthi Tennekoon – General Manager Finance & Risk Management of MAS Holdings

Rushika Dias - Manager Corp Fin. & Risk Mgt of MAS Holdings

IG Perera – Manager at Bodyline

Ruwandini Perera - Assistant Manager Finance - Treasury of MAS Active

APPENDIX C- PHASES OF MOS ROADMAP

	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
	Pre Requisite	Stability	Continuous Flow	Standardized Work	Pull System	Leveled
	(0 - 4 months)	(4 - 8 months)	(8 - 12 months)	(12 - 18 months)	(18 & Beyond)	Production
Key areas or initiatives carried out.	3\$	5S & Visual Displays	QCO	Single Unit Flow	Kaizen	Multi Product Lines
	Hoshin Kanri	ТРМ	Lean Layout	Yamazumi	-Events (3- 4)	Fixed Schedules
	VSM & Master Plan	PDCA	Standardized Work Sheets	Min - Max Levels	-AKE (Depends on the)	TAKT Time
	Process Maps	SQDC Board	Andon	Standardized Work	Pull System	Run to Volume
	Lean Matrix	Point Kaizens	Visual Controls (y	f Moratuwa	Kanban Sri Lank	a.
	MOS Team	E v	Team Based Work Groups	heses & Dis t.ac.lk	sertations	

