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EXTENDED LOGISTICAL FACTORS FOR SUCCESS IN INTERNATIONAL TRADE

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topics

- › introduction
- › research question
- › model to evaluate countries (company scope)
- › example calculations
- › overall results
- › suggestions for future research

introduction

- › regional diversification of international trade

- › competitive advantage in distribution logistics determines success of companies

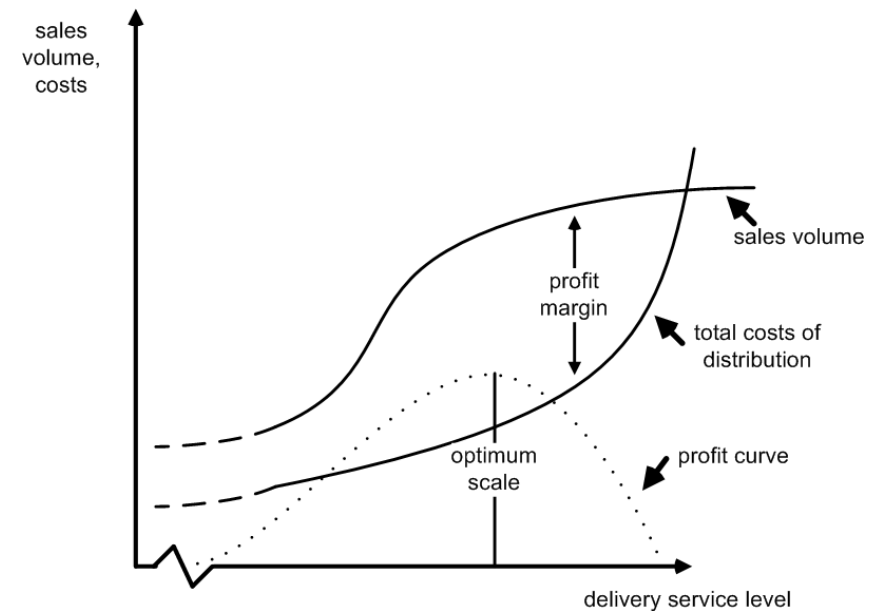
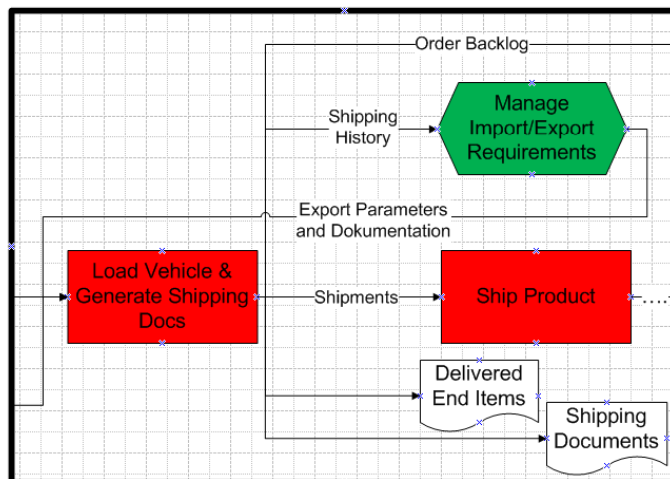
- › global competitiveness in trade is strongly related to country-specific conditions
 - › infrastructure
 - › connection to international transport systems
 - › import and export procedures

- › regional focus of logistical research primarily on Europe, USA, BRIC and South Africa

- › demand on suitable information for developing logistic structure

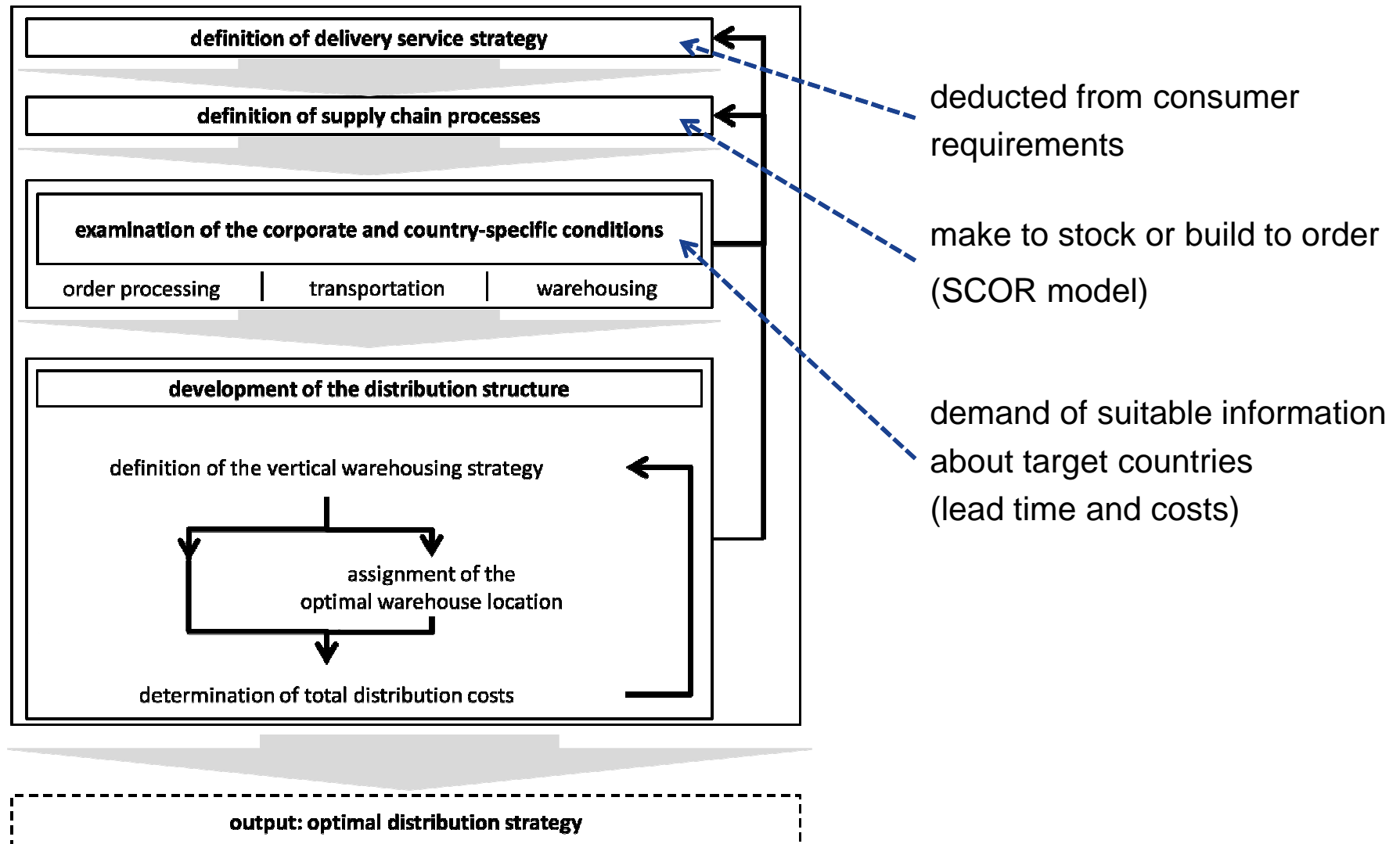
research question

- › empirical studies (eg. LPI, GCR, LSCI) measure logistic performance
- › studies do not fit to main logistical principles
 - › flow and system thinking
 - › total-cost orientation



- › Question: How to compare empirical studies with logistical principles?

model to evaluate countries (company scope)



example calculations

sea freight	container transport from Germany to Nigeria				
	Target harbour	No of sailings	No of relevant sailings	Av. lead time	Calc. factor
	Apapa (NGAPP)	60	13	21	7,38
	Lagos (NGLOS)	12	3	21	1,70
	Onne (NGONN)	38	8	28	6,05
Tincan (NGTIN)	81	13	19	6,68	
					Total: 22 days
	<ul style="list-style-type: none"> › calculation of lead time from availability of container in harbor until arrival of vessel › sailings that are overtaken by later journey are not considered › calculation factor = No of sailings to port * Average lead time / total No of sailings to country 				
import procedures	$\text{lead time} = pt_{po} * (100 - pt_{ps}) + (pt_{pi} * pt_{ps}) + (pt_{pi} * pt_{ps} * pt_{pm})$				
	For Nigeria:	Clearance time without physical inspection (days) (pt_{po})		3,81	
		Clearance time with physical inspection (days) (pt_{ps})		6,40	
		Shipments with physical inspection (%) (pt_{pi})		61	
		Shipments with multiple physically inspection (%) (pt_{pm})		9	
					Total: 6 days

overall results

- › Case study: Comparison of German export to Nigeria and Ecuador (process: make to stock)

mode of transport lead time (days)	Nigeria		Ecuador	
	air cargo	sea freight	air cargo	sea freight
transport to target country	1	22	2	27
import procedures	6	6	2	2
transport to warehouse	0,5	0,5	1	0,5
Total	7,5	28,5	5	29,5

- › link between logistical success and elements of country-specific conditions
- › possibility to analyze factors of success (for companies, governments, institutions)
- › planning model with calculation standards for different input factors
 - › target markets and products
 - › schedules or restrictions
 - › case-related costs
- › implementation of country-specific elements in the SCOR model

suggestions for future research

- › detailed empirical studies based on processes
 - › handling times at connection points
 - › lead times and costs of import/export procedures
 - › lead times and structure of road, rail and inland water transportation
 - › development and implementation of worldwide standardized data exchange for customs
 - › approaches to evaluate country specific conditions related to logistic IT-Systems
- } differentiated by modes of transport

Thank you for your attention



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