



Office of the National Economic and Social Development Board

- Overview of Thailand's Logistics Costs in 2008
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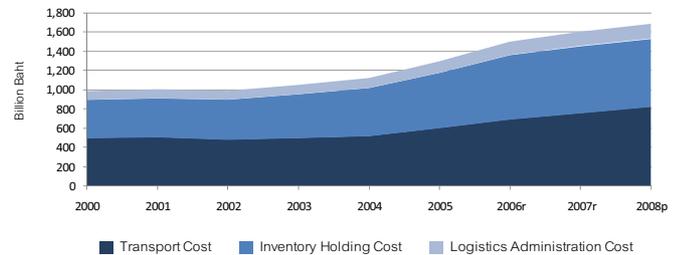


Figure 1: Thailand's Logistics Costs, by types

Overview of Thailand's Logistics Cost in 2008

The total value of logistics costs of Thailand for 2008 was approximately 1.7 trillion Baht, equivalent to 18.6 percent of the Gross Domestic Product (GDP), composing of 823 billion Baht of transportation costs (9.1 percent of the GDP), 705 billion Baht of inventory holding costs (7.8 percent of the GDP) and 153 billion Baht of logistics administration costs (1.7 percent of the GDP).

Thailand has witnessed the logistics costs growth of 5.2 percent in 2008 compared to that of last year, reflecting the fast growing logistics business that have expanded in the direction corresponding to the nation's overall economic activities with the growth rate of 6.4 percent. It is fascinating to observe that Thailand's logistics costs have demonstrated a smaller growth rate for 2 years in a row since 2006 and it is also smaller than that of the GDP. This implicitly reflects the nation's more effective efforts to reduce the seemingly high logistics costs during the past 2 years.

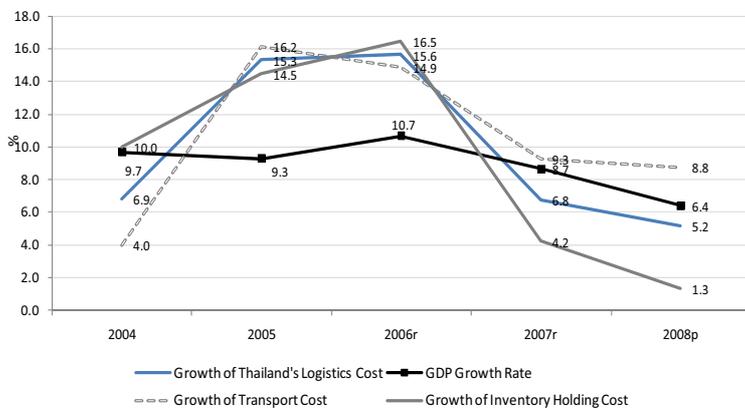


Figure 2: Trends of logistics costs and GDP growth during 2004-2008

By and large, it can be seen that the 5.2 percent logistics costs growth has been significantly contributed by the 8.8 percent transportation growth, which was comparatively close to the 9.3 percent growth of last year. Furthermore, it can be noticed that the nation's inventory holding costs have demonstrated an apparently significant smaller growth rate of 1.3 percent in 2008, compared to that of 4.2 percent in previous years.

Logistics Cost Components

Transportation costs made up to 49 percent of the total logistics costs in 2008, followed by inventory holding costs which have made up to 42 percent of the total costs, while administration costs have only contributed 9.1 percent to the total cost.

trend is because transportation costs have experienced a faster growth rate than that of the total logistics costs, resulted in a higher proportion of the transportation costs from 47.3 percent to 49 percent in 2007 and 2008 respectively. In contrast, inventory holding costs showed a reduction of the 1.6 percentage points from 43.6 to 42 percent of the total logistics costs in 2007 and 2008 respectively.

When comparing to the previous year, the proportions of logistics cost components in 2008 demonstrated quite a similar trend in which transportation costs were still a cost component contributing the largest to the total logistics costs. The reason behind such

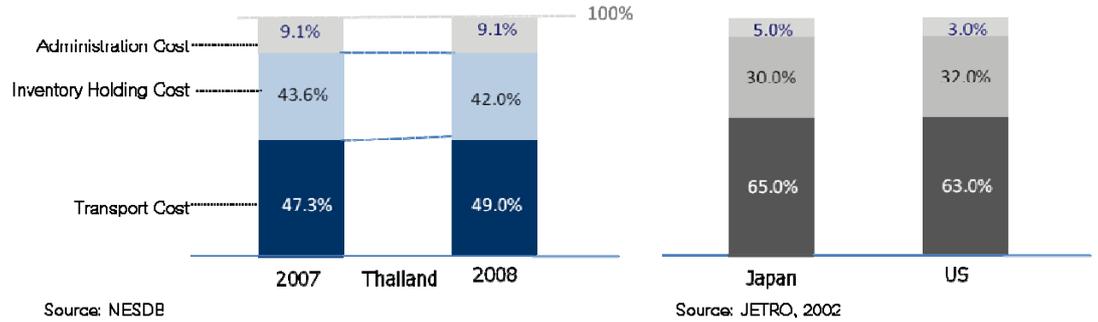


Figure 3: Logistics Cost Structure of Thailand, Japan and the United States

Thailand still has a capacity to potentially reduce the inventory holding cost proportion down by further 10 percent resulting from the more effective logistics system.

From Figure 3, it can be seen that Thailand's logistics costs structure, which can be represented into a ratio of 49:42:9 (transportation costs: inventory holding costs: administration costs), is quite different from that of some developed countries such as United States of America and Japan of which their logistics cost compo-

nents ratio are 65:30:5 and 63:32:3 respectively. This represents the fact that Thailand still has a capacity to potentially reduce the inventory holding cost proportion down by further 10 percent resulting from the more effective logistics system.

Transportation Cost

The transportation costs increased rapidly from 757 billion Baht in 2007 to 823 billion Baht in 2008, which is equivalent to a growth rate of 8.8 percent per annum. Such growth rate is noticeably higher than the 5.2 percent growth rate of the total logistics costs. The main factor influencing the large increase in transportation costs is the continuous increase in the global fuel prices since 2006, with the price growth being 28.2 percent in 2008, jumping from 21.8 percent in 2007. Fuel prices are considered to be one of the main

costs of transportation, making up to approximately 30 percent of the total costs. Furthermore, when disintegrating the transportation costs into modes of transportation, it was observed that 52 percent of the total transportation costs are derived from road transportation costs, a mode of transportation with the highest transportation cost per unit, while 21.5 percent of the total transportation costs are from water transportation costs, followed by 20.9 percent of other related logistics service costs including the costs of third-party logistics service providers.

Figure 4: Trends of Transportation Cost and Diesel Price and Usage Growth



Inventory Holding Cost

Inventory holding cost slightly increased from 696 billion Baht in 2007 to 705 billion Baht in 2008, equivalent to merely 1.3 percent growth per annum, which is quite a noticeable growth reduction from 4.2 percent in 2007. There are a number of factors influencing such reduction including, firstly, the increased awareness of the importance and understanding on internal logistics management among entrepreneurs, resulting in the ability to reduce unnecessary inventory and to manage their inventory more

effectively and prudently with more advanced technology. Furthermore, there has been a noticeable shift to the made-to-order production process, which has helped reduce the overall lead time bringing about more modest stock levels of both raw materials and finished goods. Another factor behind the apparently constant of the inventory holding cost is a small reduction in the MLR rate from 7.21 to 7.17 percent.

Note: NESDB is currently undertaking the survey of inventory carrying cost of Thailand, under the Study of the Improvement of Logistics Industry's Competitiveness in Thailand: 3rd phase which is expected to complete by September 2010

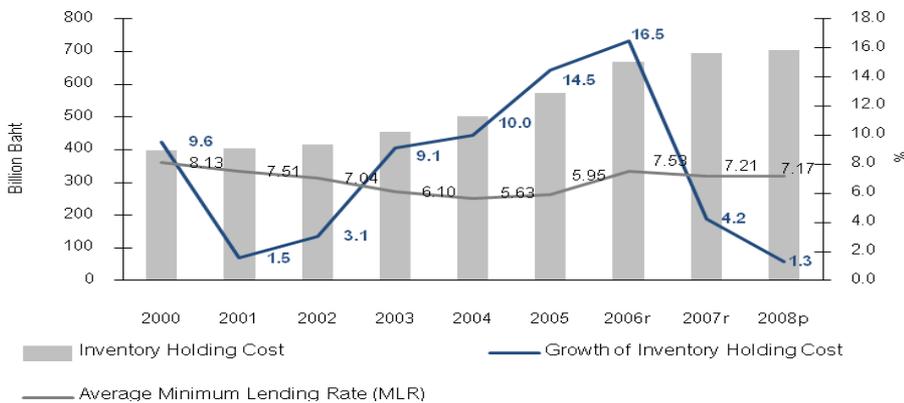
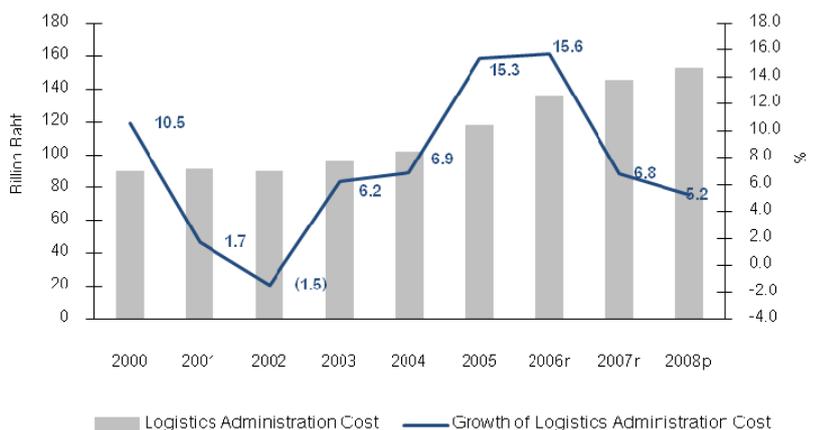


Figure 5: Trends of Inventory Holding Cost and Average Minimum Lending Rate

Logistics Administration Cost

In 2008, Thailand had its logistics administration costs valued at 153 billion Baht, increasing from 145 billion Baht in 2007, which is equivalent to a 5.2 percent annual growth. Such growth has been moving in the same direction of the growth of both inventory holding and transportation costs since Thailand is still adhere to the calculation method of determining the administration costs to be equal to 10 percent of the combination of transportation and inventory holding costs

Figure 6: Trend of Thailand's Logistics Administration Cost



Note: The Study of the Improvement of Logistics Industry's Competitiveness in Thailand:2nd phase stated that Thailand's logistics administrative costs are approximately 8 percent of the combination of transportation and inventory holding costs. Such figure was derived using the geometric calculation method, by firm sizes. The result evidently validates the prior assumptions of calculation in use for the administrative costs (10 percent of the combination of transportation and inventory holding costs).

Proportions of Logistics Costs to the Gross Domestic Products (GDP)

The proportion of Thailand's logistics costs to the GDP for the year 2008 was 18.6 percent, a slightly reduction by 0.2 percentage points compared to that of 2007. Such reduction is a product of movement of two factors; namely, 1) The inventory holding costs decreased from 8.2 to 7.8 percent of the GDP in 2007 and 2008 respectively and 2) The transportation costs increased from 8.9 to 9.1 percent of the GDP.

Unit: Percent

	2000	2001	2002	2003	2004	2005	2006r	2007r	2008p
Transportation costs to GDP	10.1	9.9	8.8	8.4	8.0	8.5	8.8	8.9	9.1
Inventory holding costs to GDP	8.1	7.9	7.7	7.7	7.7	8.1	8.5	8.2	7.8
Administration costs GDP	1.8	1.8	1.6	1.6	1.6	1.7	1.7	1.7	1.7
Total Logistics costs to GDP	20.0	19.6	18.1	17.7	17.3	18.3	19.0	18.8	18.6

Note: There has been some information revision of the GDP and total logistics costs in 2006 and 2007 in response to the National Income in 2008

Conclusion and Recommendation

It can be seen that the transportation costs still increased quite dramatically in 2008, resulted in a slower-than-expected 0.2 percent per GDP reduction in the total logistics costs, which is lower than the target of 0.7 percent per GDP per annum.

There are several factors influencing the increase in transportation costs including the continuous increases in the global fuel prices since 2006 and the delay in development of some key projects designed to help reduce logistics costs; for example, the incomplete establishment of the Back Office Information Technology System designed for data exchange with the National Single Window (NSW) aiming to help reduce paper work procedures; the delay in the Modal Shift development due to locomotive and train carriage procurement impediment; the

lack of specific coastal liner port and underachieved truck drivers training program, which could potentially help reduce the unnecessary road transportation costs by 15-20 percent in a short period of time. Furthermore, it is expected that it might take at least up to 2 years to view any tangible applications in terms of a more effective logistics process cost reductions and value-added activities resulting from those 48,000 logistics personnel who have been trained from the courses and seminars provided by responsible government and private agencies.

As a result, the short-term strategic plan for logistics improvement should encourage all related bodies to push forward all delayed plans and projects so that they can yield the real results, especially the projects of truck driver training program and logistics human resource development in real sector.

Both projects can be achieved and result considerably with low costs and promising outcomes in quite a short period of time. If these two programs can be achieved effectively, not only they can help reduce the transportation costs incurred to the business sector, but they can also help improve service reliability, reduce accidents and increase overall road safety for the public.

The experimental analysis conducted by Isuzu Limited Thailand, the study on "Best Practice in Transport Management for Energy-saving" by Council of Engineers and the study of Green Logistics by JETRO agreed that if the truck drivers being well-trained in driving skills would evidently reduce energy cost by 15-20 percent and decrease numbers of road accident from 2 cases per 1 million kilometer to 1.5 case per 1 million kilometer.

Note: The nation's logistics costs have been aimed to reduce from 18.8 percent to GDP in 2007 to 16 percent to GDP in 2011, or approximately 0.7 percent to GDP annually.

ตารางแนบ 1 : ต้นทุนโลจิสติกส์ และสัดส่วนต้นทุนโลจิสติกส์ ต่อ GDP ของประเทศไทย ระหว่างปี พ.ศ. 2543 – 2551p

โดย คณะทำงานพัฒนาข้อมูลโลจิสติกส์ สศช. ณ วันที่ 15 ธันวาคม 2552

Appendix 1: Thailand's Logistics Cost and Logistics Cost to GDP from 2000-2008p

By Logistics Information Development Working Group as of December 15, 2009

	หน่วย: พันล้านบาท Unit: Billion Baht									
	2543	2544	2545	2546	2547	2548	2549	2550r	2551p	
ต้นทุนโลจิสติกส์	2000	2001	2002	2003	2004	2005	2006r	2007r	2008p	Logistics Cost
ต้นทุนค่าขนส่งสินค้า	498.7	507.9	481.8	499.1	519.0	602.9	692.5	756.6	823.0	Transportation Cost
ทางท่อ	5.3	5.5	6.2	6.0	7.0	8.0	8.5	3.3	1.1	Pipeline
ทางราง	1.8	1.9	1.9	2.1	2.2	2.1	2.2	2.2	2.4	Rail
ทางถนน	270.1	267.3	241.6	242.0	241.4	289.2	336.3	382.5	430.4	Road
ทางน้ำ	83.4	92.0	97.3	107.2	120.7	133.4	151.6	159.6	176.8	Water
ทางอากาศ	21.1	22.2	21.7	23.3	24.4	26.8	29.2	29.9	29.8	Air
บริการเกี่ยวเนื่องกับการขนส่ง	112.4	114.4	108.2	111.7	115.9	134.8	155.1	168.2	172.0	Transport-related services
บริการขนส่งสินค้าทางไปรษณีย์	4.5	4.6	4.9	6.7	7.4	8.6	9.5	10.9	10.5	Postal services
ต้นทุนการเก็บรักษาสินค้าคงคลัง	398.9	405.0	417.4	455.5	501.0	573.5	667.9	696.1	705.2	Inventory Holding Costs
ต้นทุนการถือครองสินค้า	395.1	402.6	415.1	452.4	497.1	569.9	662.7	690.4	698.7	Inventory Carrying Cost
ต้นทุนบริหารคลังสินค้า	3.8	2.4	2.3	3.2	3.9	3.6	5.1	5.7	6.5	Warehousing Cost
ต้นทุนการบริหารจัดการ	89.8	91.3	89.9	95.5	102.0	117.6	136.0	145.3	152.8	Logistics Administration Cost
ต้นทุนโลจิสติกส์รวม	987.3	1,004.1	989.2	1,050.1	1,122.1	1,294.0	1,496.4	1,598.0	1,681.1	Total Logistics Cost
มูลค่าผลิตภัณฑ์มวลรวมในประเทศ ณ ราคาประจำปี	4,922.7	5,133.5	5,450.6	5,917.4	6,489.5	7,092.9	7,850.2	8,529.8	9,075.5	Gross Domestic Product (GDP)
หน่วย: ร้อยละ ต่อ GDP Unit: Percent to GDP										
สัดส่วนต้นทุนโลจิสติกส์ ต่อ GDP ของประเทศไทย	2543	2544	2545	2546	2547	2548	2549r	2550r	2551p	Proportion of Logistics Costs to GDP
ต้นทุนค่าขนส่งสินค้า ต่อ GDP	10.1	9.9	8.8	8.4	8.0	8.5	8.8	8.9	9.1	Transportation Cost to GDP
ต้นทุนการเก็บรักษาสินค้าคงคลัง ต่อ GDP	8.1	7.9	7.7	7.7	7.7	8.1	8.5	8.2	7.8	Inventory Holding Cost to GDP
ต้นทุนการบริหารจัดการ ต่อ GDP	1.8	1.8	1.6	1.6	1.6	1.7	1.7	1.7	1.7	Logistics Administration Cost to GDP
ต้นทุนโลจิสติกส์ ต่อ GDP	20.0	19.6	18.1	17.7	17.3	18.3	19.0	18.8	18.6	Logistics Costs to GDP

ที่มา สศช.

หมายเหตุ

ปี 2549 และ 2550 มีการปรับปรุงข้อมูลของผลิตภัณฑ์มวลรวมภายในประเทศและต้นทุนโลจิสติกส์ ตามข้อมูลรายได้ประชาชาติ พ.ศ. 2551

Source: NESDB

Remarks

There has been some information adjustment for the year 2006 and 2007 in accord to the National Income Data for 2008

ตารางแนบ 2: ต้นทุนการขนส่งสินค้าต่อ GDP แยกองค์ประกอบ ระหว่างปี พ.ศ. 2543 – 2551p

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Appendix 2: Transportation Cost to GDP by Components from 2000-2008p

By Logistics Information Development Working Group as of December 15, 2009

	หน่วย: ร้อยละต่อ GDP Unit: Percent to GDP									
	2543	2544	2545	2546	2547	2548	2549r	2550r	2551p	
	2000	2001	2002	2003	2004	2005	2006r	2007r	2008p	Logistics Cost
ต้นทุนโลจิสติกส์	10.1	9.9	8.8	8.4	8.0	8.5	8.8	8.9	9.1	Total Transportation Cost
ต้นทุนค่าขนส่งสินค้า										Pipeline
ทางท่อ	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	Rail
ทางราง	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Road
ทางถนน	5.5	5.2	4.4	4.1	3.7	4.1	4.3	4.5	4.7	Water
ทางน้ำ	1.7	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	Air
ทางอากาศ	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	Transport-related services
บริการเชื่อมโยงกับการขนส่ง	2.3	2.2	2.0	1.9	1.8	1.9	2.0	2.0	1.9	Postal services
บริการขนส่งสินค้าทางไปรษณีย์	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	

ที่มา ศศช.

Source: NESDB

ตารางแนบ 3: แนวโน้มการขยายตัวของต้นทุนโลจิสติกส์ และมูลค่าผลิตภัณฑ์มวลรวมในประเทศ ระหว่างปี พ.ศ. 2543 – 2551p
โดย คณะทำงานพัฒนาข้อมูลโลจิสติกส์ ศศช. ณ วันที่ 15 ธันวาคม 2552

Appendix 3: Trends of Logistics Costs Growth and GDP between 2000-2008p

By Logistics Information Development Working Group as of December 15, 2009

	หน่วย: ร้อยละต่อปี Unit: Percent to GDP																	
	2543	2544	2545	2546	2547	2548	2549r	2550r	2551p	2000	2001	2002	2003	2004	2005	2006r	2007r	2008p
ต้นทุนโลจิสติกส์	11.3	1.8	(5.1)	3.6	4.0	16.2	14.9	9.3	8.8	2000	2001	2002	2003	2004	2005	2006r	2007r	2008p
ต้นทุนด้านสินค้า	10.2	4.0	11.6	(1.7)	15.6	14.5	6.4	(61.0)	(67.4)									
ทางท่อ	6.9	6.8	3.3	7.3	6.2	(3.6)	5.2	0.2	6.6									
ทางราง	10.9	(1.1)	(9.6)	0.2	(0.3)	19.8	16.3	13.7	12.5									
ทางถนน	12.8	10.2	5.8	10.2	12.6	10.5	13.7	5.3	10.8									
ทางน้ำ	10.6	4.8	(1.9)	7.1	4.9	9.8	9.0	2.4	(0.4)									
ทางอากาศ	11.3	1.8	(5.5)	3.3	3.8	16.3	15.1	8.4	2.3									
บริการเกี่ยวเนื่องกับการขนส่ง	15.7	2.9	7.3	35.6	10.7	15.9	10.1	14.9	(3.9)									
บริการขนส่งสินค้าทางไปรษณีย์																		
ต้นทุนการเก็บรักษาสินค้าคงคลัง	9.6	1.5	3.1	9.1	10.0	14.5	16.5	4.2	1.3									
ต้นทุนการถือครองสินค้า	9.6	1.9	3.1	9.0	9.9	14.7	16.3	4.2	1.2									
ต้นทุนบริหารคลังสินค้า	5.0	(36.9)	(2.1)	35.8	24.2	(9.0)	44.2	11.3	13.2									
ต้นทุนการบริหารจัดการ	10.5	1.7	(1.5)	6.2	6.9	15.3	15.6	6.8	5.2									
ต้นทุนโลจิสติกส์	10.5	1.7	(1.5)	6.2	6.9	15.3	15.6	6.8	5.2									
มูลค่าผลิตภัณฑ์มวลรวมในประเทศ ณ ราคาประจำปี	6.2	4.3	6.2	8.6	9.7	9.3	10.7	8.7	6.4									

ที่มา ศศช.

Source: NESDB



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