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Tim Kraft, Yenho T. Chung, Feryal Erhun,

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Case

KEY Electronics—Sourcing and Warehouse Analysis

Tim Kraft, Yenho T. Chung, Feryal Erhun

Department of Management Science and Engineering, College of Engineering, Stanford University, Stanford, California 94305
{tkraft@stanford.edu, yhthomas@stanford.edu, ferhun@stanford.edu}

This case is based on a real-life scenario. Names, dates, and company information have been disguised to protect the identity of the company.

Key words: product sourcing; inventory modeling; global operations

History: Received: February 2010; accepted: December 2010.

Charles Thomas, Director of Procurement at KEY Electronics, rummaged through his desk drawer for his Spanish dictionary. He read the last paragraph of the e-mail again.

Perdón, pero esa es toda la información de demanda que tenemos. Me habría encantado tener más información para ustedes, pero como ya saben, la mayor parte de nuestra información histórica está corrupta—ya sea por problemas con la base de datos o porque nuestros empleados hacen ajustes incorrectos en la bodega.¹

If only he had paid more attention in high school Spanish class. No matter, he got the main idea of the e-mail. There was no more data; the Mexico office had sent everything it had. He and his team would just have to make do.

Three days earlier, Andy Jacobs, KEY's Chief Supply Chain Officer (CSO), had stormed into Thomas' cubicle after one of his weekly flare-ups with KEY's CEO, Reilly Rickard. As usual, the source of Jacobs' and Rickard's disagreement was the KEY de México (KM) store expansion project. This time, their argument concerned the new Mexico City warehouse. Rickard was tired of all the planning; he was ready to go with the third-party logistics provider (3PL). The 3PL's quoted prices seemed reasonable and he knew that for KM to stay on schedule, it would need a new warehouse ready by the end of 2009. Jacobs, however, was not ready to commit to the 3PL. He had always suspected KM did not maximize its profit margins by identifying the optimal sourcing location

for products. Before leasing a new warehouse or hiring a 3PL, he wanted to correct KM's sourcing problems. One month earlier, he had assigned Thomas to lead an analysis of KM's sourcing and warehousing requirements. Thomas' team had collected all of the necessary data, but still needed time to complete the analysis.

In the end, Rickard agreed to let Thomas' team finish the analysis. However, he wanted to see their recommendation by the end of next week. Thomas knew it was going to be a rough couple of weeks. He decided to quit looking for the dictionary...and instead look for a bottle of aspirin.

1. Corporate Background

1.1. KEY Electronics

Based in Oklahoma City, Oklahoma, KEY Electronics is a consumer electronics retailer with more than 1,500 stores throughout the United States. It sells an assortment of personal electronics, including batteries, cell phones, TVs, and laptop computers. KEY's corporate strategy is based on superior customer service and its unique close-to-customer, small-box retail locations. In 2008, KEY generated \$1.4 billion² in total revenue with a net income percentage of 5%.

Although a well-known brand throughout the United States, in recent years, KEY's revenue growth stagnated. Management believes that there are two primary reasons for KEY's lack of growth:

(1) With the advent of large-box electronics retailers, many consumers no longer value the proximity of KEY's locations. In addition, KEY cannot compete on selection with large-box retailers.

¹ "Sorry, that is all the demand data we have. I wish I had more for you, but as you know most of the historical data is corrupt—either from the database or employees making incorrect adjustments at the warehouse."

² All dollar amounts in the case are in U.S. currency.

(2) KEY's brand both hurts and helps the company. Many consumers associate KEY with either fix-it-type electronics (such as batteries and hard-to-find electronic parts) or novelty-type items (such as toys or gadget gifts). KEY has struggled to position itself as a destination for popular electronics such as iPods and flat-screen TVs.

With growth stagnant in the United States, CEO Rickard's impatience with the Mexico store expansion project is justified. Mexico is one of the few markets KEY serves where growth seems possible.

Organizationally, KEY is well-known for being loyal to its employees. It is not uncommon to find KEY store managers with 25+ years of experience within the company. This is also true at the corporate headquarters where many employees started with KEY as store associates. Rickard got his start with KEY while in college, working part time in a store to pay his tuition. CSO Jacobs' first job out of college was as a floor manager in the Hagerstown, Maryland distribution center (DC). There are exceptions, however. KEY hired Chief Financial Officer Anthony Chung from Wall Street. The board pushed heavily for Chung's hire in an effort to boost KEY's slumping stock price. Since his arrival in November 2007, Chung has helped to reduce operational costs; however, KEY's stock price continues to lag.

1.2. KEY de México

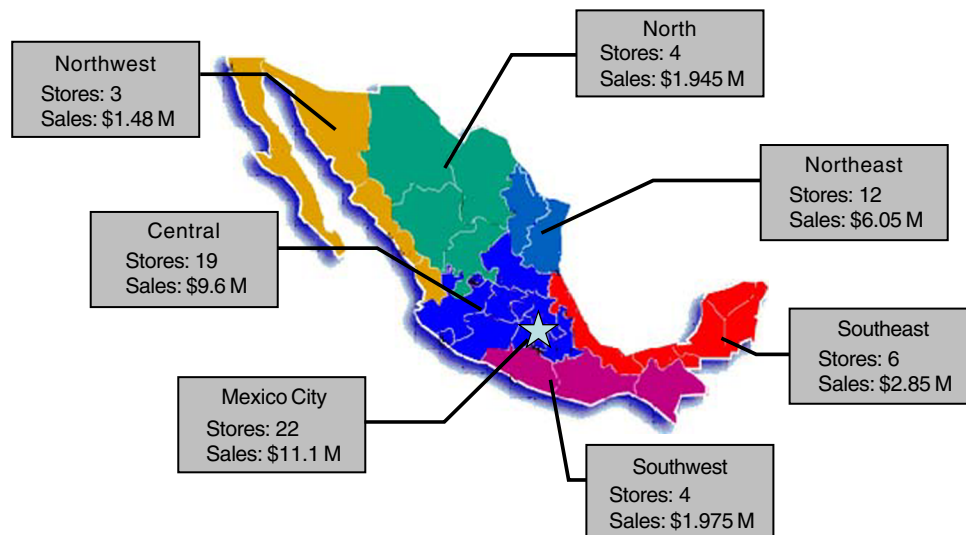
KEY's retail presence in Mexico is limited, with only 30 stores and sales last year (2008) of \$15 million (net profit \$1 million). KEY would like to expand operations in Mexico to 70 stores and \$35 million in sales (net profit \$2.2 million) by year-end 2012 (see Figure 1).

KM's corporate headquarters are in Mexico City. In typical KEY fashion, KM's 30 stores were set up on a whim by the previous KEY executive team in 1998. No real market or operational analyses were performed; instead management simply rationalized that there were a lot of potential new customers in Mexico, especially in the Mexico City area, and that KEY should have a presence there. Fortunately for KEY, the Mexico market and KEY are a good fit. Unlike the U.S. market where consumers' preferences have shifted toward large-box retailers, the Mexico market still appreciates the more personal experience of KEY's close-to-customer stores. In addition, KM stores do not have the same brand problem that KEY stores have. In Mexico, KM is seen as a high-end electronics store with a wide assortment of popular, although pricey, electronics.

Mexico's store managers are very entrepreneurial. Many within KEY consider the KM stores on par with and sometimes better run than the U.S. stores. Unfortunately for KEY, the previous executive team did not provide KM with the resources or infrastructure to properly grow its business. In 2004, for the first time in its history, KM achieved a profit. This profit was based on hard work, manual operations, and an extensive use of Excel spreadsheets.

Rickard recognized KM's potential as a growth area for KEY and, upon his appointment as CEO in 2007, took the initial steps to grow the KM business. Although the initiative has executive backing, KEY's Mexico growth strategy is still a work in progress. With many employees with 20+ years experience, the words "change" and "flexibility" are not phrases typically associated with KEY. Instead, a popular answer throughout the company is "that's how we've always done it." For KEY, expanding operations into Mexico

Figure 1 2012 Projected Store Count and Sales in Mexico



represents a significant change. So far, with considerable internal pushback, Rickard has accomplished the following with regard to KM:

(1) A strong and agile management team is in place at the Mexico City corporate offices. The team understands both the electronics and Mexican markets. However, the KM team still has not filled its Vice President of Operations position; this is a major concern for Rickard and a major headache for Jacobs.

(2) KM is currently implementing an off-the-shelf IT system that will allow it to better manage the inventory in its Mexico City warehouse. The previous system was unreliable, misused, and built on corrupt databases. The new system will integrate with KM's point-of-sale system, which is used in every store. Although the two systems will provide KM with serviceable IT capabilities for managing 70 stores, KEY's management team is still worried that KM's poor operational processes may corrupt the new system.

(3) Chung's finance team approved either the lease of a new warehouse or the hiring of a 3PL in Mexico City to service all KM stores. Currently, KM leases a 15,000 square-foot facility in Mexico City that CSO Jacobs once described as "something out of the industrial revolution." The current warehouse has uneven cracked floors with product scattered throughout the facility. KM has identified a 40,000 square-foot warehouse to potentially lease located just north of Mexico City. KEY has also approached a 3PL in Mexico about the possibility of KM outsourcing its warehousing operations.

2. Operations Background

2.1. KEY Electronics

KEY has three DCs in the United States, which service its 1,500 stores. The West Coast DC is located in Richmond, California and acts as the port of entry for all of KEY's imports. All goods originating from Asia come through the Richmond DC and then are either stored there or forwarded to one of the other DCs. Goods procured from U.S. manufacturers and distributors are shipped directly to each individual U.S. DC. The Oklahoma City DC services the Central U.S. and Mexico. The Hagerstown, Maryland DC services the Eastern U.S. KEY's DCs are by no means state of the art, but they get the job done. Over the years, KEY's operations have been customized to service KEY's unique network of small-box stores, which require frequent, smaller replenishments to stores.

KEY sources approximately 89% of its product from Asia. For most goods, it uses a periodic review inventory policy with orders occurring on weekly increments.³ The delivery lead time to the United

States is 60+ days for Asia-sourced stock keeping units (SKUs).

2.2. KEY de México

KM's single warehouse is located in Mexico City and services all Mexico stores. Of the 30 current stores, 12 are located in the Mexico City area (52% of sales). On average, KM has around 300 SKUs with inventory on hand in their Mexico City warehouse.

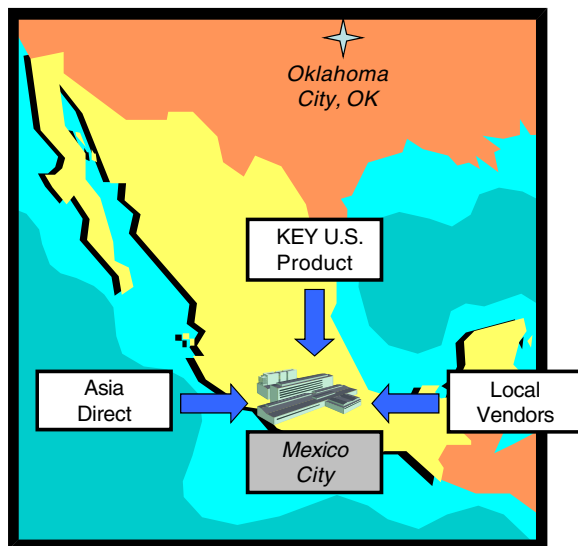
Historically, KM procures approximately half of its product from KEY's Oklahoma City DC (47.6%) of cost of goods sold (COGS) and half from local Mexico distributors (52.4%). This is somewhat misleading, though, because of the higher cost of goods for local distributor's product (local margins are, on average, 30% versus 51% for product sourced from KEY). Margins are typically much lower for local product as local purchases are from Mexican electronics distributors who, with their middleman services, take a portion of the profits. KM prefers to source KEY U.S. products but because of high duties and U.S. stores having first priority for products, KM's procurement team is often forced to source local product. However, with the establishment of a direct from Asia channel, KM has a third source for product that may reduce supply uncertainty.

High duties complicate KEY's import of goods from the United States and Asia into Mexico. Currently, there exists intense competition between Mexico and East Asia, especially China, to attract manufacturing and commercial interest from countries such as the United States. To detract foreign imports from Asia, Mexico charges a significant duty on all products entering the country from Asia. This includes goods that flow through the United States (i.e., Oklahoma City replenishments). Although the duties on product sent from Asia to the United States are negligible, the duties for these same products in Mexico (either coming direct from Asia or through the United States) are extremely high, with an average duty rate of 25%.

One regulation issue KM must consider when importing product from either the United States or Asia is proper packaging labels. Mexican importation law requires that all products imported for sale into Mexico comply with Mexican Mandatory Standards and be properly labeled with what are called "Normas Oficiales Mexicanas" (NOM) labels. These labels ensure that the product being imported into the country has been verified by the Mexican government for safety standards and that the selling company has obtained and paid for the proper license to sell the product in the Mexican marketplace. A NOM label license costs approximately \$1,000 per SKU per year, and failure to comply with proper NOM labeling can result in a fine of up to \$10,000 per each noncompliant unit. Typically corporations such as

³ Example: SKU 101 is ordered weekly and SKU 202 is ordered every three weeks.

Figure 2 KM Channel Overview



Walmex (Wal-mart Mexico) embed NOM certification requirements into their bilingual packaging. Unfortunately, KEY just started the expensive and complicated process of transitioning to bilingual packaging. The marketing department estimates the transition to bilingual packaging will finish, at the earliest, by some time in 2013. A summary of the three sourcing channels is provided below (see Figure 2):

(1) *U.S. Imports from Oklahoma City DC.* KEY's Oklahoma City DC is KM's largest supplier of goods in terms of physical quantity, supplying more than 500,000 units at a freight-on-board cost of \$3.6 million in 2008. KM prefers goods from KEY's Oklahoma City DC over local products because of their higher margins (51%).

While the shipment of goods from the United States represents 47.6% of KM's total unit costs (freight-on-board origin⁴), for the United States, the demand created by Mexico is minimal—in 2008, the amount of goods shipped to Mexico represented only 0.35% of the total U.S. demand (COGS). To put this amount into perspective, compared to U.S. demand regions, Mexico ranked twentieth, right behind the Orlando, Florida demand region.

KM uses a periodic review inventory policy to manage goods sent from Oklahoma City. KM and Oklahoma City have an agreement where KM orders goods every two weeks. To standardize the process, a two-week ideal order fulfillment process has been established (see Figure 3).

While the process is improving, issues still remain. There is variability in the process and so orders can

take anywhere from 11 to 17 days. KM's poor processes and lack of information visibility are big reasons for the order inconsistency. As shown in Table 1, the order sizes generated by KM can vary widely.

Another challenge that hampers lead times between Oklahoma City and Mexico City is the lack of trust between KM's procurement team and U.S. fulfillment operations. Some within KEY believe KM inflates orders to acquire "hot" items that it knows will sell in the Mexico market but to which U.S. stores have first priority. KEY fulfillment personnel have full authorization to adjust KM's orders as they see fit. Unfortunately, these adjustments are often based on "gut feeling" instead of on actual communication with KM's procurement team.

A final problem that increases lead times is the NOM packaging requirement. As part of the KM order fulfillment process, the Oklahoma City DC manually labels *each unit* sent to Mexico with the proper NOM warning label, so that it may cross the border into Mexico. So, for example, each package of batteries on a pallet must be labeled. The average shipment processing time is 3–5 days.⁵ Currently, shipping KM orders out of the Oklahoma City DC is a hassle, but manageable because they can be treated as very large store orders. However, once KM grows to 70 stores, if KEY still does not have bilingual packaging, then the current 15–20 employee manual labeling operation may not be able to process items quickly enough. KEY's DCs and IT systems are designed for frequent small-box store replenishments, not large, biweekly, DC to warehouse replenishments. Jacobs does not want to see KM orders start to disrupt operations at the Oklahoma City DC.

(2) *Local Mexico Product.* Because of a lack of historical data and the wide range and variety of suppliers used, KEY's management team has limited visibility into KM's local buy process. While shorter lead times for local product (3 days versus 14 days for U.S. shipments) significantly reduce the amount of inventory on hand, the high cost of local items typically negates the local lead time advantage. Because local orders are easier to process, KM uses a continuous review inventory policy to manage goods bought from local distributors.

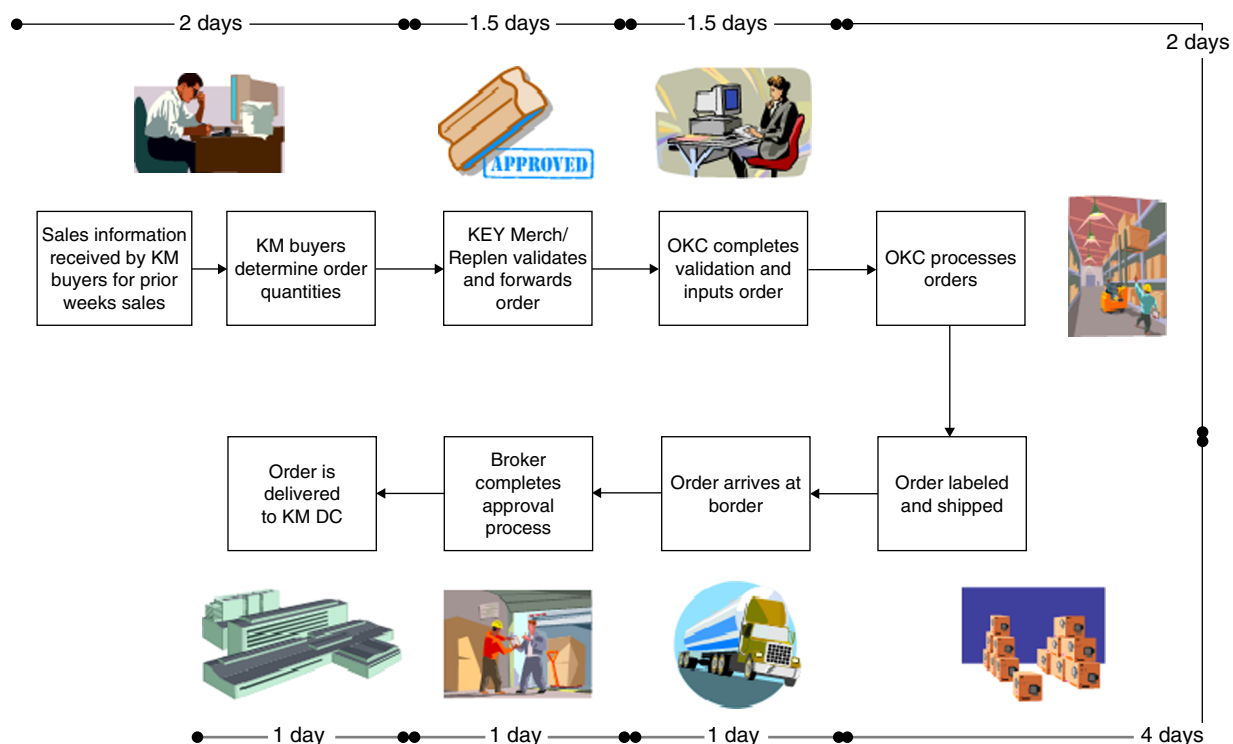
KEY's management team prefers a reduction in local purchases to eliminate product risk. Many within KEY's corporate offices are skeptical about the ethics of some of the local Mexico distributors. It is not unheard of in the electronics industry for local suppliers and distributors to sell either black market or counterfeit items to retailers.

(3) *Direct from Asia (through Manzanillo, Mexico).* Recently, KM established a new direct from Asia

⁴ KM pays the shipping costs and takes responsibility of the shipments when they leave the Oklahoma City DC.

⁵ This processing time is already included in the 14-day lead time.

Figure 3 KM-Oklahoma City Order Process



to Mexico sourcing channel. So far, only two test orders have been processed. Because of the lengthy order process and requirements set by KEY's Asia consolidators, KM will use a periodic review inventory system to manage Asia orders with orders being submitted every four weeks. The fulfillment process works as follows:

(a) Orders are sent directly from KM's procurement team to KEY sourcing offices in Asia.

(b) A shipment is prepared in Asia for Mexico, including the attachment of NOM labels. KM provides the labels and processing requirements. On average, this process takes two days.

(c) A KM only ocean shipment is sent from Asia to Manzanillo, Mexico, located on the West Coast of Mexico. On average, shipments take 60 days.

(d) A broker verifies the shipment and processes the importation documentation. On average, this process takes one day.

(e) Product is shipped by train from Manzanillo to Mexico City where it is transferred by truck to the KM warehouse. On average, this process takes two days.

Table 1 KM-Oklahoma City Order Summary

2008	Weight (lbs)	Units	Value (\$)
Average	5,650	19,831	112,380
Max	23,542	88,579	255,217
Min	342	1,529	15,182
Standard deviation	4,312	15,198	26,840

In total, the lead time for Asia shipments is 65 days. While a large amount of coordination and process development is still required to refine this process, KEY hopes that many of the fast-moving KEY products that require fairly large stocks of inventory can be sourced directly from Asia to Mexico, thereby:

- (1) Reducing KM's dependency on U.S. operations,
- (2) Decreasing potential inventory availability conflicts between U.S. and KM operations, and
- (3) Reducing processing costs, as Asia labeling costs are less than U.S. labeling costs.

Managing Asia to Mexico shipments might prove difficult for KM's procurement team, given the lack of accurate information. Because of long lead times for overseas products, KM must submit forecasts three months in advance for direct from Asia product. In the past, KM struggled to provide accurate information when submitting forecasts to U.S. operations. Yet, this typically was not a problem because of KM's small demands in comparison to U.S. demands. KM cannot afford these same mistakes if it begins to order directly from Asia.

Because of long lead times from Asia, there is also an end-of-life (EOL) inventory risk. Some popular electronics, such as cell phones and laptops, can go EOL within a matter of months if a new version is released. Jacobs already got in trouble with Chung over a major U.S. inventory write-off because of obsolescence at the start of 2008. He does not want to go through the same process with Mexico.

3. KM Warehousing Requirements

KM's existing Mexico City warehouse is in poor shape and is too small to handle the expansion to 70 stores. For the new warehouse, KEY and KM management are considering two options: (1) leasing a new facility or (2) hiring a 3PL to run KM's warehousing and distribution.

As a first option, KM's real estate team has identified a modern, 40,000-square-foot warehouse for potential lease, located on the outskirts of Mexico City. The facility's storage capacity is approximately 1,850 pallets, which Jacobs estimates should be enough to handle KM's store growth until 2012. The rent and management salaries required to run the new facility are given in Appendix A. The variable cost to run the new facility will need to be estimated based on the variable cost at the existing facility (see Figure 4). For small warehouses (< 60,000 square feet) the variable cost typically increases linearly in square footage. In addition, CSO Jacobs expects at least a 15% reduction in variable cost if KEY moves to a new and improved facility.

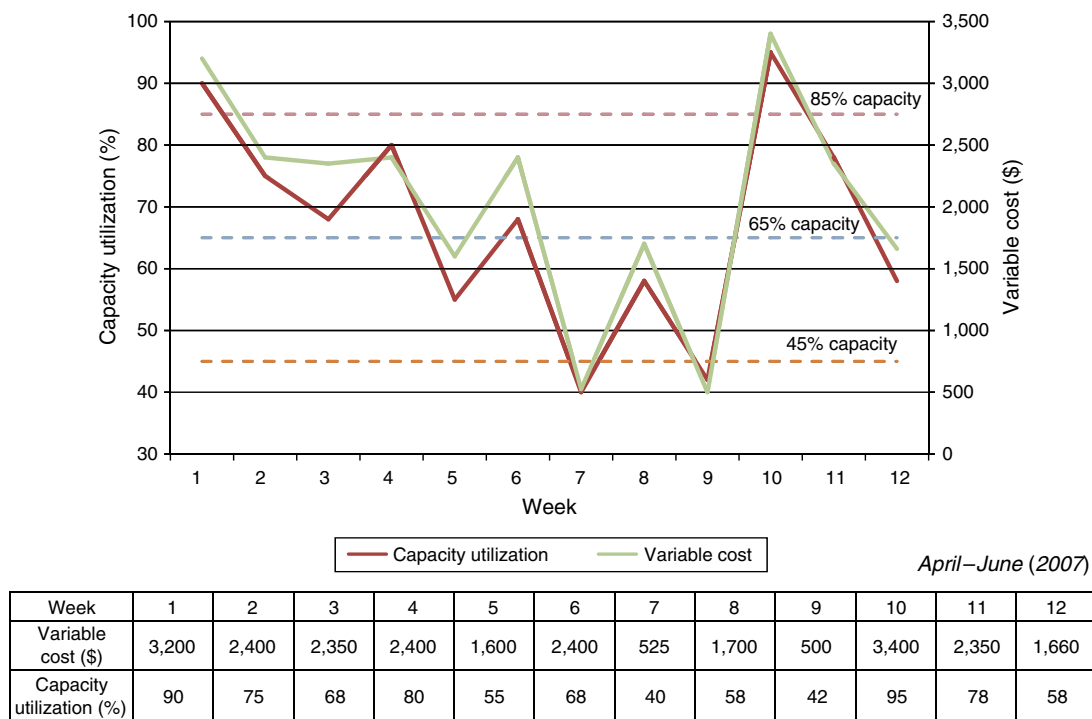
As a second option, Jacobs requested a pricing bid from a reputable 3PL in Mexico City. Because of its unique distribution model, KEY has never worked with a 3PL before, so Jacobs is unsure how one might perform in Mexico. However, based on the quote he received, the pricing seems reasonable (Appendix B).

Costs would be based on the annual number of pallets received and store replenishments made, as well as on weekly inventory snapshots of the number of pallets on hand. The 3PL would store KM's product in a single facility located in Mexico City. Advanced shipment notifications would be sent from KM to the 3PL one day prior to any receipts from the United States or Asia. Local shipment receipts would require a four-hour advanced notification. Store replenishments would be based on a weekly schedule agreed upon by KM and the 3PL.

4. KM SKU Sourcing and Warehouse Analysis

In the summer of 2009, Jacobs approached Thomas about a special assignment for KEY's Mexico operation. Jacobs wanted Thomas and his team to analyze KM's sourcing of products to determine (1) if KM was maximizing its profits by sourcing goods from the correct location and (2) what should KM's optimal sourcing and warehouse strategy be. In the U.S., although not ideal, KEY's sourcing and operations groups typically planned sequentially, with the operations team reacting to the decisions made by the sourcing team. Jacobs felt this method would not work for KM because KM's sourcing options were so

Figure 4 Existing Warehouse Weekly Variable Cost (Sample)



Notes. Variable costs include hourly labor wages and supplies (fuel, packaging material, etc.). Because of KM's tendency to use a significant amount of temporary labor, the variable cost at the existing warehouse tends to jump with capacity utilization.

diverse. Whereas KEY primarily sourced SKUs with 60+ day lead times from Asia, each KM SKU had three sourcing options with three different lead times. Because of these differences in lead time, the storage requirements for a SKU could vary significantly depending on the sourcing location chosen.

Thomas was hesitant to accept the assignment. His procurement team spent most of their time negotiating contracts and finding the lowest unit cost for an item, not performing complex analysis. To determine KM's warehousing requirements, Thomas and his team would need to incorporate inventory policies into their analysis. Typically, they only modeled inventory requirements, in the final stages of a negotiation, to determine the optimal order quantity for an SKU. Even then, they approximated values based on deterministic demands and weeks of supply.

Eventually, Thomas agreed to take on the project. His team spent the last month collecting the necessary SKU, demand, and cost data from KM. Although KM's team was extremely responsive to requests, they lacked reliable historical data. Most of their data was either corrupted by their IT systems or employees making incorrect adjustments at the warehouse. Therefore, for their analysis, Thomas's team identified a noncorrupt representative SKU for each of KM's 10 categories (Appendices C and D). Given the lack of data and limited time, they will assume the identified optimal sourcing location for each SKU holds for the entire category. Although KM only provided base unit costs (purchase costs from the supplier) for each SKU, Thomas' team identified the additional labeling, transportation, and duty costs for each SKU and sourcing location (Appendix E). Type 1 service levels⁶ were provided by KM management.

5. Conclusion

Thomas knew that his team had to work fast. He originally estimated four weeks for the analysis, not two weeks. So far, he was struggling to see how they should incorporate KM's inventory policies into the analysis. Could they still base the sourcing analysis on lowest unit cost and then use this to determine the warehouse requirements? Or should they incorporate inventory policy costs such as holding and setup costs into their sourcing analysis? As for determining the warehouse costs, he agreed with Jacobs that the attractiveness of the 3PL's pricing would depend heavily on the sourcing strategy chosen.

Thomas also realized this would not be just a cost minimizing exercise. There were qualitative factors that his team must consider. Could KM manage the

new direct from Asia process? When would Mexico orders start to truly disrupt U.S. operations? Could KM trust local purchases? And were KEY and KM capable of managing a 3PL? Thomas and his team had their hands full.

Appendix A. New Warehouse Specifications

Warehouse parameters	
Description	Value
Capacity in pallets	1,850
Square feet	40,000
Rent (\$/square feet per year)	\$3.75
Salary per:	
Manager (one in total)	\$30,000
Supervisor (four in total)	\$12,000
Benefits (% applied to salary)	30%

Appendix B. 3PL Pricing

Description	Value
Receiving cost/pallet ¹	\$6.50
Shipping cost/replenishment ²	\$11.25
Avg. orders per week/per store	2.50
Storage cost/pallet per week ³	Incremental
Pallets on hand (x)	quantity discount
$x < 1,000$	\$4.00
$1,000 \leq x < 1,200$	\$2.75
$1,200 \leq x < 1,400$	\$1.50
$1,400 \leq x$	\$0.75

¹Includes cost to receive and put-away pallets.

²Includes cost to pick, prep, and ship a replenishment (i.e., a store order).

³Weekly inventory snapshot taken on Friday.

(1) Setup costs for both leasing the new warehouse and hiring the 3PL are approximately equal, and therefore do not impact the warehousing decision.

(2) Incremental Quantity Discount implies the first 1,000 pallets cost \$4.00 per week to store, the next 200 pallets cost \$2.75 to store, etc.

Appendix C. SKU Count by Category

SKU category ¹	Description	Number of SKUs
13	Music	15
16	TV, DVD	10
17	Cell phones	20
20	Antennas, Shortwave radios	10
23	Batteries	50
27	Fuses, adapters	53
43	Telephones	12
61	Surge protectors	100
63	Gadgets	15
65	Calculators	15
Total		300

¹SKU category = First two digits of SKU number.

⁶ A Type 1 service level equals the probability of not stocking out during the lead time.

Appendix D. KM SKUs

- Base unit cost is the price the supplier charges KEY per product. It does not include additional costs such as labeling, transportation, and duty costs. Note, the additional cost to store goods at the Oklahoma City DC is included in the U.S. base unit cost.
- Duties should be applied to base unit costs. Duties only apply to products sourced from the United States or Asia.
- Demands are normally distributed.

SKU	KM description	Item	Current source	Weight (lbs)	Volume (cubic ft)	Units/Pallet	Sales price (\$)	Local base unit cost (\$)	U.S. base unit cost (\$)	Asia base unit cost (\$)	Duty (%)	Service level (Type 1)	Projected 2012	
													Mean demand (month)	Standard deviation of demand (month)
2300105	BATERIA KY357	Batteries	KEY	0.10	0.016	1,000	1.33	0.80	0.41	0.40	18	0.98	1,800	250
1609313	T.V. 25" SANYO	TV	Local	8.82	2.080	8	176.94	129.17	116.78	115.01	30	0.98	115	95
2780211	CONNECTOR F-59	Cable/connector	KEY	0.01	0.043	350	1.18	0.66	0.38	0.37	10	0.90	675	85
1709786	TEL CEL SONY Z200	Cell-phone	KEY	0.60	0.130	128	142.22	128.00	108.09	106.67	35	0.98	152	69
6300612	PURIFICADOR DE AIRE	Air purifier	KEY	8.08	1.360	8	166.67	116.67	93.33	91.67	15	0.95	125	45
1309034	KARAOKE JXOK5	Karaoke machine	Local	16.50	3.500	4	138.89	108.33	75.00	73.61	50	0.95	30	16
6509036	CALC.CIENT.SC OLI53	Calculator	Local	1.23	0.200	80	16.28	10.42	8.46	8.30	25	0.95	108	65
6109015	REGULADOR KOBLENZ BP1000	Surge protector	Local	0.96	0.080	200	20.51	13.33	8.41	8.21	13	0.95	540	270
4309113	TELEFONO ALAMBRICO GONDOL	Telephone	Local	1.50	0.140	115	9.49	6.83	4.46	4.37	23	0.98	910	334
2000234	RADIO FM YB400PE	Radio	KEY	3.00	0.160	100	174.39	148.23	120.33	118.58	20	0.95	38	17

Appendix E. Parameters

- U.S. and Asia lead times are normally distributed.
- KEY and KM use third-party shipping services. Therefore they do not need to consider truck or container capacity when making orders.
- The holding cost interest rate is based on a weighted average cost of capital of 10.50%.
- Transportation costs for locally sourced SKUs are considered negligible.

General		Lead time/Replenishment (days)		Order costs (per SKU)		Ocean freight	
Annual holding cost interest rate	25.00%	Asia	65	Asia	\$12.60	\$/Cubic ft	\$2.05
		Asia (std. deviation)	7	U.S.	\$4.86		
		OKC	14	Local	\$0.28		
		OKC (std. deviation)	1.3				
		Local	3				
Mexico shipping		Labeling		U.S. shipping			
\$/lb (Border to Mexico City)		Cost per unit (Asia)		\$/lb (OKC to Border)		\$0.05	
\$/lb (Manzanillo to Mexico City)		Cost per unit (OKC)					
				\$0.02			
				\$0.14			