Little Swan's "T+3" Model's Impact on Working Capital

Tao Hua*

School of Economics and Management, NUST Nanjing, China

*Corresponding author: 1745137775@qq.com

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Abstract: As the first manufacturer of fully automatic washing machines in China, Wuxi Little Swan Company Limited has been leading the development of washing machine industry in China. Faced with the increasingly white-hot washing machine industry, company implemented a series of major reforms in 2012, among which the "T+3" customer order system production and marketing mode promoted by company has dramatically shortened the supply cycle and accelerated the speed of capital turnover and attracted extensive attention from the industry. This paper selected the 2010 to 2017 financial data of Shenzhen Stock Exchange with the year 2012 as the demarcation point. The paper analyzes the company's inventory turnover rate, accounts receivable turnover rate and cash flow rate to explore the impact of the "T+3" model on working capital. At the same time, the relevant indicators of Little Swan's working capital are compared with Qingdao Haier Company Limited, the industry benchmarking company, to sum up the reason for the success of this model is that it can effectively destock and compress the supply cycle. Suggestions such as strengthening supplier management, improving production speed, and optimizing inventory management are proposed for the development of the washing machine industry, which hopes to provide certain reference significance for the development of the washing machine industry.

1. Introduction

In the case of increasingly fierce competition among enterprises, efficient use of working capital can speed up capital turnover, reduce capital costs, and reduce certain operating risks. With changes in the economic situation and consumer demand, although the growth rate of the washing machine market has slowed down, it still occupies a very important position. The traditional sales model of scale expansion has gradually withdrawn from the market arena. Enterprises are seeking new production and sales models to effectively manage funds and improve the efficiency of capital use.

As a leader in the domestic washing machine industry, Wuxi Little Swan Company Limited has since launched a new production and sales model of "T+3" customer order system, adheres to consumer demand-oriented, eliminates many unnecessary processes, and speeds up capital turnover. . This article takes Little Swan as the research object, based on specific data, using relevant financial analysis and statistical methods, to explore the impact of the "T+3" model on working capital, and summarize the reasons for the success of the model.

The innovation of this article is to organically combine the "T+3" customer order system model with working capital, and analyze the management of Little Swan working capital. However, due to the limited knowledge of the author, there are still many shortcomings. For example, there are many research indicators for working capital. This article only selects the key indicators for analysis, and the conclusions drawn may have errors. I hope that future scholars can improve this aspect.

2. Company background

The predecessor of Little Swan was established in 1958, mainly engaged in the production and operation of washing machines, and was also one of the earliest companies engaged in the washing machine business. In 1978, Little Swan produced China's first fully automatic washing machine, which attracted the attention of the people. Since then, based on the principle of independent

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innovation, Little Swan has gradually become a leader in the washing machine industry, continuously driving the development of this industry, and becoming a home appliance manufacturer with very strong comprehensive strength.

The customer order system is essentially a production and sales model. As the consumer's demand concept is gradually rationalized, it is no longer "buy what you produce". This has forced manufacturers to change their traditional sales model, and strive to start from the needs of customers, "customers can produce what they want." This model is customer-oriented and can quickly meet market needs. The traditional reserve production mode is not clear about the needs of customers, and it is often large-scale material preparation and production, which is easy to cause inventory accumulation. On the other hand, "T+3" means that each of the four links of product supply has a cycle time of 3 days. The four links are: collecting customer order information, equipping the required raw materials, producing products, and logistics delivery. It is equivalent to that in the "T+3" mode, it only takes 12 days for the customer to place an order to the factory for delivery. The traditional production mode of Little Swan requires at least 7 days per cycle, and three cycles are required to deliver products to customers.

3. Impact Analysis

3.1 Impact on inventory

Inventory is an important part of a company's working capital. The purpose of a company's inventory is to ensure the needs of production and sales. The management of inventory is also an issue that companies must pay attention to. Inventory management must not only allow enterprises to continue production and operation, but also occupy as little capital as possible. Proper inventory management can speed up the turnover of inventory, thereby improving the efficiency of the use of corporate working capital, and vice versa. This article uses the inventory turnover rate to reflect the impact of the "T+3" model on working capital.

Table 1. Changes in Little Swan’s inventory turnover rate

Year	Operating Cost	Average Inventory	Inventory Turnover
2010	944535	88055	10.73
2011	915313	93004	9.84
2012	533991	88107	6.06
2013	654962	87544	7.48
2014	800749	70188	11.41
2015	964639	67551	14.28
2016	1211121	123513	9.81
2017	1598289	185280	8.63

From the data in Table I, we can see that from 2010 to 2012, the company’s inventory turnover rate gradually declined, especially in 2012, the decline was much greater than the previous year. Tracing the reasons, we can find the average change in inventory is not large. The reason for the decrease in inventory turnover rate is the decrease in operating costs. Table II reflects that operating income and operating costs have decreased at the same time, which means that the decrease in operating costs is not due to materials. And the reduction of labor costs, but the poor sales performance caused the reduction of operating costs.

Based on the background analysis, because Little Swan adopted certain inventory management measures in 2011, the operating income and operating costs of this year were not reduced much. Since the second half of 2011, the growth rate of the washing machine industry has slowed down. One-year inventory management measures failed, and sales of washing machines did not increase much, so operating costs fell sharply in 2012.

Table 2. Changes in Little Swan's operating income and operating costs

Year	2010	2011	2012
Operating Income	1,120,236.68	1,097,562.17	689,986.39
Operating Costs	944,534.90	915,313.36	533,991.46

Since 2012, companies have begun to introduce the "T+3" model. The inventory turnover rate from 2013 to 2015 has increased year by year. The reason is that operating costs during this period have increased year by year, while the overall inventory has been in a downward trend. Operating costs are increasing along with the increase in sales. Inventory goods are an important factor affecting inventory changes. The quantities of raw materials and products in progress are decreasing year by year. Except for a small increase in inventory in 2015, the remaining years have been declining. Therefore, from 2012 to 2015, the average number of inventories has continued to decrease.

Looking at the inventory turnover rate of 2016 and 2017, we can find that compared with 2012 to 2015, the inventory turnover rate of these two years has decreased. The main reason is the increase in the average inventory quantity and the increase in the inventory quantity. The increase comes from the increase in scale on the one hand, and the large stocking during the Spring Festival on the other. In addition, the increase in operating costs is due to the increase in sales and the increase in raw material costs. Under the changes of these two factors, the inventory turnover rate in the past two years has decreased, but compared to the first two years of the implementation of the "T+3" model, the inventory turnover rate during this period is relatively high. This also shows that the "T+3" model has not greatly reduced its effect due to the huge changes in the external economic environment. The model still has a positive impact on optimizing inventory management and speeding up inventory turnover.

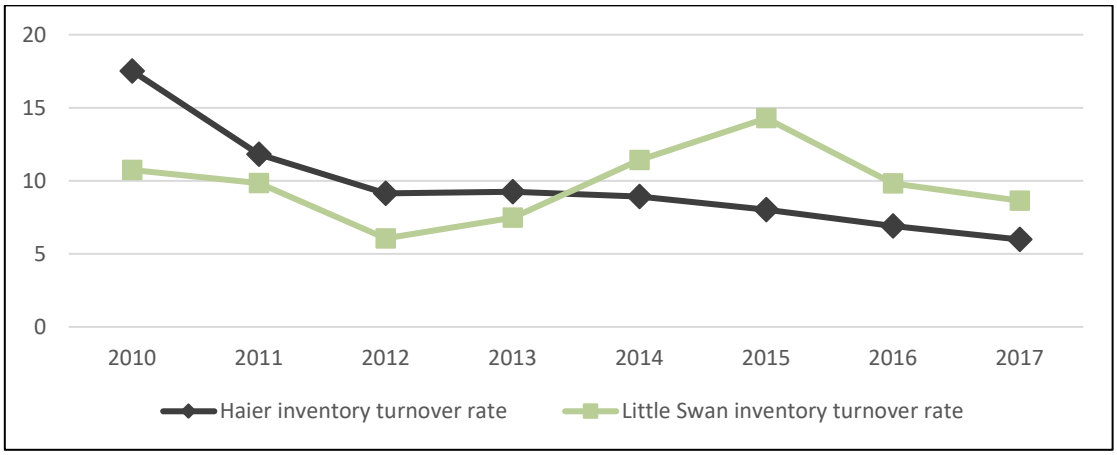

Figure 1. Inventory turnover rate of Little Swan and Haier

Comparing Little Swan's inventory turnover rate from 2010 to 2017 with Haier, as shown in Fig.1, it can be found that after 2014, Little Swan's inventory turnover rate is generally higher than that of Haier. Although before the implementation of the "T+3" model, Little Swan was not as good as Haier, the industry leader in inventory management, but after insisting and improving the "T+3" model, Little Swan minimized bad inventory and optimized Inventory management, and even the efficiency of inventory management in the industry is in a relatively high position. This also fully shows that the "T+3" model has a huge advantage in inventory management.

3.2 Impact on accounts receivable

Account's receivable is an important item of the working capital of an enterprise, and it is an account formed by the method of credit sales in order to expand sales and reduce inventory. The existence of accounts receivable means that some of the company's funds are occupied by consumers, which will cause a certain cost. Therefore, the management of accounts receivable will affect the use of corporate working capital. Proper management of accounts receivable can speed up the recovery

of funds and improve the ability to use working capital. This article uses accounts receivable turnover rate to reflect the impact of the "T+3" model on working capital.

Table 3. Changes in the turnover rate of Little Swan's accounts receivable

Year	Operating Income	Average Accounts Receivable	Accounts Receivable Turnover Rate
2010	1120237	112226	9.98
2011	1097562	91763	11.96
2012	689986	82579	8.36
2013	872796	74997	11.64
2014	1080422	81704	13.22
2015	1313163	87621	14.99
2016	1633491	118086	13.83
2017	2138470	160119	13.36

It can be seen from Table III that the overall account receivable turnover rate before 2012 is generally low. The reason for the relatively high turnover rate of accounts receivable in 2011 was the reduction of accounts receivable while maintaining a high level of operating income. Part of the reason for the higher operating income is that large-scale promotion activities were held that year, which activated the market, which attracted the attention of many consumers, and the reason for the lower accounts receivable was that Little Swan standardized internal control and achieved corresponding effect.

But in 2012, as the market environment deteriorated, it was obvious that the decrease in accounts receivable that year was much lower than operating income. Combined with Table IV, Little Swan’s operating income mainly comes from washing machines, accounting for up to 90%. In 2012, because the sales income of washing machines was far lower than in previous years, and there were no other product sales, other business income was not as good as in previous years. Various factors led to poor income this year, which also caused a decline in turnover rate.

Table 4. Little Swan's operating income components

Year	2010	2011	2012
Washing Machine	981,414.94	963,520.86	616,326.66
Other Products	3,921.86	1,380.69	0.00
Other Business Income	134,899.88	132,660.62	73,659.74
Operating Income	1,120,236.68	1,097,562.17	689,986.39

Looking at the implementation of the "T+3" model, the turnover rate of accounts receivable has continued to rise. Although it has declined in 2016 and 2017, the decline is not very large, and it is still at a higher level than before. The reason why the accounts receivable turnover rate has been high during this period is the amazing growth of operating income. Combining Fig. 2, whether it is the main business income or other business income, it has been on a growing trend, indicating that the sales volume of washing machines and other products of Little Swan has been rising during this period, which also proves that "T+3 "The model is consumer-oriented, caters to the needs of the market, and is welcomed and supported by customers. Although the accounts receivable has been increasing year by year since 2013, and even after 2016, the growth rate of accounts receivable has accelerated, but the growth rate of operating income has also gradually increased, resulting in the account receivable turnover rate. Increase, even if there is a decline in the later period, it will remain at a certain level, which will speed up the collection of accounts receivable to a certain extent and improve the efficiency of the use of working capital.

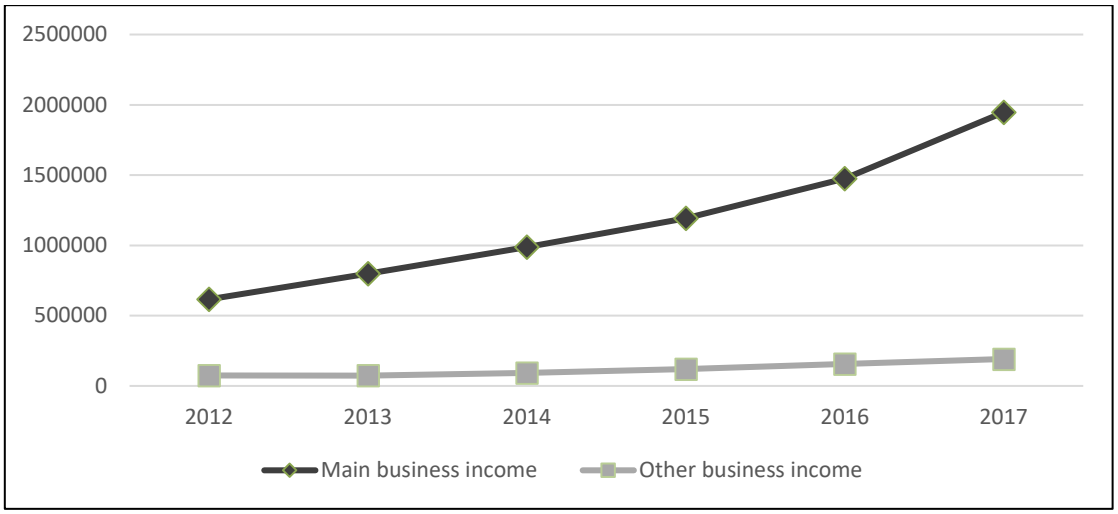

Figure 2. Little Swan's operating income components

Comparing Little Swan's account receivable turnover rate from 2010 to 2017 with Haier, as shown in Table V, it can be found that Haier's accounts receivable turnover rate was higher than that of Little Swan from 2010 to 2015. Especially before 2013, the accounts receivable turnover rate of the two companies differed greatly, indicating that the management efficiency of the accounts receivable of Little Swan was far inferior to that of Haier. However, the accounts receivable turnover rate of these two companies is constantly shrinking. After 2016, the indicator of Little Swan is slightly larger than that of Haier. This change structure can be attributed to Haier's increased pressure on the washing machine industry. Another important reason is that Little Swan's "T+3" model allows it to maintain sales growth and accelerate the turnover of accounts receivable in the increasingly competitive market. Speed, to optimize the management of accounts receivable.

Table 5. Little Swan and Haier's account receivable turnover rate

Year	2010	2011	2012	2013	2014	2015	2016	2017
Haier Accounts Receivable Turnover Rate	36.21	28.21	21.94	20.29	18.45	15.69	12.95	12.90
Little Swan Accounts Receivable Turnover Rate	9.98	11.96	8.36	11.64	13.22	14.99	13.83	13.36

3.3 Impact on cash

As the bloodline of an enterprise's production and operation, cash plays a key role in the survival and development of an enterprise. On the one hand, companies keep cash for transactional needs, and on the other hand, they are also to deal with unexpected situations. But holding cash often requires certain costs, such as opportunity costs and management costs. Therefore, all-round strengthening of cash management is a prerequisite for the sustainable and healthy development of enterprises. This article uses the cash turnover rate as an accounting indicator to reflect the impact of the "T+3" model on Little Swan's working capital.

Table 6. Little Swan's cash turnover rate changes

Year	Average monetary capital	Operating income	Cash turnover
2010	188486	1120237	5.94
2011	231563	1097562	4.74
2012	190987	689986	3.61
2013	151083	872796	5.78
2014	233864	1080422	4.62
2015	305138	1313163	4.3
2016	365746	1633491	4.47
2017	293017	2138470	7.3

From Table VI, it can be found that Little Swan's cash turnover rate was in a downward trend from 2010 to 2012. The main reason was the substantial decrease in operating income. This was analyzed above. It is because of the decline in sales of Little Swan. This shows that the decrease in sales revenue of the company during this period has greatly affected Little Swan's cash turnover speed. After 2013, with the implementation of the "T+3" model, Little Swan's operating income continued to rise. Although Little Swan's cash turnover rate declined in the early stage, the decline was far less than that between 2010 and 2012. During the period, the whole is in a relatively stable state.

In addition, after 2016, the cash turnover rate is also picking up. In 2017, the cash turnover rate was much higher than in previous years. It can be found that since 2013, except for 2017, Little Swan's monetary funds have continued to grow and maintain a certain growth rate. The reason why the cash turnover rate does not change much is the substantial increase in operating income. However, the overall growth rate of the market slows down, which will still have a certain impact on the income of the company, so the growth rate of Little Swan's operating income is not as fast as the growth rate of monetary funds.

As shown in Fig.3, comparing the cash turnover rate of Little Swan with Haier, just like the analysis of inventory and accounts receivable above, Haier's cash turnover rate was higher than that of Little Swan before 2012. However, starting from 2013, the cash turnover rate of Little Swan was slightly lower than that of Haier in 2016 alone, and the cash turnover rate of Little Swan was higher than that of Haier during the rest of the period. From the perspective of Little Swan's change trend, although the cash turnover rate has declined after 2013, combined with Haier's analysis, this should be a common change in the industry caused by changes in the external environment. Judging from the fact that Little Swan's cash turnover rate is gradually higher than that of Haier, the implementation of the "T+3" model has played a pivotal role in strengthening cash management and improving cash utilization efficiency.

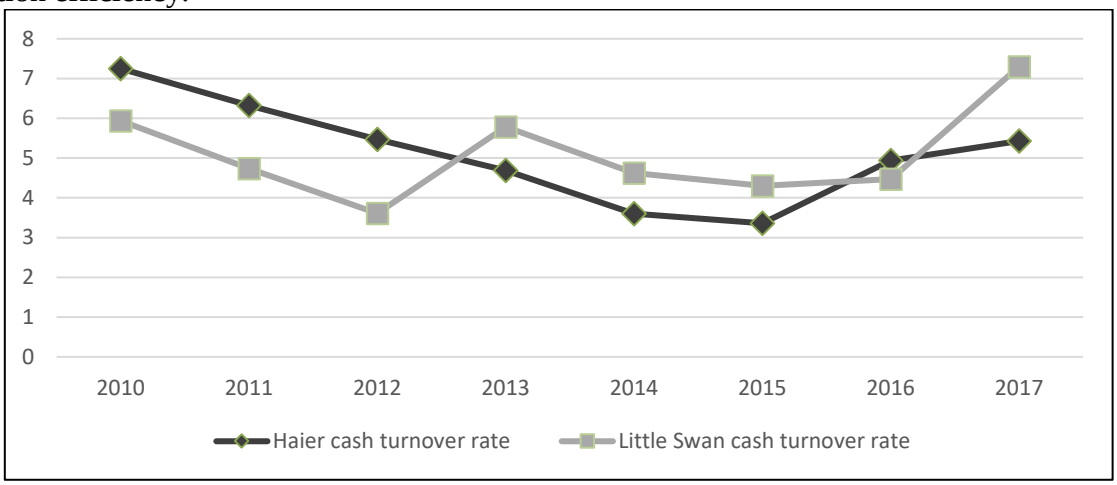

Figure 3. Cash turnover rate of Little Swan and Haier

4. Reason for success

4.1 Destocking and capacity reduction

In the production process of the washing machine industry, it often encounters problems of inventory accumulation and overcapacity, which not only causes certain storage costs, but also takes up part of the capital, reducing the efficiency of the entire capital. From the above analysis, it can be found that the "T+3" model can shorten the supply cycle while speeding up the inventory operation. As the overall production efficiency is improving, in order to adapt to the speed of each link, the produced goods must be shipped out quickly, and sometimes the link in the warehouse is omitted and directly transported to the customer to achieve "zero inventory". The above data can also show that the "T+3" model is indeed effective in reducing inventory holdings, reducing storage costs, and

improving the efficiency of capital use. According to data, before the implementation of the "T+3" model, Little Swan's storage area could reach up to 1.2 million square meters, but after the implementation of this model, Little Swan's storage area dropped to only 100,000 square meters. This shows that the "T+3" model has a greater effect in destocking, reducing production capacity and accelerating capital turnover, and this is also an urgent problem in the washing machine industry, so this model can be successfully promoted.

4.2 Reducing the supply cycle

Under the "T+3" model, the time for the three links of factory production, material preparation and logistics delivery have been reduced to half of the previous cycle. In order to obtain materials as soon as possible to meet production needs, Little Swan strengthened supplier management and proactively helped suppliers encounter difficulties in providing materials. In order to deliver goods to consumers as quickly as possible, Little Swan has eliminated many unnecessary links in the middle, such as the link where the goods stay in the warehouse. It is precisely because of these measures that Little Swan's supply cycle has been greatly reduced. Little Swan’s rapid and effective production efficiency under the condition of little product surplus also boosted Little Swan’s sales. Little Swan produced the products required by customers in a relatively short period of time, which promoted the demand for the products and thus increased the sales of the products. From the above data, although the market is cold, the sales volume of Little Swan has been increasing since 2013, and the operating income has also increased. Because the increase in sales requires companies to repeat the "production-sales" links, this will inevitably speed up the operation of inventory and accounts receivable, thereby promoting the efficiency of capital use.

5. Experience

5.1 Strengthening supplier management

The reason why Little Swan can effectively shorten the cycle of material preparation is largely since Little Swan can strengthen supplier management. Little Swan uses the procurement and supply platform of the holding company Midea Group to continuously improve the efficiency of the supply chain. Little Swan establishes a good cooperative relationship with its suppliers and builds a strategic partnership with suppliers. Under the traditional production model, companies often purchase raw materials in large quantities. Not only are the quantities of materials large, but the procurement process is very slow. The "T+3" model first prepares materials according to customer needs, and only prepares materials after the customer places an order. In this case, due to the large differences in customer needs, there are many product models to be produced. This requires Little Swan not only to integrate the resources of each supplier, quickly communicate and coordinate with suppliers, but also to achieve a high level of product Standardization and modularization ensure that the number of types of materials prepared by suppliers is continuously reduced.

It can be seen from the successful promotion of the "T+3" model that Little Swan has successfully achieved this and effectively shortened the preparation time. Therefore, the washing machine industry needs to strengthen supplier management, change the relationship with suppliers, change from mutual game to mutual benefit and win-win, and reduce the time of production and stocking, thereby speeding up the production efficiency of enterprises.

5.2 Increasing production speed

Little Swan can quickly produce the products required by customers in a relatively short time because of its very fast production speed. From the traditional 23-day supply cycle to the current 12 days, this process is quite difficult, so Little Swan reduces unnecessary links in the production process as much as possible, and even reaches the state of no inventory, so that the production platform and standardization can reach as expected, the upstream suppliers will provide more targeted products, thereby increasing the speed of production.

From the above analysis, it can be found that Little Swan's operating income is increasing year by year. The increase in the company's operating income has not only led to an increase in inventory turnover, but also accelerated the turnover of accounts receivable. This further promotes the efficiency of the use of working capital of the entire enterprise. The growth of Little Swan's income comes from the increase in product sales. If Little Swan is not efficient and fast in the production process, it will be difficult to promote sales growth. After Little Swan increases the production speed, the space for efficiency improvement is very flexible, and the speed of production, sales and circulation is also improved. Therefore, when the washing machine industry considers improving the efficiency of the use of working capital, it may wish to consider increasing the speed of the production process, promoting the improvement of manufacturing efficiency, effectively reducing the unit cost of the product, and increasing the profit.

5.3 Optimizing inventory management

Inventory in the washing machine industry is often easy to accumulate, which will not only occupy part of the company's funds, but also increase storage and management costs. Therefore, how to effectively manage inventory is a problem that companies must think about. The "T+3" model can effectively reduce the inventory of Little Swan, which is closely related to its inventory management. Little Swan promoted the CCS inventory management system internally, increased inventory supervision, and at the same time forced inventory control by rigidly reducing the area of the warehouse.

From the inventory analysis, it is obvious that these measures have achieved good results. Not only the number of inventories has been greatly reduced, but the turnover rate of inventory has also been improved, which has improved the efficiency of the use of Little Swan's working capital. Therefore, enterprises in the washing machine industry need to carry out scientific inventory management, improve the inventory management system, optimize the inbound and outbound processes, reduce redundant links and steps, reduce inventory occupancy, and increase inventory turnover.

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