


“Evaluating the impact of sales methods on profitability in the Japanese software industry”

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EVALUATING THE IMPACT OF SALES METHODS ON PROFITABILITY IN THE JAPANESE SOFTWARE INDUSTRY

Abstract

This study aims to examine the impact of sales channels, either direct or indirect, on the profitability of software companies in Japan, and to further elucidate the differences in international competitive advantages by comparing Japanese firms with U.S. SaaS companies. This study analyzes the financial data of Japanese software manufacturers listed on the Tokyo Stock Exchange over the three-year period from 2020 to 2022. Companies are classified into direct sales and indirect sales groups based on their revenue and operating profit margins. Additionally, Welch's t-test was performed to compare the profitability of these companies, and comparisons were also made with U.S. Software-as-a-Service (SaaS) companies. The analysis revealed that Japanese companies adopting indirect sales channels exhibited statistically significantly higher profitability than those using direct sales channels ($t = 2.3828$, $p = 0.0263$, mean difference = 0.1701). Moreover, Japanese companies with indirect sales channels also demonstrated significantly higher profitability when compared to U.S. SaaS companies ($t = 4.7911$, $p = 0.00001$, mean difference = 0.3874). These findings suggest that, particularly in the small and medium-sized enterprise (SME) market, the use of indirect sales channels effectively bridges the IT literacy gap and enhances profitability. This study concludes that indirect sales channels serve as a strategic factor that strengthens the competitive advantage of Japanese software companies and contributes to the improvement of profitability.

Keywords

sales channels, profitability analysis, competitive advantage, Japanese software industry, sales strategy optimization

JEL Classification

L86, L25, M31, O33, D22

INTRODUCTION

In the software industry, one of the critical factors influencing a company's profitability is the choice of sales method. The question of whether direct sales channels, where companies sell directly to customers, or indirect sales channels, where sales occur through intermediaries such as distributors or resellers, yield higher profitability has been a subject of debate for many years. In the Japanese software industry, indirect sales channels have traditionally dominated, with many companies adopting this model. While indirect sales channels are often considered advantageous in terms of broad market access and cost reduction, it has been argued that the lack of direct relationships with customers may limit profitability. On the other hand, direct sales channels allow companies to respond more swiftly to customer needs and provide customized solutions, but they come with the challenge of higher sales and marketing costs.

This study aims to analyze how direct and indirect sales channels impact the profitability of Japanese software companies. Additionally,

the research aims to explore how these channels contribute to competitive advantage by comparing Japanese firms with U.S. SaaS companies. Through this comparison, the study seeks to highlight differences in international competitive strategies and provide insights into optimizing sales channels for enhanced profitability and competitiveness.

While previous research has focused on individual aspects of sales channels, there has been limited systematic comparison of the overall impact of direct versus indirect sales methods. This study not only examines profitability but also evaluates how each sales channel influences strategic positioning. By offering practical insights into optimizing sales channel strategies, this research provides actionable recommendations for companies seeking to improve their profitability and strengthen their competitive edge.

Ultimately, this study is intended to assist businesses in making informed decisions about sales channel selection. By clarifying the impact of direct versus indirect sales on market competitiveness, it provides companies with valuable guidance for enhancing their overall performance and market position.

1. LITERATURE REVIEW

When evaluating corporate profitability, the operating profit margin is a highly important indicator. In particular, in Japan's software industry, many studies have pointed out that the choice of sales channels significantly affects a company's profitability and competitive advantage. Companies with high operating profit margins demonstrate an ability to efficiently utilize management resources and effectively sell their products and services, resulting in stable profitability. Conversely, companies with low operating profit margins are at a higher risk of losing competitiveness and facing long-term declines in profitability.

Many studies have shown that the choice of sales channels has a significant impact on corporate profitability. Weitz (2002) pointed out that indirect sales channels are advantageous for entering new markets and reducing costs, and that trust relationships are crucial for improving profitability. Coelho and Easingwood (2008) noted that indirect sales contribute to faster market entry and cost efficiency, while Rosenbloom (2004) argued that the management of sales channels is key to building trust with customers. These studies collectively indicate that indirect sales contribute to enhancing competitive advantage.

Kobayashi (2006) introduced successful examples of vertical marketing systems (VMS) in Japanese software industry, while Porter (1996) emphasized that differentiation and rapid market access are key to strengthening competitive advantage.

Sutomo (2023) demonstrated the effectiveness of omnichannel strategies, while also pointing out the risk of short-term cost increases due to initial investments. Additionally, it was confirmed that trust relationships with partners and the efficiency of channel management are essential for success.

Christensen and Raynor (2013) showed that disruptive innovation transforms existing business models and that the indirect sales model, in particular, is a means of achieving sustainable profitability. Gemba (2010) emphasized the importance of the rapid introduction of new technologies through indirect sales channels in maintaining competitiveness in Japan's manufacturing sector. Dibrell et al. (2008) concluded that IT investment and innovation contribute to improving the profitability of small and medium-sized enterprises (SMEs), particularly by establishing competitive advantage through indirect sales. Wyer et al. (2010) demonstrated that strategic learning and knowledge sharing enhance market adaptability, which is a key success factor in indirect sales.

Kanda et al. (2021) showed that sustainable strategies enhance innovation capabilities and contribute to long-term growth, while Felin et al. (2020) argued that the lean startup approach accelerates market entry speed, with indirect sales serving as a means of supporting such rapid market introduction. These studies confirm that innovation is crucial for the selection of sales channels and corporate growth, and this study will examine these dynamics within the same framework. The importance of relationships with customers and val-

ue creation is emphasized as playing a critical role in establishing competitive advantage and achieving sustainable growth.

Kotler et al. (2010) pointed out that companies emphasizing social responsibility can strengthen trust relationships with customers and enhance competitiveness even with an indirect sales strategy. Moore (2002) stated that market segmentation contributes to expanding the customer base and improving profitability through indirect sales. W. Ray and J. Ray (2006) demonstrated that the utilization of third-party IT resources is crucial for improving the efficiency of indirect sales and strengthening competitive advantage. Curiskis et al. (2023) emphasized that predicting customer lifetime value (CLV) through data analytics directly leads to increased profitability, while Naguib (2023) argued that improving SaaS quality significantly impacts customer loyalty and profitability. Salazar Flores et al. (2024) noted that the use of sales technologies contributes to the expansion of the customer base and deepening of trust relationships, thereby enhancing the effectiveness of indirect sales channels. These studies collectively show that customer value is essential for corporate competitiveness and sustainable growth, and they conclude that marketing, IT resources, data analytics, and quality management enhance customer value and contribute to improving corporate profitability.

Regarding pricing strategies, the focus has been on how SaaS and cloud service companies can maximize profitability in competitive markets. Lee (2021) pointed out that pricing adjustments for SaaS companies are key to ensuring customer loyalty, while Li and Kumar (2022) demonstrated that cost management is essential for profitability. Cong et al. (2020) emphasized that optimizing pricing strategies and resource management contributes to competitiveness and sustainable growth. Putri (2020) argued that companies utilizing indirect sales channels can enhance profitability by optimizing their capital structure, while Rodrigues et al. (2020) showed that SaaS adoption strengthens corporate competitiveness. Baldwin and Okubo (2023) revealed that automation and remote work contribute to improved operational efficiency and profitability. These studies demonstrate that pricing strategies, operational strate-

gies, and capital structure interact to enhance profitability, highlighting that maximizing customer value and sales channel strategies are essential for enhancing competitiveness.

On the other hand, it is also important to adopt a more comprehensive perspective regarding these profitability-focused approaches. For example, sustainability, digitalization, and knowledge sharing are factors that must be considered in understanding how companies can achieve long-term growth and competitive advantage. Several studies present alternative views on traditional sales channel strategies. Lüdeke-Freund (2019) argued that balancing profitability and sustainability is essential for long-term corporate success, and that the creation of environmental and social value contributes to competitive advantage. Azeem et al. (2021) emphasized that competitive advantage based on knowledge sharing and innovation is necessary for sustainable growth. Dabić et al. (2021) analyzed the impact of digitalization on competitive advantage, stating that agile operations support technological innovation. Freudenreich et al. (2020) demonstrated that the creation of social and environmental value serves as a source of long-term competitiveness. Kraus et al. (2021) also pointed out that digitalization promotes flexible and innovative approaches, leading to sustainable success.

Considering these differing perspectives, this study aims to examine the impact of sales channels, whether direct or indirect, on the profitability of Japanese software companies. Additionally, through a comparison between Japanese companies and U.S. SaaS companies, this research seeks to elucidate differences in international competitive advantage and investigate how the choice of sales channels in Japan's software industry affects long-term corporate competitiveness and profitability.

2. HYPOTHESES

It is hypothesized that the profitability of Japanese software companies significantly differs depending on the sales method employed, whether direct or indirect sales channels. Specifically, companies that adopt indirect sales channels are expected

to demonstrate higher profitability compared to those utilizing direct sales channels. This assumption is grounded in prior research that has highlighted the superiority of the indirect sales model. Companies employing indirect sales channels often provide technical support and implementation assistance through distributors, which compensates for the limited IT literacy and resource constraints of small and medium-sized enterprises (SMEs), thereby facilitating more efficient system implementation and operation. Consequently, companies utilizing indirect sales channels are expected to enhance service quality and achieve higher profitability.

In contrast, companies that employ direct sales channels may be less capable of providing adequate technical support and implementation assistance, particularly in the SME market, where IT literacy tends to be lower, thereby posing a risk of reduced profitability. Based on this premise, the following three hypotheses are proposed:

H1: Japanese software companies employing indirect sales channels are predicted to exhibit higher operating profit margins than those adopting direct sales channels, due to the provision of technical support and implementation assistance. Indirect sales channels play a critical role in reducing adoption barriers, especially for SMEs with lower IT literacy, by providing technical support and guidance through distributors. This assistance is expected to expand the customer base of indirect sales companies and enhance service quality, leading to an increase in operating profit margins.

H2: Japanese software companies that utilize direct sales channels are predicted to have lower operating profit margins compared to those adopting indirect sales channels, due to the lack of sufficient technical support and implementation assistance. The direct sales model may result in inadequate technical and implementation support, especially in the SME market, where lower IT literacy raises adoption barriers. As a result, it may be more challenging for these companies to expand their customer base, which can lead to reduced sales efficiency and lower profitability.

H3: Japanese software companies employing indirect sales channels are predicted to exhibit higher operating profit margins than U.S. SaaS companies due to the provision of technical support and in-person implementation assistance. U.S. SaaS companies often rely on a self-service model, where the lack of adequate customer support may serve as a barrier to adoption, particularly for customers with lower IT literacy, thus potentially constraining profitability.

3. METHODOLOGY

This study employs quantitative analysis to examine the impact of different sales channels on the profitability of Japanese software companies. Data from Japanese firms using both direct and indirect sales channels were collected, and their operating profit margins were analyzed. Additionally, U.S. SaaS companies were included in the analysis to provide a comparative perspective. The study uses regression analysis to assess the relationship between sales models and profitability, with a focus on identifying the key factors that influence operating margins.

For this study, financial data from publicly traded companies in the information and communication technology (ICT) sector, listed on the Tokyo Stock Exchange, were utilized. The selection criterion for defining a “software company” was that at least 50% of the company’s business segments be related to software or system sales. This criterion is based on the business reports and financial statements of the companies. In total, 40 software companies were selected for analysis, and data from the three-year period from 2020 to 2022 were collected.

Companies were classified based on the ratio of selling, general, and administrative expenses (SG&A) to revenue. Specifically, firms with an SG&A ratio of 65% or more were classified as employing “direct sales channels,” while those with a ratio below 65% were classified as employing “indirect sales channels.” This threshold is based on the assumption that companies using direct sales channels allocate more resources to sales and marketing activities, leading to higher SG&A ra-

tios. In selecting this criterion, the sales ratios of prominent Japanese software manufacturers such as OBIC Corporation, OBC Corporation, and WingArc1st Corporation, which range from 50% to 58%, were taken into account, defining software companies as those generating more than 50% of their revenue from software sales. Similarly, the threshold of a 65% SG&A ratio was deemed appropriate based on the SG&A ratios of representative software companies such as Trend Micro and Rakus, which range between 60% and 62%. Based on these criteria, 15 companies were classified as using direct sales channels, and 25 companies as using indirect sales channels.

For the international comparison, data from U.S. SaaS companies were also collected. The target companies were the top 40 SaaS firms by market capitalization, listed on the New York Stock Exchange and NASDAQ. Similar to the Japanese companies, financial data spanning the period from 2020 to 2022 were used. This enabled a comparison of operating profit margins between Japanese indirect sales companies and U.S. SaaS companies.

Operating profit margin was used as the key indicator of profitability. The operating profit margin is calculated by dividing operating income by total revenue, making it a suitable measure for evaluating the efficiency of a company's cost structure and the effectiveness of its sales strategy. Additionally, the SG&A ratio was employed to assess the impact of sales channels on corporate cost structures.

To evaluate the differences in operating profit margins between Japanese companies using direct and indirect sales channels, as well as between Japanese indirect sales companies and U.S. SaaS firms, Welch's t-test was employed for statistical analysis. This test allowed for the evaluation of whether significant differences exist between the respective groups.

4. RESULTS

In this study, software companies were selected from the ICT sector of the Tokyo Stock Exchange, where more than 50% of their business segments are related to software or system sales. Ultimately, 40 software companies were chosen as the sample for analysis, based on financial data covering the three-year period from 2020 to 2022.

4.1. Classification by sales channels

Based on the sales methods of each company, the annual selling, general, and administrative (SG&A) expense ratio was calculated. Companies with an SG&A ratio accounting for 65% or more of total revenue were classified as "direct sales companies," while those with an SG&A ratio below 65% were classified as "indirect sales companies." According to this criterion, 15 companies were categorized as direct sales companies, and 25 were categorized as indirect sales companies (see Table 1 and Table 2). This classification establishes the foundation for comparing the profitability between companies with different sales approaches.

Table 1. Japanese software manufacturers using indirect sales channels (N = 25)

Stock code	Company name	Attribute	Operating profit margin			
			FY2022	FY2021	FY2020	Average
4480	Medley	Online medical treatment	0.0909	0.0675	0.0580	0.0721
3993	PKSHA Technology	AI	0.1360	0.0745	0.0858	0.0988
2492	Infomart	Ordering system	0.0478	0.1048	0.1677	0.1067
4375	Safte	Cloud recording	-0.1387	-0.0090	-0.0237	-0.0572
3983	oRo	Accounting/ERP	0.3682	0.3667	0.3287	0.3545
4431	Smaregi	POS cash register	0.1645	0.2543	0.2311	0.2167
3984	UserLocal	Site analysis	0.3818	0.4093	0.4121	0.4011
4397	TeamSpirit	Accounting/ERP	-0.0362	0.0583	0.1169	0.0463
5033	Nulab	Project management	0.0719	-0.0035	-0.0251	0.0144
4192	SPIDERPLUS	Construction drawing management	-0.4607	-0.1962	0.0573	-0.1999
4493	Cyber Security Cloud	Web security service	0.1696	0.1516	0.1578	0.1596
4716	Oracle Corporation Japan	DB/Infrastructure/ERP	0.3411	0.3401	0.3259	0.3357
4704	TrendMicro	Cybersecurity	0.1400	0.2293	0.2267	0.1987

Table 1 (cont.). Japanese software manufacturers using indirect sales channels (N = 25)

Stock code	Company name	Attribute	Operating profit margin			
			FY2022	FY2021	FY2020	Average
4684	OBIC	Integrated business software/ERP	0.6050	0.5733	0.5372	0.5718
4686	JUST SYSTEMS	Corporate business systems/education	0.4120	0.3661	0.3586	0.3789
9928	MJS	Accounting/ERP	0.1309	0.1329	0.1472	0.1370
4733	OBC	Accounting/ERP	0.4706	0.4424	0.4317	0.4482
3923	Rakus	Expense settlement, invoice	0.0765	0.2533	0.1012	0.1437
9640	Saison Information Systems	File transfer middleware	0.1256	0.1328	0.1464	0.1349
3040	Soliton Systems	Security/Multi-factor authentication	0.1031	0.1362	0.1134	0.1176
9698	Cleo	Accounting/ERP	0.0720	0.0770	0.0716	0.0735
9629	PCA	Accounting/ERP	0.1984	0.1739	0.1950	0.1891
3694	OPTiM	MDM	0.1847	0.2406	0.0382	0.1545
4054	Nihon Jyoho Create	Rental real estate management software	0.1640	0.2238	0.2209	0.2029
3692	FFRI Security	endpoint security	0.0581	0.2031	0.2190	0.1601

Table 2. Japanese software manufacturers using direct sales channels (N = 15)

Stock code	Company name	Attribute	Operating profit margin			
			FY2022	FY2021	FY2020	Average
4443	Sansan	Business card management, billing	0.0310	0.0455	0.0567	0.0444
3994	MoneyForward	Accounting/ERP	-0.3943	-0.0680	-0.2478	-0.2367
4478	freee	Accounting/ERP	-0.2116	-0.2381	-0.3888	-0.2795
4435	Kaonavi	Human resources management	0.0387	-0.0032	-0.1058	-0.0234
4475	HENNGE	ID management	0.0819	0.0785	0.1297	0.0967
3991	Wantedly	Recruitment	0.2783	0.1159	0.1434	0.1792
4168	Yappli	Low code development software	-0.1977	-0.2845	-0.2468	-0.2430
4379	Photosynth	Entrance/exit management	-0.3054	-0.5304	-0.5672	-0.4677
4432	WingArc1st	Form/document management	0.3018	0.1754	0.1911	0.2228
4776	Cybozu	Groupware	0.0278	0.0782	0.1449	0.0836
4344	SOURCENEXT	PC software	-0.2192	0.0413	0.0278	-0.0500
6027	Bengo4.com	Lawyer/tax accountant support, electronic contracts	0.1657	0.0324	0.0951	0.0977
4448	Chatwork	Chat communication	-0.1566	-0.2040	0.1349	-0.0752
4488	AI inside	AI OCR	0.1720	0.5135	0.2716	0.3190
3853	Asteria	No-code development software	1.1610	0.3049	-0.0979	0.4560

4.2. Results of international comparison between Japanese and U.S. SaaS companies

from SaaS companies listed on the New York Stock Exchange and NASDAQ. A total of 40 SaaS companies were ultimately selected for analysis (see Table 3).

To facilitate a comparison between Japanese companies and U.S. SaaS firms, data were collected

Table 3. Software-as-a-Service (SaaS) companies in the United States (N = 40)

Stock code	Company name	Attribute	Operating profit margin			
			FY2022	FY2021	FY2020	Average
MSFT	Microsoft	Software/IT services	0.4206	0.4159	0.3703	0.4023
CRM	Salesforce	CRM for corporations	0.0207	0.0214	0.0174	0.0198
ADBE	Adobe	Image editing software	0.3464	0.3676	0.3293	0.3477
SQ	Block	Mobile payment service	-0.0016	0.0238	0.0167	0.0130
INTU	Intuit	Specific business software	0.2020	0.2595	0.2834	0.2483
NOW	ServiceNow	Business standardization platform	0.0490	0.0436	0.0440	0.0455
SHOP	Shopify	E-commerce platform	-0.1468	0.0583	0.0308	-0.0193

Table 3 (cont.). Software-as-a-Service (SaaS) companies in the United States (N = 40)

Stock code	Company name	Attribute	Operating profit margin			
			FY2022	FY2021	FY2020	Average
WDAY	Workday	Financial management/human resources management	-0.0226	-0.0576	-0.1385	-0.0729
ADSK	Autodesk	CAD	0.1409	0.1660	0.1049	0.1373
ZM	Zoom	Video	0.2594	0.2489	0.0198	0.1760
TWLO	Twilio	Communication	-0.2694	-0.3222	-0.2798	-0.2905
AKAM	Akamai	CDN	0.1966	0.2332	0.2194	0.2164
TEAM	Atlassian	Software collaborative development tools	0.0250	0.0677	0.0087	0.0338
SPLK	Splunk	Data operational intelligence	-0.4289	-0.1433	-0.4083	-0.3268
DBX	Dropbox	Online storage "Dropbox"	0.1533	0.1417	0.0633	0.1194
DOCU	DocuSign	Electronic signature	-0.0294	-0.1196	-0.1026	-0.0839
PLTR	Palantir Technologies	Big data storage and analysis	-0.0846	-0.2666	-1.0741	-0.4751
VEEV	Veeva	CRM for life sciences	0.2130	0.2731	0.2579	0.2480
HUBS	HubSpot	Marketing software	-0.0630	-0.0421	-0.0576	-0.0542
DDOG	Datadog	Monitoring management	-0.0350	-0.0186	-0.0228	-0.0255
CRWD	CrowdStrike	Security software	-0.0982	-0.1058	-0.2919	-0.1653
PAYC	Paycom	Human resources management software	0.2754	0.2402	0.2212	0.2456
OKTA	Okta	ID management	-0.5908	-0.2443	-0.4043	-0.4131
CDAY	Ceridian	Human capital management software	-0.0505	-0.0882	-0.0110	-0.0499
SNOW	Snowflake	Big data storage and analysis	-0.5864	-0.9187	-1.3583	-0.9545
BSY	Bentley	Integrated software for companies and organizations	0.1898	0.0980	0.2199	0.1692
ZI	ZoomInfo Technologies	Marketing software	0.1638	0.1834	0.1069	0.1514
ZS	Zscaler	Network security	-0.3001	-0.3081	-0.2642	-0.2908
NET	Cloudflare	CDN	-0.2063	-0.1945	-0.2477	-0.2162
DT	Dynatrace	Software platform for specific industries	0.0875	0.1307	-0.7884	-0.1901
PATH	UiPath	RPA	-0.5614	-0.1816	-1.5423	-0.7618
BOX	Box	Online storage "Box"	-0.0316	-0.0488	-0.1880	-0.0895
MDB	MongoDB	General purpose database platform	-0.3312	-0.3545	-0.3441	-0.3433
IOT	Samsara	IoT cloud service	-0.8225	-0.8112	-1.7647	-1.1328
GTLB	GitLab	DevOps platform	-0.5104	-1.4055	-1.4053	-1.1071
MNDY	Monday	Business management tools	-0.2929	-0.4093	-0.9343	-0.5455
PCOR	Procore	Construction management software	-0.4033	-0.5554	-0.1462	-0.3683
GWRE	Guidewire	Software specialized for the non-life insurance industry	-0.2454	-0.1421	-0.0322	-0.1399
KVYO	Klaviyo	Marketing automation platform	-0.1164	-0.2726	-0.3503	-0.2465
S	SentinelOne	Cybersecurity provider	-1.3049	-1.2414	-3.3398	-1.9620

4.3. Comparison of profitability between indirect and direct sales channels

The analysis of differences in operating profit margins between the 25 Japanese companies employing indirect sales channels and the 15

companies utilizing direct sales channels revealed a statistically significant difference ($t = 2.3828$, $p = 0.0263$, mean difference = 0.1701). These results indicate that companies adopting indirect sales channels have a distinct advantage in terms of operating profit margins (see Table 4).

Table 4. Welch t-test results (Japanese software companies: indirect sales channels and direct sales channels)

Japanese software companies	t	p-value	95% confidence interval	Mean difference
Indirect sales vs direct sales	2.3828	0.0263*	0.0170 to 0.3233	0.1701

4.4. Comparison between Japanese indirect sales companies and U.S. SaaS companies

When comparing the operating profit margins of the 25 Japanese companies using indirect sales channels and the 40 U.S. SaaS companies, a statistically significant difference was observed ($t = 4.7911, p = 0.00001, \text{mean difference} = 0.3874$). This suggests that Japanese companies employing indirect sales channels also outperform U.S. SaaS companies in terms of operating profit margins (see Table 5).

4.4.1. Hypothesis 1

Japanese software companies utilizing indirect sales channels are expected to achieve higher operating profit margins than those using direct sales channels, due to the technical support and implementation assistance provided by distributors. The results demonstrated a statistically significant difference in operating profit margins between companies adopting indirect and direct sales channels ($t = 2.3828, p = 0.0263, \text{mean difference} = 0.1701$), thereby confirming *Hypothesis 1*.

4.4.2. Hypothesis 2

Japanese software companies adopting direct sales channels are expected to exhibit lower operating profit margins compared to those utilizing indirect sales channels, due to insufficient technical support and implementation assistance. A statistically significant difference in operating profit margins was observed between companies using indirect and direct sales channels ($t = 2.3828, p = 0.0263$), thus supporting *Hypothesis 2*.

4.4.3. Hypothesis 3

Japanese software companies utilizing indirect sales channels are expected to have higher operating profit margins compared to U.S. SaaS companies, as the latter primarily rely on self-service models, which may pose barriers for customers

with low IT literacy. The results of the international comparison revealed a statistically significant difference in operating profit margins between Japanese indirect sales companies and U.S. SaaS companies ($t = 4.7911, p = 0.00001, \text{mean difference} = 0.3874$), which validates *Hypothesis 3*.

From these analytical results, it was confirmed that Japanese software companies adopting indirect sales channels exhibit statistically significantly higher operating profit margins compared to those adopting direct sales channels ($t = 2.3828, p = 0.0263, 95\% \text{ confidence interval} = 0.0170 \text{ to } 0.3233, \text{mean difference} = 0.1701$). Furthermore, in the comparison between Japanese companies utilizing indirect sales and U.S. SaaS companies, a statistically significant difference in operating profit margins was also observed, with the Japanese indirect sales companies demonstrating higher profitability ($t = 4.7911, p = 0.00001, \text{mean difference} = 0.3874$).

5. DISCUSSION

This study sought to examine the impact of sales channel selection on the profitability of Japanese software companies by comparing direct and indirect sales channels. Additionally, from an international perspective, it aimed to elucidate the differences in operating profit margins between Japanese companies adopting indirect sales channels and U.S. SaaS companies, thereby shedding light on the factors contributing to their respective profitability. The findings of this research confirm that the adoption of indirect sales channels significantly enhances profitability in the Japanese market. Moreover, the comparison with the U.S. market provides critical insights into the factors underpinning the competitive advantage of Japanese firms.

Hypothesis 1 posited that “Japanese software companies employing indirect sales channels will demonstrate statistically significantly higher operating profit margins than those utilizing direct sales

Table 5. Welch t-test results (international comparison: indirect sales channels)

International comparison	t	p-value	95% confidence interval	Mean difference
Indirect sales vs US SaaS	4.7911	0.00001***	0.2205 to 0.5544	0.3874

channels.” The results supported this hypothesis, as companies using indirect sales channels were found to exhibit significantly higher operating profit margins. The indirect sales model, by leveraging distributors and partners, enables companies to reach a broader customer base and, particularly in the small and medium-sized enterprise (SME) sector, offers essential technical support and implementation assistance. This, in turn, lowers the barriers to adoption and enhances customer satisfaction and implementation success rates. These findings highlight the substantial contribution of indirect sales channels to the improvement of corporate profitability, suggesting that this strategy is particularly effective for Japanese software companies aiming to expand their customer base. Furthermore, the characteristics of the Japanese market, such as the lower level of IT literacy among customers and the high proportion of SMEs, amplify the importance of technical support and implementation assistance. The ability of companies to provide tailored customer support through indirect sales channels is likely a key factor in their success. Additionally, the use of distributors allows firms to allocate their internal resources more effectively, which may further enhance the profitability of the indirect sales model. These results can be compared to previous research. Homburg et al. (2020) highlighted that the effectiveness of indirect channels can vary depending on governance mechanisms, emphasizing the critical role of proper governance in corporate success. Although this study did not delve into governance mechanisms, it focused on the direct impact of indirect sales channels on profitability. As such, the consideration of governance mechanisms presents an avenue for future research. Furthermore, Keeling et al. (2020) emphasized the importance of improving the sales skills and expertise of channel partners and demonstrated that learning processes within indirect channels play a pivotal role in enhancing sales performance. While this study focused on profitability, a complementary analysis from a different perspective was conducted in Keeling et al.’s (2020) work, underscoring the need for future analyses to include multifaceted evaluations, incorporating factors such as sales skills and learning effects.

Hypothesis 2 examined the inverse assertion that “Japanese software companies utilizing direct sales channels will exhibit lower operating prof-

it margins compared to those adopting indirect sales channels.” The findings corroborated this hypothesis, revealing that companies employing direct sales channels indeed demonstrated lower operating profit margins relative to their indirect counterparts. The direct sales model necessitates substantial allocation of resources toward sales and marketing activities, leading to higher SG&A (selling, general, and administrative) expenses, which in turn tend to reduce profitability. Notably, the direct sales channel often requires customized sales efforts for each customer, thereby elevating the risk of increased sales costs. Furthermore, the low level of IT literacy among small and medium-sized enterprises (SMEs) in the Japanese market poses challenges in providing adequate technical support, potentially heightening barriers during the implementation process. These factors collectively contribute to the negative impact on the profitability of firms adopting direct sales channels. The Transaction Cost Theory (TCT), as articulated by Cuypers et al. (2021), explains that when asset specificity in transactions is high, transaction costs escalate, thereby reducing profitability. This theory offers a theoretical explanation for the increase in costs and the decline in profitability associated with the direct sales channel, aligning with the findings of *Hypothesis 2*. Additionally, the theory reinforces the notion that adopting indirect sales channels to minimize transaction costs constitutes an effective strategy for enhancing profitability, further supporting the results of *Hypothesis 2*. On the other hand, Pu et al. (2020) analyzed the effects of online sales strategies employed by manufacturers, including direct sales, reselling, and agency-based sales. Their study noted that while direct sales can sometimes incur higher costs compared to reselling or agency-based models, it may also offer opportunities to enhance profitability by allowing manufacturers to maintain direct control over customer relationships. However, their research also emphasized that direct sales are not universally the optimal strategy; depending on operational costs and competitive market conditions, reselling or agency-based models may prove more appropriate. The findings of *Hypothesis 2* complement Pu et al.’s (2020) research, particularly by underscoring how the low IT literacy of SMEs in the Japanese market exacerbates sales costs and constrains profitability.

Hypothesis 3 posited that “Japanese software companies utilizing indirect sales channels would exhibit higher operating profit margins than U.S. SaaS companies.” The results supported this hypothesis, confirming that Japanese companies employing indirect sales channels outperformed U.S. SaaS firms in terms of operating profit margins. U.S. SaaS companies predominantly adopt a self-service business model, which offers comparatively limited technical support and implementation assistance to customers, especially in contrast to Japanese firms. Conversely, Japanese software companies, particularly those targeting small and medium-sized enterprises (SMEs), leverage indirect sales channels to provide comprehensive technical support via resellers, facilitating a smoother implementation process and ultimately enhancing profitability. The research by Lanzolla and Markides (2020) posited that “interdependencies between activities” within a business model are critical for maintaining competitive advantage. This perspective aligns with the findings of this study, which demonstrate that the integrated system of activities, including technical support and customer engagement provided through indirect sales channels significantly contributes to the profitability of Japanese companies. Additionally, the work of Yuan et al. (2020) examined how a company’s strategy is intertwined with its corporate social responsibility (CSR) initiatives. Their findings suggest that innovation-oriented firms tend to achieve long-term success by fulfilling responsibilities to both customers and society. This linkage between corporate strategy and performance further supports the relevance of *Hypothesis 3*, highlighting the broader strategic context in which these firms operate.

In sum, the hypothesis testing in this study elucidated the impact of strategic choices on corporate profitability and performance. Specifically, the use of indirect sales channels and innovation-driven strategies were identified as key factors that strengthen competitive advantage and facilitate sustainable growth. Furthermore, the results underscore the importance of adopting a holistic and integrated approach, tailored to the specific market and environmental conditions a firm faces, as a critical enabler of both competi-

tive advantage and long-term growth. Future research should aim to incorporate more multifaceted analyses, including governance mechanisms and the learning processes of channel partners, to deepen the understanding of these dynamics.

Nevertheless, this study has certain limitations. One notable limitation is the insufficient consideration given to the influence of governance mechanisms in sales channel selection. Governance mechanisms play a crucial role in maximizing the effectiveness of sales channels, especially in the operation of indirect sales channels, where interactions with internal corporate control and decision-making processes can significantly affect profitability. Future research will require more detailed analysis that incorporates these governance mechanisms to provide a more comprehensive understanding of their impact.

Moreover, this study lacks a thorough analysis of how the sales skills and learning processes of channel partners influence corporate profitability. In the context of indirect sales channels, the role of distributors and partners extends beyond mere sales activities; they are crucial in building relationships with customers and providing technical support. Understanding how the sales skills and expertise of these partners contribute to corporate profitability through this process presents an important avenue for future research.

Additionally, a limitation of this study is its focus on the Japanese market and the U.S. SaaS market, without examining the effects of sales channels in other regions or industries. Investigating how sales channel choices impact corporate performance across different markets and sectors is essential for developing a universal theory of sales channel strategy. Particularly, elucidating the effects of sales channels in emerging markets and diverse industries could offer valuable insights for enhancing firms’ global competitiveness.

The significance of this study lies in its clear demonstration of the effectiveness of indirect sales channels for Japanese software compa-

nies. Notably, the provision of technical support and implementation assistance through indirect sales channels was shown to contribute to improved profitability, particularly within the SME market. This provides valuable implications for strategic decision-making by companies. Furthermore, through the comparison with U.S. SaaS firms, the study highlights that enhanced customer service and a strengthened support infrastructure are critical factors for

Japanese companies to secure a competitive advantage.

Future research is expected to integrate factors such as governance mechanisms and the learning processes of channel partners, thereby constructing a more comprehensive theoretical framework on sales channel strategies. This would provide practical insights for companies aiming to achieve sustainable growth.

CONCLUSION

This study examined the impact of sales channel selection on the profitability of Japanese software companies by comparing direct and indirect sales channels. Additionally, from an international perspective, it aimed to elucidate the differences in competitive advantage by comparing the operating profit margins of Japanese firms with those of U.S. SaaS companies. The findings derived from the hypothesis testing provide several critical insights.

First, it was confirmed that Japanese software companies employing indirect sales channels exhibited statistically significantly higher operating profit margins than those utilizing direct sales channels. Indirect sales channels, particularly in the SME market, play a crucial role in reducing implementation barriers and improving customer satisfaction through technical support and implementation assistance. This result suggests that the indirect sales channel is an effective strategy contributing to increased profitability, highlighting the importance of selecting sales channels that align with the characteristics of the Japanese market.

Second, it was observed that Japanese software companies adopting direct sales channels showed lower operating profit margins than those utilizing indirect sales channels. The direct sales model requires significant resource allocation to sales and marketing activities, which leads to an increase in SG&A (Selling, General, and Administrative Expenses) and a corresponding decline in profitability. Furthermore, direct sales often necessitate customized responses to individual customers, particularly in the SME market, where inadequate technical support may result in increased barriers during the implementation process. These factors were found to negatively impact the profitability of companies adopting direct sales channels.

Third, it was revealed that Japanese software companies using indirect sales channels had higher operating profit margins compared to U.S. SaaS companies. While U.S. SaaS firms predominantly adopt self-service business models, offering limited technical support and implementation assistance to customers, Japanese software firms provide more detailed technical support through distributors, especially for SMEs. This support was found to streamline the implementation process and significantly contribute to profitability. These findings confirm that the indirect sales model is a critical factor in strengthening the competitive advantage of Japanese software companies.

AUTHOR CONTRIBUTIONS

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