

Sales and Website Funnel Analysis on Shopify

Role: Business Analyst

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Welcome to our store



2. Introduction and Business Context

The object of analysis is a small e-commerce website running on the Shopify platform, specializing in selling t-shirts. The business focuses on direct online sales to end customers in the Polish market. The product range is limited to a single main product, which allows the sales process to be considered as single-product and linear. The website is privately owned and operated as a microbusiness. The analysis is conducted without disclosing personal data of the owner or commercially sensitive information. All data is used solely for educational and analytical purposes.

The main traffic sources include organic and paid social media channels, as well as an external advertising platform. At the time of analysis, the following user acquisition channels were used:

Instagram

TikTok

Paid advertising on the Temu platform

Traffic from social media is directed straight to the product page without additional intermediate funnel steps, such as registration or subscription. The user journey follows a standard e-commerce logic: visit website → view product → add to cart → checkout → payment.

The analysis is limited to the aggregated data provided by the website owner. There is no direct access to web analytics tools such as Google Analytics. Therefore, some metrics are estimated, and conclusions are based on available sales, revenue, and observed trends after changes in marketing activity.

The goal of this project is to identify bottlenecks in the current sales funnel, evaluate key business metrics, and propose practical improvements to increase conversion and overall sales efficiency. Additionally, a simplified assessment of the economic impact of the proposed changes is conducted.

3. Analysis Approach

A systematic approach using a sales funnel was applied to evaluate website performance and identify bottlenecks.

Key metrics:

CR (Conversion Rate) at each funnel stage: visits → registrations → payments

ARPU (Average Revenue per User) – average revenue per registered user

LTV (Lifetime Value) – projected revenue per customer

CAC (Customer Acquisition Cost) – cost of acquiring one customer

The analysis allowed identification of critical points of user drop-off and helped to develop recommendations to increase conversions.

Tools used for visualization and analysis:

Excel – calculation of metrics, creation of tables and charts

Power BI – dashboards to visualize conversions, traffic, and sales

demo.bpmn.io – BPMN visualization

app.diagrams.net – Use Case diagram visualization

Artifacts used:

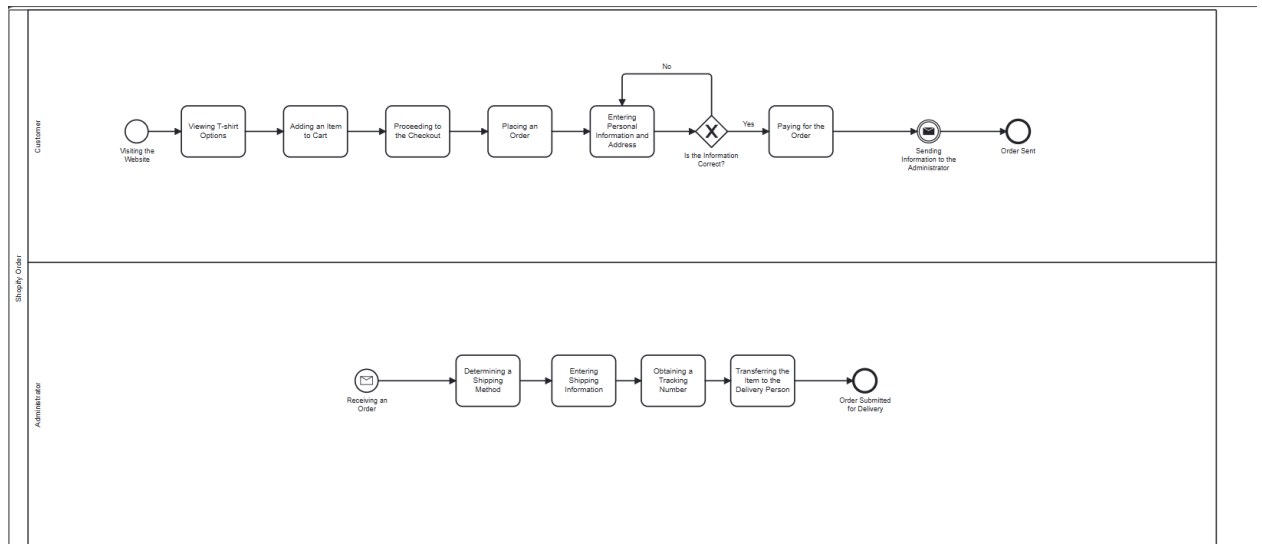
BPMN – diagram of the website purchase business process

Use Case – user action scenarios, including registration, checkout, abandoned carts, and possible touchpoints (trigger emails, chatbots)

This approach allows not only a quantitative assessment of website performance but also a visual identification of bottlenecks to support decision-making for sales optimization.

4. BPMN / Purchase Business Process

Website Purchase Process (BPMN):



Comments on Bottlenecks:

Visits → Add to Cart: users may drop off due to low motivation, poor navigation, or high prices.

Cart → Checkout: possible drop-off due to complex UX, absence of a “Buy in 1 Click” button, or unclear interface.

Data Entry → Data Verification: input errors can block payment, causing users to leave.

Conclusion:

The BPMN visualizes the customer journey and helps identify critical points where traffic is lost. This is important for further analysis of conversion rates (CR) and generating hypotheses to improve conversions.

5. Use Case



Critical Points (Bottlenecks):

- Add to Cart – user drop-off due to high price or low motivation
- Entering Contact and Shipping Information – abandoned carts caused by complex UX and input errors
- Payment Completion – loss of customers due to inconvenient or limited payment options

6. Sales Funnel (Before / After Promotion)

Funnel table		
Before the promotion (price 132 PLN, no ads)		
Stage	Number	CR
Visits	2500	
Registratioins	250	10%
Payments	15	6 (0.6%) of site visits
After the promotion (price 79 PLN + Temu advertising)		
Stage	Number	CR
Visits	5 202	
Registratioins	413	8%
Payments	39	9,4 (0,75%) of site visits

Before the promotion (2.5 months), website sales were low, despite stable registrations. Most users left before completing payment.

After the price reduction and advertising on Temu (1 month), traffic and the number of payments increased. However, the main drop-off still occurs between registration and payment.

Key Finding:

The main bottleneck in the sales funnel is the registration → payment stage.

7. Traffic Channels

Channel	Visits	Distribution of visits and conversions by channel			
		Registrations	Payments	Registration CR	Payment CR
Instagram	1 200	108	13	9%	12%
TikTok	1 800	126	10	7%	7,90%
Temu Ads	2 202	179	16	8,10%	8,90%
Total	5 202	413	39	8%	9,40%

Traffic Channel Analysis

The main traffic volume after the promotion came from Temu advertising, which generated the highest number of visits and payments, but with an average purchase conversion rate. This channel is effective for scaling but requires optimization of acquisition costs.

Instagram showed the best payment conversion rate thanks to a more loyal audience, despite lower traffic volume. This channel is effective in terms of user quality.

TikTok brought significant traffic, however, the payment conversion rate is lower, indicating a less targeted audience and the need to refine the offer.

Conclusion:

Instagram is the highest-quality channel, Temu is the main growth driver, and TikTok has potential if the funnel is optimized.

8. Metrics / KPI

Project KPIs			
KPI	Before promotion	After promotion	Change
CR registration	10%	8%	↓
CR payment (from registrations)	8%	9.4%	↑
Overall CR (visit → payment)	0.6%	0.75%	↑
Average order value (AOV)	132 PLN	79 PLN	↓
ARPU	7.9 PLN	5.9 PLN	↓
CAC	-	15 PLN	↑
LTV	540 PLN	540 PLN	=
LTV / CAC	-	36	strong

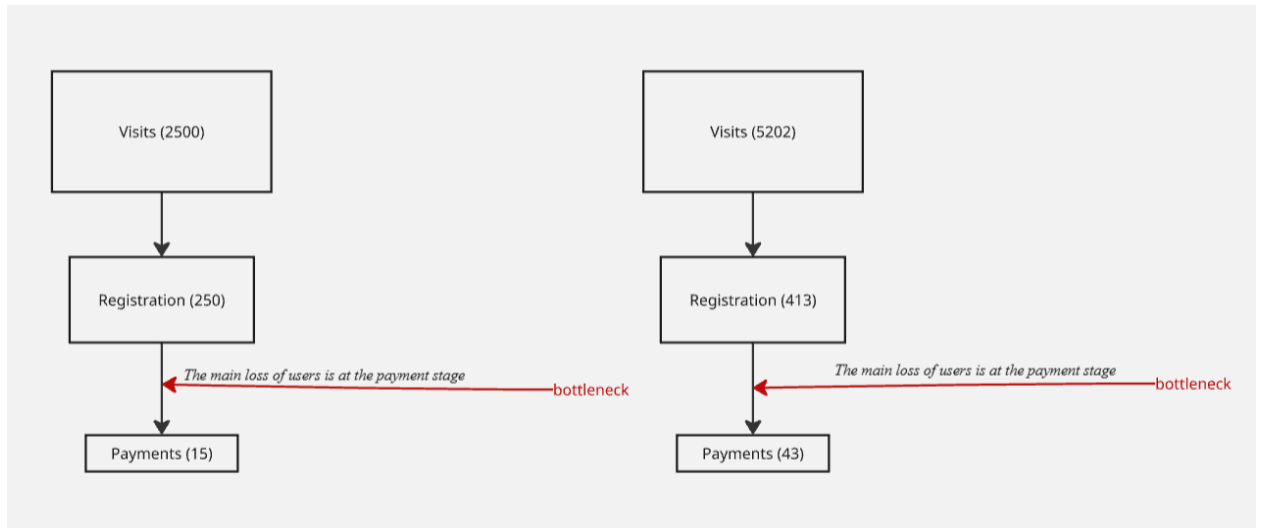
Brief KPI Summary

After the price reduction and launch of advertising, overall CR and payment CR improved, despite a drop in average order value and ARPU. A high LTV/CAC ratio indicates a sustainable project economy and potential for scaling with optimization of the payment funnel.

9. Bottlenecks and Analysis

Text Description of Bottlenecks

The main user drop-off occurs at the registration → payment stage.



Key Issues:

- High Price – some users leave the site before purchase.
- Checkout UX – complex process, input errors → abandoned carts.
- Trust – new users hesitate about payments and delivery.
- Lack of Triggers and Reminders – users do not return to complete the purchase.

Conclusion:

To increase sales, it is necessary to:

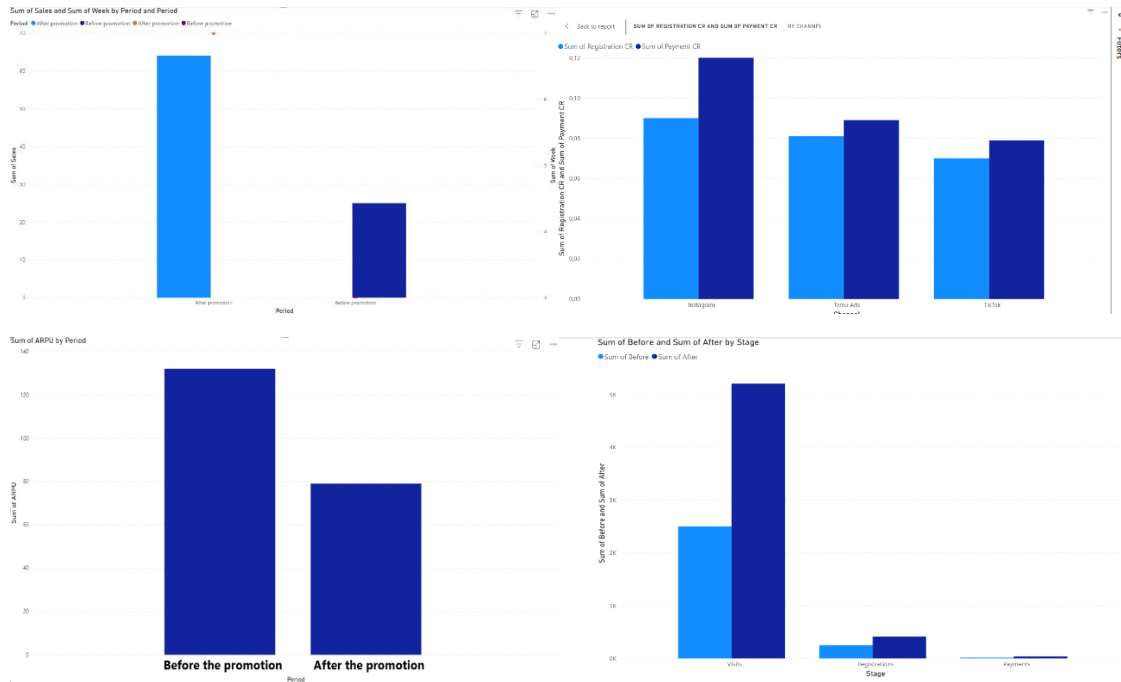
- optimize the checkout UX;
- implement trigger emails or a chatbot;
- test promotional campaigns and discounts;
- increase trust through social proof (reviews, guarantees, secure payment).

10. Hypotheses and Solutions

Hypotheses and solutions		
Problem	Hypothesis	Expected effect
Low registration → payment conversion	Send reminder emails about abandoned carts	More completed payments
Losing users at payment stage	Give personal discounts to new users	Higher payment conversion and sales
Complicated checkout UX	Add a “Buy in 1 click” button, simplify the form	Fewer abandoned carts, higher conversion
Lack of trust	Show reviews and blogger photos	More trust, higher conversion
No support	Add a chatbot for help	Fewer payment drop-offs, higher conversion

Each hypothesis targets a specific bottleneck in the funnel. Implementing the proposed solutions should increase conversion at the payment stage and boost overall sales.

11. Visualizations and Data Storytelling



Channel	Sum of Visits	Sum of Registrations	Sum of Registration CR	Sum of Payments	Sum of Payment CR
Instagram	1200	108	0,09	13	0,12
Temu Ads	2202	179	0,08	16	0,09
TikTok	1800	126	0,07	10	0,08
Total	5202	413	0,24	39	0,29

Charts show an increase in traffic and payments after the price reduction and launch of advertising. Sales grew, and channel conversions indicate that Instagram provides a loyal audience, Temu is the main volume driver, and TikTok is a potential channel for optimization. Average order value and ARPU decreased due to the lower price, but overall profit is growing.

12. Conclusions

Performance After the Promotion:

- Price reduction from 132 PLN to 79 PLN and the launch of Temu advertising increased traffic from 2,500 to 5,202 visits and sales from 15 to 39 payments.
- Payment CR rose from 6% to 9.4% of registrations, and overall CR (visits → payment) improved from 0.6% to 0.75%.
- LTV exceeds CAC, keeping the project potentially profitable.

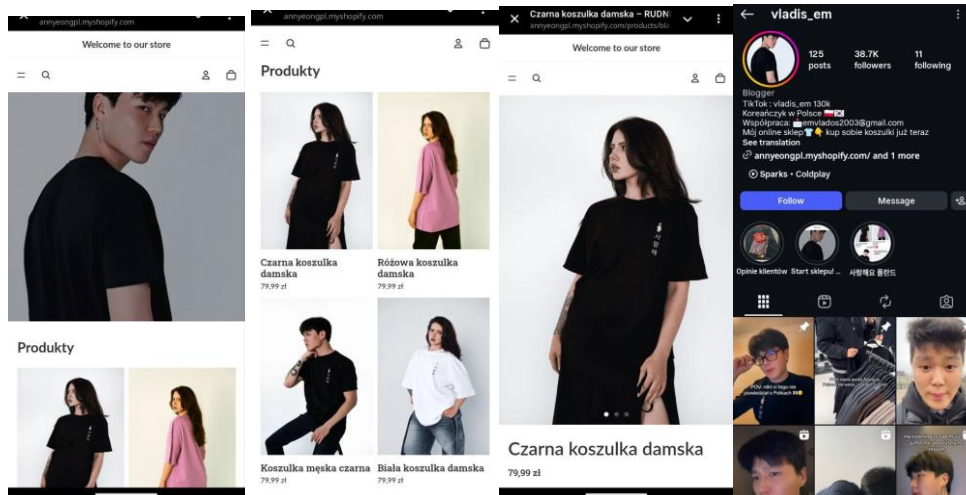
Main Bottlenecks:

- The main user drop-off occurs at the registration → payment stage.
- Complex checkout UX, lack of triggers, and low payment trust still limit conversions.

Recommendations for Further Work:

- Optimize checkout UX (e.g., “Buy in 1 Click” button, simplified form).
- Implement trigger emails and notifications for abandoned carts.
- Retargeting on TikTok/Instagram to increase repeat conversions.
- Upselling and promotional campaigns to increase average order value and repeat sales.

13. Appendix



Step-by-Step Website Purchase Process:

