

# KupiKniga.mk: Transforming a Website into a Profitable E-Commerce System Using Assisted Conversions Funnel

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**Abstract.** There is a lack of published research data on the goal conversions of the real e-commerce systems and e-commerce users' behavior in Macedonia and the Balkan countries. We present the findings of the 6 months research on the strategies applied on the regional e-commerce online bookstore Kupikniga.mk. Several conversion channels and combination funnels were applied, like paper flyers, TV and news presence, multi-level referral lists, social networks, search engines optimization, AdWords, social advertising, online video advertising, email advertising, newsletters, personalized search and recommendations. Based on the analytical data from 2,000 registered byers for 10,000 offered items, we draw conclusions on the conversion rates of different channels and model the behavior of the average e-commerce user in the region.

**Keywords:** goals, analytics, conversions, online bookstore, e-commerce, user behavior, supply chain, social networking, search engine optimization, referrals

## 1 Introduction

There are numerous research publications concerning the e-commerce status in Macedonia and the region 1234. But there is lack of indexed published research providing information regarding real commercial e-commerce websites performance indicators 5. Especially for the following research questions: which conversion channels lead to higher percentage of accomplishments of e-commerce goals, and what is the behavior of the average e-commerce user in Macedonia and the Balkan region?

We applied the research on the e-commerce web site Kupikniga.mk 6. It is an online bookstore that sells books and small goods to customers mainly in Macedonia, the Balkan countries and the Macedonian diaspora around the world. Different approaches and several conversion channels and combination funnels were applied, like paper flyers, TV and news presence, multi-level referral lists, social networks, search engines optimization, AdWords, social advertising, online video advertising,

email advertising, newsletters, personalized search and recommendations. The period of monitoring was 6 months.

This paper is organized in the following sections: section 2 presents the overview of the e-commerce site Kupikniga.mk, section 3 defines the goals that were setup for the website and the completion outcome that was measured during the research period, section 4 presents the different channels and the combinations conversions funnels that were applied and the impact results that were obtained, section 5 present the findings and the discussion.

## 2 Overview of Kupikniga.mk

Kupikniga.mk is an online bookstore that sells books and small goods to customers in Macedonia, the Balkan region and the regional diaspora around the world. It is an investment of the authors.



Fig. 1 End users front end of the system

The website is developed from scratch and does not use any third party of-the-shelf non-configurable components. It is constantly upgraded and new features are added on daily bases. Kupikniga.mk includes the front end e-shopping website for the users (Figure 1) and back end administrative system that is a combination of a basic customer relationship management system, e-commerce back end system, finance management system, and supply chain and tracking system (Figure 2).

The books are organized in numerous categories and subcategories. At this moment of writing there are more than 10,000 books and 2,000 registered buyers. All the analysis in this paper is based on this representative number.

The web site implements a rating and recommendations system and several social connectors that enable sharing and expressions for the offered books.

The screenshot shows the 'Kupikniga Administration' interface. The main content area displays a table of books under the heading 'Книги'. The table has columns for 'Внесен улог', 'Профил', 'ISBN', 'Слика', 'Издавач', 'Класификација', 'Попуст %', 'Наличност', and 'Датум отпора'. The table lists 10 books with their respective details.

#	Внесен улог	Профил	ISBN	Слика	Издавач	Класификација	Попуст %	Наличност	Датум отпора
1	1004		9789082201004		Издавачки центар ТИМ	Издавачки центар ТИМ	0,00	5	
2	7 Повеќи на уште повеќе луѓе		9789084080001		Издавачки центар ТИМ	Издавачки центар ТИМ	0,00 01.01.1900	3	
3	Кде да те дојдевам		9789082200028		Издавачки центар ТИМ	Издавачки центар ТИМ	0,00	5	
4	Ако една година нон самој патник		978-608-230-012-2		Издавачки центар ТИМ	Издавачки центар ТИМ	0,00	4	
5	Ако некој не избере за исполнителен шеф		9789082200042		Издавачки центар ТИМ	Издавачки центар ТИМ	0,00	5	
6	Акој		9789082200037		Издавачки центар ТИМ	Издавачки центар ТИМ	0,00	5	
7	Антиот кабар		9789084377980		Издавачки центар ТИМ	Издавачки центар ТИМ	0,00	4	
8	Акој, партизан, партизан, партизан		9789080287020		Издавачки центар ТИМ	Издавачки центар ТИМ	0,00	5	
9	Бастени на Бугарска		9789084377907		Издавачки центар ТИМ	Издавачки центар ТИМ	0,00	4	
10	Бил спонзоринг!		9789084300004		Издавачки центар ТИМ	Издавачки центар ТИМ	0,00	0	

Fig. 2 Back end administrative part of the system

Kupikniga.mk implements an innovative supply chain concept. There are no books and goods kept on stock at Kupikniga.mk. Instead it has a comprehensive tracking and delivery system. The ledger of the books is automatically maintained in connection to the status of the publishers' ledgers, and the ordered books are ordered and shipped directly from the publisher's collection center to the end user. There are special cases when one user orders books from several publishers. In order to minimize the expenses for delivery, the system calculates the optimal route and date for collection of the books from several publishers that are later joined in one package at the Kupikniga.mk fulfillment center and shipped to the end customer.

The second special case is when a user orders books that are not from the country of the end shipment address. Kupikniga.mk has regional partner collection centers in several Balkan countries. To minimize the impact of the transport and import expenses on the end user price, the systems calculated the optimal time when a group order will be shipped from a collection center. There is a minimal order quantity that is covered by the end user price margin. If the number of ordered books is below this quantity, the Kupikniga.mk admin system places automatic orders of additional books. The books are selected by the system using several criteria: the best sellers in the last 10 days, the books that are most visited and socially shared, books with best ratings. It is expected that these books will be as well purchased shortly after the order. With these techniques, the average delivery time for in country ordered books

with normal shipment is 3 days and for priority shipment if ordered during working hours is the next working day. The same periods apply to orders from Macedonian publishers to customers abroad. The above times apply but for start of delivery taking into account the additional time is needed for delivery with normal and priority post. For out of country ordered books, the delivery time to the customer is around 9 days in average.

### 3 Goals

There are several goals defined and monitored with different conversion channels. The first goal is the number of visits. Since there are new and returning visitors that behave differently, apart from the number of visit, as well the number of visited pages and visit duration is monitored.

The second goal is the registered users. For the website this is a very important goal, since apart from the number of visits these registered users pay to the site, they can as well be targeted with personalized emails, calls and offers.

The ultimate goal of Kupikniga.mk, like for other e-commerce sites 7 is the successful purchase when a client orders and pays. There is a long-lasting argument which goal is more important. At the end, higher number of visitor usually leads to more registered customers and this to more purchases if handled well. But a clear distinction needs to be made between informational websites and e-commerce sites. The main revenue for informational web sites is from commercials that usually refer to more visitors to the site, but for e-commerce sites, the core revenue is from concluded purchases.

### 4 Multi-Channel Conversions

Our approach in the researched period was to apply different strategies that included use of a specific conversion channel, but also to explore strategies that combined several assisted conversions channels 8. The main goal was to determine the right strategy that gives best results in the context of the geographical location of the customers 910. The following channels were tried:

*Hardcopy promotional fliers* – the leaflets were distributed to special groups that have interest in book. We covered events like the Skopje Book fair and specific promotional event for books. We tracked the impact with a special promotional code for registration.

*Television and press presence* - the strategy was to be present on the major television channels and in the press in a period of one week so we could easily measure the impact. Different shows were targeted like morning shows, classical interviews, and press conferences.

*Cross-referencing* – banners were exchanged with several other sites. The referral traffic was monitored.

*Loyalty and referral program* - We implement a loyalty program where the regular customers are rewarded with discounts from 3 to 10 %. More a customer spends, the

bigger is the discount for all future purchases. We encourage the customers to invite more friends to join and register on the site. After accomplishing a certain number of registered referrals, the inviting party gets a bigger discount. To encourage the referred user to register, we offer a startup discount for this group of users as well. The registered users are targeted with personalized e-newsletters with latest offers.

*Optimization of the search tools and recommendations system* – Kupikniga.mk implements the algorithm of collaborative filtering for the search tool on the website and item-to-item collaborative filtering for the recommendation system where when a product is presented, several additional recommendations are given 16.

*Social networks* – we had two approaches for the social networks. The first one was to create and maintain profiles on the social networks: Facebook, Google +, LinkedIn and Tweeter. The second approach was to attract more visitors with paid advertisements on Facebook. For the second approach several campaigns were tried. We targeted special age groups, with special interests and specific locations.

*Search engines* – the first approach was to optimize the website and every page for search engines optimization (SEO). Several steps widely published were conducted with linking to other sites and the metadata of every webpage 1718. We also ran paid AdWords 19 campaigns on Google in specific periods to measure the impact of paid searches.

## 5 Findings and Discussion

We have measured the impact of the conversions channels using the data from the internal administration system of Kupikniga.mk and the analytical tool provided by Google Analytics 20.

The data for the audience of the website shows that there is a high percentage of new visitors 61.72% compared to 38.28% returning visitors. This indicates that in order to complete a purchase, an average e-commerce site in the region needs to have a good navigation in order to lead on the users to make a decision to purchase in the first visit.

Majority of the visitors are from Macedonia with more than 90%, followed by a fair representation from the USA, Serbia, Croatia, Germany, Bulgaria, Slovenia, Italy and other countries. Majority of the site visitors from Macedonia live in the capital Skopje 67,93%, but there is noticeable domination of purchases from other cities in Macedonia compared to Skopje. The reason will be discussed further on in this section.

Most of the visits with 49.01% are with duration of less than 10 seconds. Usually visits last from 1 to 10 minutes in 25,79% of the visits and remaining for other durations. We conclude that a usual e-commerce user in the region need a good impression in the first 10 seconds to stay on the site, and usually the purchase is made in the time span from 1 to 10 minutes.

The dominant operating system in use is Windows with 94.57% followed by Mac OS 1.51%, Linux 1.42%, and other. Dominant browser is Chrome 54.52%, than Firefox 31.58%, Internet Explorer 8.36%, Safari 2.08% and other. At this moment the

average e-commerce users in the region dominantly use Windows and browse on Chrome. All the future services need to be fine-tuned especially for this profile of OS and browser.

When it comes to the access devices, only 2.35% of the users access the site on a mobile device, from which dominant are the Apple products iPhone 28.76% and iPad 22.61%. At this moment the market for e-commerce in Macedonia and the region is not ready for mobile access, but it is an emerging market, since the cost for mobile Internet is getting more affordable in the region.

The traffic on the website is mostly referral from Facebook 51.86%, direct traffic 19.86%, Google organic search 11.62% and insignificant remaining sources. We reason that an ordinary e-commerce user in the region heavily uses social networks and this is a very good channel to refer traffic to the website. When it comes to the AdWords campaigns, they are insignificant compared to the advertisements on Facebook, because there is an estimation of only 170 thousand overall users that use Google search 19, further narrowed with specific search keywords, compared to more than 1.5 million Facebook profiles in Macedonia only 12.

Regarding the conversion rates of the channels presented in section 4, the promotional leaflets did not lead to any goal completion and we could conclude that this channel is not appropriate for marketing activities connected to e-commerce.

The television and press presence had an impact on the goals completion, especially for the number of visits and the registration. In the period of intense presence in the media, there was an increase in the goals completion in the span of 4-9% compared to the periods without media activity.

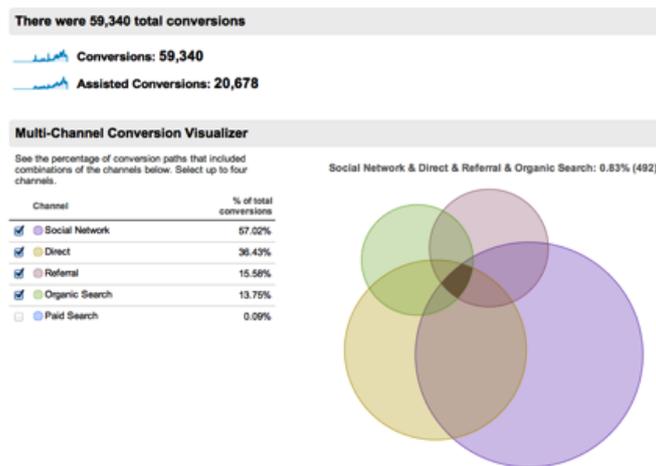


Fig. 3 Multi-channel conversion funnel

The cross referencing and the referral from other local sites had a significant impact on the goals completions. Since these were sites that had normal rate of traffic, this channel will need to be trialed further with referrals from top ranked sites by visits from Macedonia and the region.

The loyalty and referral program increased the completion of the goal for registration nearly 21%, but only when used in a funnel with other promotional activities like social networking, paid search and e-newsletters.

Kupikniga.mk has more than 10,000 items in the offer. There was a significant number of drop-offs because the customers could not find products that do exist in the offer. After implementing the algorithm of collaborative filtering for the search tool on the website and item-to-item collaborative filtering for the recommendation system, the number of drop-offs for searches of products that do exist in the offer has lowered by nearly 36%.

The research showed that the activities thru the channels of social networking and search engines have the highest rate of conversions (Figure 3). From total of 59,340 goal completions, 20,678 were assisted conversion than included several channels before the final step of goal completions. There were 57.02% of goal completions with referral from social networks, with 99.38% coming from Facebook, direct conversion 36.43%, referral from other sources 15.58%, organic search 13.58% and insignificant paid search 0.09%.

The assisted conversion with 34.84% of the goal completions came from the interaction of several channels. The best performing combination were: the combination of social and direct traffic assisted in 10.25% of the assisted conversions, social and referral in 3.96%, direct and referral 6.05%, organic search and direct 4.42%, social with direct and referral 2.97%. The other combinations are with impact of below 1%. Having said this, we can conclude that the social networks are the best performers in assisting goal completions, but in many cases there is a need for assisted conversions funnel with several channels to complete a specific goal.

Two aspects that are important are the time lag and the goal path length. The observed data showed that the e-commerce users in Macedonia are impulsive and buy on the first day of visit with 70.94%. The second significant group is buyers returning and buying after 29 days with 2.81% and all other periods from 1-28 days distributed evenly around 1% each.

The ordinarily e-commerce users in the region are very impatient to complete a purchase. The completion of a goal is either in one interaction 65.15%, two interactions 13.68%, three interactions 5.32%, four interactions 2.76%, or 12+ interaction 7.20%. All other paths participate with bellow 1%.

Interesting phenomenon was observed with the type of payments. On Kupikniga.mk the users can pay online with a credit card on via bank transfer. Even though this is an e-commerce site, nearly 60% of the users prefer to pay for the purchase via bank transfer, not to use a credit card. There is a huge mistrust that is mainly subjective, since there have not been any major reported abuses of credit cards on e-commerce sites in Macedonia or in the region.

## 6 Conclusion

In this paper we have presented our observations on the different strategies applied to improve the conversion rate of the specified goals on the website Kupikniga.mk. The observed site had 2,000 registered clients and 10,000 items.

The paper based printed traditional channels underperform. The media still contribute but only with supportive electronic campaign as well.

From the electronic channels, for the specific users that were observed, the best channel to increase the number of conversions is Facebook. Google, especially the paid search underperforms, due to the reason that there is a significant difference in the number of social users and users that search on the web.

Apart from the direct conversion, there are assisted conversion paths that are combination of several conversion channels. The best performer is the combination of social and direct traffic.

The e-commerce users in the region are impulsive, impatient and complete the purchase either instantly or in the period from one to ten minutes.

Even buying on the Internet, more than 60% of the e-commerce users prefer to pay for the purchase via bank transfer, not to use a credit card. Since electronic payment systems are the main enabler of e-commerce, this phenomenon of low trust for credit card payments needs to be researched further.

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