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B2B or B2C, this is the question: A case study over implementation of B2B(2C) and B2C models in the same sector and an evaluation of a cross-company e-business model

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Abstract:E-commerce as an interdisciplinary field was represented in literature, in two major aspects: Technological and Managerial. In this paper, we are going to closely investigate and analyze both mentioned aspects. B2B and B2C as transactional types of e-commerce will be discussed. There is no plausible conclusion among scholars on proclaiming one of the models better than the other since it depends on many other environmental business factors and business functions. In this case study, we face two major manufacturers in the construction industry. Based on e-Business model analysis, we explain different aspects of the B2B model implemented from the company “Fischer™ Group” on one side, and the B2C model implemented from the Hilti Group on the other side. The conclusion of this paper is that there is no clear division between the two models, bringing as a result, the birth of new and more complicated e-commerce models like B2B2C. Even Though B2B2C models are known in the literature, a closer look inside their actual technical implementation and management of such kinds of e-commerce models is absent or very rare in the scholarly databases. We tend to provide to this community and to the scholars in the field of e-commerce in general, a deeper insight into B2B2C implementations and a modest contribution to cross model evaluation and analysis methods.
Keywords: e-commerce business models, cross-model analysis, B2B2C, e-commerce strategy

INTRODUCTION

This work aims to provide in-depth information about the way how different e-commerce business models developers operate in practice. Many authors have interpreted different business models, and especially e-business transactions, by analyzing case studies. [1][2][3][4][5]. Some of them use the technique of cross-model evaluation, based on what they pose, like *FAQs* and trying to answer them, sometimes by adding recommendations and opinions on how things should be done, through the so-called best-practice scenarios. We are using similar techniques within this work too, by adding a few other own approaches, such as side-by-side market value data analysis, social media activity analysis, service implementation analysis, marketplace presence analysis, online shop analysis, e-business strategy analysis, etc.

Motivation and the Research Question

The reason for our interest in e-commerce or e-Business in general, is that this technology according to many authors [7][8][9][10][11], is different and much more powerful than any of the other technologies we have seen for the last centuries. E-business or more narrowly e-commerce, brought many unprecedented shifts in commerce, and enabled fundamental transactions and processes within organizations, involving information systems. E-business transaction types evolved from the standard B2C - Business-to-customer, B2B - Business-to-business into "mobile commerce", and recently "voice commerce".

E-commerce transactions achieved unprecedented growth since the first widespread use of the Web in 1995 and onwards. This rapid growth was fueled by over \$125 billion in U.S venture capital [11]. B2C Retail e-commerce sales worldwide for the year 2020, according to statista.com, will achieve \$3,53 Trillion, whereas the total share of e-commerce in retail sales shall reach 22%. The country with the highest retail e-commerce Growth Rate (CAGR) is Turkey with 20,2% from Global (8.1%), and the most popular retail website worldwide, amazon.com has planned to achieve a turnover of \$970,7 billion. Even higher turnover growth is forecasted for B2B transactions worldwide. According to the same source, gross merchandise volume (GMV) of B2B e-commerce worldwide in 2019 was \$12,2 Trillion.

The previous predictions mentioned by authors in the previous years witnessed that any possible forecast in e-commerce is difficult since all the predictions can turn wrong in absolute terms. In one case we can agree that the growing trend of e-commerce is unprecedented and that the online marketplaces are not the only form of B2B business. Also, we agree, that private industrial network has a very dominant role in B2B e-commerce, both now and in the future, and that non-EDI, B2B e-commerce is the most rapidly growing type of B2B and is considered as a workhorse of B2B commerce.

Research methods

1.1 The Case Study

In the theory of scientific research in business and economics, different author used an explained in details different research methods. Within this paper we will focus on the method of answering a research question through Case Studies, where we compare the e-business models of the two Companies, fischer and Hilti. This Method will be used to answer the Research Question: ***Which business Model is better for doing Business online, the B2B(2C) or the B2C Model?***

From the Case Study, we will also derive conclusions about the advantages and the disadvantages of the B2B (2C) and B2C e-business models, backing this up with an "***Cross-Model Analysis***" by ***comparing*** all the characteristics of these Models (Section 6).

1.2 The Questionnaire

Within the scope of our research we organized an online survey with 20 Participants, after an online Seminar on the same topic. The Seminar and the Survey was held on 7th of October 2020, at the ICAN organization (a resource network of SEEU, in Northern Macedonia). At the end of the Seminar all Participants received a Certificate in the topic of e-Business Models. From 20 participants, 13 fully answered the questionnaire. Of those that answered, 76,9% were employed in different institutions (mainly Universities), and 23,1% were Students of different disciplines. All the participants were interested to soon engage in any form of business online. The Age Range of the participants was from 18 to 45, thus representing almost all Ages, whereas 69% were under 35 years old.

What was interesting to see, is the fact that from all the respondents, in the question: **"Do you know what B2B2C transactions are"?**

Only 23,1% said: - "Yes", whereas 76,9% said: - "No" similarly they answered for B2B (53,8% No), and B2C (69,2% No).

The survey shows that the e-commerce transactions that we mainly explain within this paper, are almost unknown for some of the young professionals and students, especially in the Southeast European countries (which we should agree, is not much different from other EU regions). These results support even more the topic of our analysis, especially if we bear in mind that, all participants (100%) have committed any of the given online transactions like buying, or selling, and 100% of the respondents own at least one of the following payment instruments (Credit Card, PayPal, Net banking, or other), whereas 53,8% own all of the above-mentioned payment instruments.

In the question: " Do you think it's time to open an online business"?

92,3% of the respondents said it's the right time to do so. This is for us another argument, that we need to work harder as a community to bring forward more information, projects, and generate content in the field of e-commerce, and e-business in general.

Case Study Company 1: The Case of Fischer™ Group

1.3 Company Profile

The "Fischer™ holding GmbH & Co. KG" (founded in 1948) with its headquarters in Waldachtal-Germany, owns the fischerwerke "Artur Fischer™ GmbH & Co. KG", the "Upat GmbH & Co" (Emmendingen), "ROCCA Bauchemie GmbH & Co. KG", "Automotive Systems GmbH & Co. KG", "Fischer™ Deutschland Vertriebs GmbH", "Fischer™ Consulting GmbH", and "LNT Automation GmbH", all located in Germany. The owner and head of the holding is Professor E.H. Senator E.H. E.H Dipl.-Ing. (FH) Klaus Fischer™.
Fischer™ has its own production capacities in Argentina, Brazil, China, Germany

(Waldachtal, Horb, Freiburg, Denzlingen), Italy, the Czech Republic, and the USA. There are 49 national companies in 37 countries, with a distribution network in more than 100 countries worldwide. By the end of 2019, there were 5200 employees working for Fischer™, generating gross a revenue of 887 Mio Euro. The main business activity of “Fischer™ Group of Companies” is focused on fastening technology. Fischer™ is the market leader in Europe in the production of tie rods and plugs. It is also active in the fields of automotive systems – storage components for vehicle interiors, automation (production robots, electronic systems), Consulting (Business Processes), and model construction sets (“fischer™ technik”).

1.4 The IT software solutions adopted by Fischer™

Fischer™ is one of the first companies to use SAP APO (Advanced Planning & Optimizations) software, by investing approximately \$2.6 million [5]. The main objective of introducing this kind of software was, to use earlier and more exact forecasts to provide a better basis for scheduling. Before introducing this system, the customers of Fischer™ needed to reorder the products on a regular basis, thus resulting in a high level of local stock reserves. After introducing SAP APO, the sales of Fischer™ products to the end-customers are recorded and a forecast for the complete supply chain is made from the start. The forecast methods base provided in the APO led to a significant improvement. In 1999, Fischer™ was running two R/3 Systems and one R/2 System. The R/2 System was used for sales administration, T/3 is applied for production, and R/3 for parts of sales, purchasing, controlling, and inventory management. Since its introduction, SAP was continuously updated, achieving the actual state of the modules such as ERP 6.0 (Enterprise Resource Planning), BW (Business Warehouse), CRM (Customer Relationships Management), E-Recruiting, etc. EDI is used in the B2B field, for example in communication with car manufacturers and large do-it-yourself retail chains. [5] In the B2C relationships, and in the relationships between industry and retail companies, major Internet-based software solutions were and are planned; both as an ordering medium between retailers and industry, and to allow networking of users (craftsmen), retailers, and suppliers. Fischer™ is known as one of the early adopters of new technologies. In this spirit was the newly introduced SAP cloud-based solution C4C (Cloud for Customer), which is an SAP Cloud-based CRM based management solution, different from the traditional SAP CRM systems. This cloud-based software provides the best CRM-based Sales, Service, and Marketing practices including the remote access possibility from the customer mobile devices (like smartphones and tablets). The collaboration between Fischer™ sister companies and their employees, and concerning representative customers, was previously done by using WebEx Cisco software.

To modernize and to further integrate its solutions, Fischer™ introduced Microsoft Teams as a collaboration and communication tool. Microsoft Teams from Microsoft is

a platform that combines workplace chat, meetings, notes, and attachments. This platform is integrated into the *Office 365 Office Suite* with Microsoft Office and Skype / Skype for Business, providing Help and *FAQ* content in 37 languages. Another reason why Fischer™ introduced this solution is the availability of apps in different mobile operating systems like Android, iOS, Windows, macOS, and Linux.

1.5 Business strategies and the generation of e-business models

The basis of all business models (consequently, all e-business models) stands the revenue. Everyone is yet familiar with the saying of Tim Berners-Lee, one of the founders of the Web, that “what is not on the web does not exist”. All the companies in the world, consequently Fischer™, Hilti, Würth, and all other manufacturers in the fixing solutions sector took this seriously too.

Information Technology, and especially Web technology as a business enabler, in recent years, played a crucial role in the evolution of business models especially in aspects of the digitalization of business processes. As we previously saw, Fischer™ already digitized its own core business processes through SAP ERP and CRM modules, and it was one of the pioneers introducing SAP.

To fully utilize the potential of new technologies, it is necessary to pursue a strategic approach when planning and implementing e-business. One of the central questions is which competitive goals a company wants to achieve in the future by using new technologies and media. In this aspect, almost all companies take into consideration the effect of social media as a marketing tool and even a revenue generator. According to a study from ESCH, in respect to the driver of respective contact point targets, 46% of the pillar “Increase awareness” was achieved through online advertising, 49% of the pillar “sharpen image” was achieved through a company website, 65% of the pillar “promote sale” was achieved through Trade Platforms or Online-Shops, whereas 49% of the pillar “retain customers”, was achieved through e-mail marketing/newsletters.

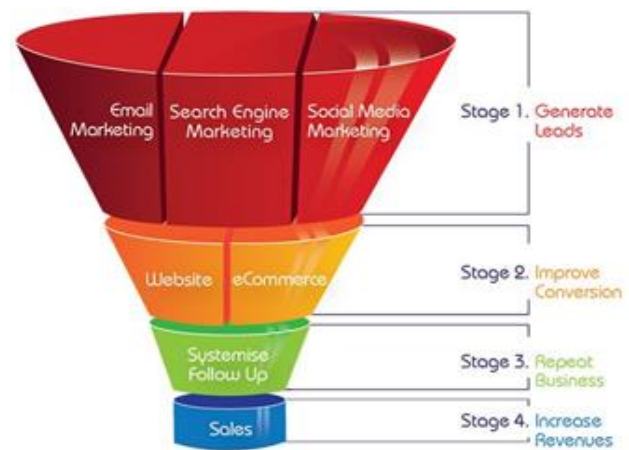


Fig. 1. Fig 1. The Marketing Funnel Model

However, it is necessary that not only operational business areas deal with these technologies, but that top management also deals with the possibilities, opportunities, and dangers of these new developments. Because, the technology is no longer a pure means to an end, but also enables new strategies and processes in the digital economy that were previously not possible.

In the foundations of every business strategy, besides revenues, is the *customer expectation* that plays a crucial role in decision making. According to a study from ESCH, in the first three places of top ten customer expectations, the first three were: quick feedback, transparent information, and better convenience, followed by targeted communication, customized offers, interaction and dialogue, lower online price and promotion offers, etc.

The question is no more about whether or not, or when, or how to start your online “Sales Activities”, the questions nowadays are as simple as what channels are you in? and “What is your turnover share in online selling”?

Recently one of the main competitors of Fischer™, Hilti in their financial reports stated, that since 2016, “...online sales have gone beyond the CHF 1 billion mark for the first time”, which corresponds to 21% of the revenue share. Many companies, fascinated by the success of Hilti (B2C online Brand Shop), started the run for new customers online, for example, Würth, which also implemented their online Brand Shop and started selling their products online.

1.6 Fischer™ e-business model and strategy

In the e-business literature there are few business models often explained in connotation to the sales channels and their representative demand touchpoint, i.e. Pure Player (selling only online, or more than 75% of the sales is done online), Multi-Channel Retail (Traditional POS, offline, Craftsman on site, but having online shops and eProcurement in place), Marketplace (online shops, and e-Procurement), Direct Sales (selling in traditional channels offline, but also through online Brand Shop, eProcurement, and using Craftsman as sales contact point). Finally, we mention the concept of Mommas (companies that sell online indirectly through their partners, without direct online Brand Shops, but with Craftsman that operate in direct sales through contact points).

The model MoMaS represents one of the pillars of the Fischer™ e-Business strategy and will be used in relation to a multi-channel **Mobile Material Service (MoMaS)**. The meaning of this term is known to us, as the fastest and easiest way for mobile replenishment. Three services are characteristically for MoMaS: **1. Craftsman at the construction site** (Fischer™ Craftsman are collecting orders with the help of an App that is provided from the company’s service provider Nexmart (see further: Nexmart Craftsman App), they sometimes deliver some orders, present new products, provide giveaways, conduct training on how Fischer™ products can be used, etc.), **2.**

Craftsman Storage, Stock (Fischer™ Craftsman have their small stock always with, so they can react quickly to short orders or to provide sample boxes for testing at Retail Stores, Warehouses, or construction sites), **3. Craftsman Vehicle/VAN** (Fischer™ Craftsman have their own vehicle provided from the company, with the task to commit scheduled and ad-hoc visits to Fischer™ Partners be they in physical stores/sales locations or at construction sites.

Not only Fischer™ introduces this concept, but also well-known companies like Daimler, Sortimo, etc. belong to this list. Referring to the e-business literature or more specifically to the e-commerce literature, one could specify the MoMaS concept as part of a B2B2C business model.

1.7 The B2B2C model of Fischer™

To break down the B2B2C model of Fischer™ (incl. MoMaS), we are going to explain in detail the strategic thinking behind this decision. The basic strategic thinking of Fischer™ is based on four pillars of e-commerce: "Online Marketing Reach, Guidance, Multi-Channel Sales, and After Sales". To support this strategy, online marketing plays a crucial role.

Geared toward to gain maximum interested persons, through its online marketing strategy, Fischer™ strives to expand the reach, via guidance wants to switch interested persons to potential buyers, through multi-channel sales strives high conversion rates, and via After-Sales Services strives to turn buyers in permanent re-Purchaser.

1.8 Online Marketing Reach

As we can see from the greatest online players, be they, retailers, DIY online shops, pure players, marketplaces, the Fischer™ products remain everywhere available. One of the first strategies was to have the best presentation of its products online, with description, product images, certifications, and any other relevant data for the sales process. Fischer™ products nowadays are present in Amazon, eBay, and all relevant online shops and retailers like Bauhaus, Obi, Conrad, Mercateo, Manomano, let's do it, in national and international domains.

As we previously explained, Fischer™ has national representatives in 37 countries, many of which have a Fischer™ website in the representative local language, whereas countries without one, refer to the international one (www.fischer™-international.com).

Another way of reaching out to their customers, Fischer™ introduced email marketing which works through a central database of interested customers ready to accept periodical newsletters.

SEO (search engine optimization) is one of the technologies that play crucial importance to the online customer reach of all websites of Fischer™.

As part of the Fischer™ website infrastructure, one can also find a Blog with topics that help four different categories of professionals, to further read about best practices from the fixing solutions or products of Fischer™.

To deliver all this amount of information, surely it is needed a powerful server infrastructure and an outstanding product information management software and related to social media publishing tools such as Facelift play the same role.

1.9 Customer guidance

To help its customers, find the right Fischer™ solution for their fixing problems, Fischer™ developed a few web-applications and apps.

The DIY Product finder App is available in more than 7 countries, planned to be available in all countries where Fischer™ has its national subsidiaries. The Product Finder can be used as an App in Smartphones, Fischer™ Websites in form of an iFrame, and in online shops also integrated with the assortment listed in these shops. It has integrated features like **retail Connect** (explained down in this text).

The Fischer™ Professional App, it is another smartphone App from Fischer™ available on Android and iOS devices. This app was developed as a joint project of the International Project Management Team and the e-commerce Department of “fischerwerke” in Germany. It provides the best mobile Guide for professionals on the topic of fixing solutions. It assists the users in finding the best solution to the problem, by calculating the fix points, the mortar needed, and recommends combined solutions for heavyweight fixings, etc. Within this app, one has access to the product online catalog of 35 countries, in approximately as much Languages. The App integrates the retail Connect service to find listed articles in online shops, and offline shops of Fischer™ Partners. Furthermore, it has the geo-location search technology, which allows the allocation of the local Partners within the App map, where Fischer™ Products are available. The Professional App has a barcode scanner that helps the client to quickly identify some product if they already have a Fischer™ product i.e. barcode in hand. This allows them, quick reordering of the item, and access to more detailed information, video materials, technical drawings, certificates, and much more. From this perspective, one can say that the Fischer™ Professional App is a representation of a Fischer Website in the form of a smartphone app, with few more powerful services.

The Mortar-Fix App, it helps professional users in the construction industry in determining the injection mortar requirements for chemical anchors. It is a highly professional solution and a very powerful tool which is broadly used, since, like all Fischer™ apps, it is free of charge in all App Stores (android and iOS).

Customer guidance is also done through MoMaS, i.e. all Fischer™ Craftsmen are trained to use all Fischer™ e-services, offer onsite product training, and collect orders through Fischer™ Craftsman Sales App provided from NexMart. For a more detailed explanation of Nexmart services please consult Appendix A.

1.10 The Fischer™ Website infrastructure

Fischer™ developed an official Website for all its national subsidiaries, whereas, for other export countries, there is the Fischer™ International Website providing all the needed information in English. Each of these National Websites has the same supporting infrastructure in the background, which is centrally managed. For each of the countries, there is a product online catalog, web content management software, and PIM (product information management) software.

Within each of the websites, there is a “retail-connect” integration, partner search map, and the DIY Product Finder App in the form of an I Frame (look: Customer guidance).

Fischer™ Chat channel, it is also available on a few of the Fischer™ websites, which enables direct communication of the customers with the Fischer™ technical support team in “fischerwerke” - Germany. There is a plan on integrating this communication channel through WhatsApp and in all Fischer™ smartphone Apps.

Retailer Search is an integrated part of the Fischer™ website and allows allocation of all local retailers, online shops, construction supply companies, and marketplaces that sell Fischer™ products, in both sales channels, online and offline. The user can filter them according to the distance from their geo-location, or according to the type of company that they are looking for, i.e., Retailer, Wholesaler, online shop, or Premium Partner. Also, there is a possibility to filter the Partners by Country (for example in the fischer™.at Website).

The Fischer™ Blog is also part of the Fischer™ Website, and it is managed by the social media department of “fischerwerke” and their national social media colleagues. It publishes regular helpful articles in storytelling form, for different key topics, allowing the users to learn about the Fischer™ engagements in the world of fixing solutions (www.fischer™blog.com).

1.11 Multi-Channel Sales

Under the motto “we go where the Customer is!” Fischer™ is fueling its Multi-Channel approach to sell its products online via the best online selling platform in the online market, be they shops, marketplaces, or some other. If one looks closer to the business processes of Fischer™ will recognize a few revenue channels at Fischer™. Fischer™ generates sales through retailer’s online shops, marketplaces, MoMaS, own Fischer™ shop, and online pure players.

Providing the best digital presence of its products, Fischer™ easily and in fast fashion can be present physically and digitally at retail shops worldwide (or at least where there is a Fischer™ representative). Retail stores or PoS are the places where Fischer™ generates revenues through MoMaS.

The new era of e-commerce brought in stage huge companies that solely operate online, the so-called “Pure Players”. Since Fischer™ it’s one of the leaders when it goes for digital presence online, all its products together with high-quality images, descriptions, certificates, and other documents are one mouse click away from the pure player online shops or marketplaces. Almost all known pure players in the online market, with headquarters in the countries where Fischer™ operates, have already listed online Fischer™ products, starting from Amazon, eBay, and also local, Pure Players like: “Mercateo”, “Manomano” (marketplace), “Toolnation”, “Zoro”, “Zamro”, “Contorion”, “Jd”, “Bol”, “Cdiscount”, etc. Also “Pure Players” are on the list of priorities of Fischer™ concerning future revenue generation.

The Fischer™ Shop, as a B2B online shop, provides the best user experience and service, combined with a short customer journey. The idea behind this online shop was to create a user-friendly online shop for all Partners and potential Partners of Fischer™ to purchase Fischer™ products directly from the producer. This online shop it is launched in few test versions in different countries, and provides a possibility to all local Partners to Register and then be able to directly order from Fischer™ since this online shop is directly connected to the SAP System of Fischer™, which makes possible to show the right prices and conditions in a personalized fashion for each visitor

The revenue channel MoMaS of Fischer™ or how craftsmen support the sales process. The physical shops are maintained through the Mommas (mentioned above), which also means digital presence. The Fischer™ craftsmen are fully supported with laptops, and iPads that provide digital content for the customer, be that for advertisement purposes like flyers and co. or placing orders on behalf of the customer through the Sales App (Craftsman App).

Marketplaces are providing a Platform for any retailer to sell. Some Marketplace-Providers are hybrid i.e., Marketplace providers and online Pure Players on their own Platform. In both of the channels, Fischer™ generates revenue by fully supporting these sales channels with digital content, directly or through its service providers (like Nexmart).

Fischer™ 24, is a service that makes possible the drop shipment of purchased product directly to the end-customers. If a private person purchases a Fischer™ Product at one of Fischer™ Partner online Stores, and the product is not in the stock, the Fischer™ Partner can share the Client Data so the Fischer™ delivers the product directly to the private client. This concept works in Germany, and partly in a few other countries with Fischer™ Subsidiaries and Stock Management Systems in place.

1.12 After Sales Services

Maybe all will think that the most important after-sales service of Fischer™ is the classical messenger or WhatsApp channel that provides feedback and support to the end-customers, but for Fischer™ it is something more than that. Lately, Fischer™

introduced a brand-new **PIM (Product Information Management) System**, which is very powerful when it comes to providing content and product information. If a customer asks from a Fischer™ representative a piece of very specific information or a list of specific products with specific details, this can be obtained per mouse click from the new PIM system of Fischer™. This eases the work and access to information for the service lines of Fischer™.

Another after-sales activity is the Support Website of Fischer™ in all countries where it has a representative or subsidiary. Through these sites, Fischer™ promotes (directly or indirectly) a few other important concepts of after-sales, such as “word of mouth”, “customer helps customer”, “complaint management”, etc.

Other after-sales services that Fischer™ uses (not in detail explained here), are e-Mail Marketing, and Ratings.

Case Study Company 2: The Hilti Company and their Business Model

The Hilti Company it is a Swiss Manufacturer from the Fixings Industry and Construction Tool Producer. On contrary to fischer Group, which is a synonym for plugs, the Hilti Company it is synonym for Tools. In most of the segments they pose direct competition to fischer Group, even though in general both Companies have a broad diversification of their product range. Hilti is a Family Company, founded from the brothers Eugen and Martin Hilti in 1941 in Lichtenstein. This Company it is spread with its subsidiaries Worldwide in all Continents and as of today, it has 30.000 employees from which 15.000 in direct sales. The turnover of the Hilti Company in year 2019 was 5.9 billion Swiss francs.

1.13 The traditional B2C Business Model of Hilti

The B2C online shop of Hilti is one of the best of its kind worldwide, and for most of the companies it is serving as a best practice implementation. Even though, the business model of Hilti is well established, from year to year it is evolving by embracing new models and technologies. Like fischer Group, the Hilti Group has also a very broad base of applications, software for homeworkers, engineers, and professionals. There are a huge number of Apps and tools, mostly free of charge.

Now that we are writing this paper, Hilti Group owns more than 75 online shops worldwide. From which 8 are managed with Spryker: The huge Marketing budget it is also spread in the Social Media channels and online marketing.

Since the B2C online shop models are broadly studied, for the sake of space we are not going to elaborate this kind of implementations in details within this paper.

Besides its traditional B2C online shop, Hilti developed the so called “E-marketplaces”, as a central contact point’s for B2B buyers. Where the buyers can access products and suppliers, compare prices, and place orders with multiple suppliers from a single platform, just like the B2C equivalent. E-Marketplaces hosts the individual product and price catalogs of the buyers and maintains user-specific profiles. This means that regular customers can access their personalized product lists and prices anytime, anywhere, and on any device. Compliance with specifications is also easier, as approved products are very easy to find.

Cross-Model Analysis (Comparison)

In the previous sections, we explained thoroughly the e-business models of Fischer™ Group and Hilti Group. Further, we are going to evaluate both e-Business models and try to draw conclusions based on the Research Questions we mentioned in the first section.

Business models are nothing more than the way of doing business, or the method that Management uses to make a profit, thus enabling the organization to exist in the medium or longer term. Each of the types of e-commerce mentioned above is executed in one or more business models. For example, in B2B we can sell from catalogs, auctions, etc. [7]

We all agree that organizations decide to sell their products online mainly for the following reasons: sales growth, reduction of sales and advertising costs, increase the speed of deliveries (distribution), and reduction of administrative costs.[7]

Business models in the 'new economy' require four management solutions including specifics, such as:

1. A value proposition for potential consumers,
2. A market offer, which can be a product, a service, information, or all three together,
3. A unique justified resource system, and
4. A financial Model.

The first step towards articulating a business model is to clarify or clearly specify the value proposition for the business. Creating a value proposition requires Management to specify the following three components:

- a). Determination of the target segment,
- b). Determining customer benefits, and
- c). Reasoning why the firm will offer a much better benefits package than competitors in the same field. [9]

On the other hand, most managers find it difficult to answer the question ‘What is your business model?’. This is especially true in cases where companies have adopted one of the many models of doing business online, e.g., portals, or service providers applications (ASP providers). But, after focusing in a little more detail on the activity of firms such as, who are the customers of the firm? From which suppliers is the firm supplied? Which are the channels of supply? Who are the competitors? What is the financial model of the company? (Including cost and revenue structure), etc., we will

see that all these components define a firm's business model. According to Lynda Applegate [8] The components of a business model are:

- Concept - describes business opportunities and strategy
- Value - measures benefits for other investors and shareholders and
- Opportunities - define the resources needed to implement the strategy.

In the table below we will present a few of the characteristics of these components for both organizations, Fischer™, and Hilti, based on a personal study and partly based on the study from EAC.

Company	Fischer™	Hilti	Implementation
Business Model	B2B, B2B2C, MoMaS	B2C, B2B, MoMaS	Fischer™ Websites, hilti.com
Revenue Model	B2B Sales, Indirect Sales, Market Places, Pure Players, Retailer Online Shops, MoMaS	B2C Sales, Pure Players, Retailer Online Shops, Market Places	Fischer™: B2B Online Shop, B2B2C sales channel, Market Places, Pure Players, Retailer Online Shops
Value	Building, Infrastructure, OEM (Product offering, Quality, Price, Pre-Sales service, After-sales service, Relationship, Time, Brand, Sales channel)	Building, Infrastructure, OEM (Product offering, Quality, Price, Pre-Sales service, After-sales service, Relationship, Time, Brand, Sales channel)	Building - brand awareness, Infrastructure -strong communication with principals and design institutions, Prof. recommendations, etc., OEM - enhanced CRM/ODM cooperation with OEM'S global HQ
Opportunities	Product quality requirements, Fischer™ application know-how, Fischer™ fulfillment price-performance ratio, customer relationship/access. Sectors: Automation, Utility Tunnel, BIM, Wastewater Treatment, Elevator,	Wastewater Treatment, Tunnel Construction, Rail & Metro, Industry Facility, Tunnel Construction, BIM, Wastewater Treatment, Road & Bridge, Airports, Nuclear and Hydro Power, Public & Commercial	Fischer™ Priority: Renovation Building, Steel, metal & facade construction, Electro Installations, Industry Facility, Road & Bridge, Airport, Rail & Metro, Nuclear and Hydro Power, Renovation Infrastructure, BIM, etc.

	Residential Building, Petro & Chemical, Elevator, etc.	Building, Petro & Chemical, etc.	Hilti Priority: Renovation Building, Steel, metal & facade construction, Industry Facility, Electro Installations, Road & Bridges, Rail & Metro, Nuclear and Hydro Power, Airports, Tunnels, Public & Commercial Building, etc.
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Table 1. Comparing Concept, Values, and Opportunities

If we compare the revenues of the two players, we will see that Hilti leads in almost all sectors. This was expected since Hilti started its e-commerce journey much earlier than Fischer™ Group. If we can see the development of Hilti in the last few years one can see that now Hilti is situated in the maturity phase of its e-Business Model, whereas Fischer™ Group is in the advanced initial phase.

From the revenue perspective one can see a huge difference too if Fischer™ Group was generating gross revenue of 887 Mio Euro in the year 2019, the Hilti Group achieved 5,9 billion CHF in 2019, whereas 2,9 billion CHF only in Europe. If Hilti employs more than 30Tsd Employees Worldwide, Fischer™ Group has only 5200 till the end of 2019.

Company/Values	Turnover 2019	Employees	Type
Fischer™	887 Mio €	5.200	Family Company, Run by Family Fischer™ (Germany)

Hilti	5.9 billion CHF	30.000 directly Customers)	(15.000 with	Family Company, Run by Family Hilti (Switzerland)
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Table 2. Comparing the core values of Fischer™ and Hilti organizations

The EAC Fixing Market survey from the year 2014 in China shows that Hilti had 546 Mio RMB (1.3% Market Share), whereas Fischer™ was second with 241 Mio RMB (0,6 Market Share). Both, being first and second among “High-end” product suppliers (3% of the Chinese Fixing Market). The same organization did a survey about the value criteria i.e., the criteria that mostly concern the corresponding customers in China, and showcased that Fischer™ is behind Hilti in all areas but not in the “Quality of products” where they have rated as equal. Fischer™ in the future needs to improve the “reaction Time”, Pre-sales services, Price, and Relationships with its customers, whereas it is in the stable ground in the “After sales services”, “Product offering”, “Sales channels”, “Brand”, and “Quality”, always according to the Chinese customers. From our experience, we think that the same results apply for European Customers too, with very slight changes.

One of the key sectors where the companies tend to be present and generate revenues in the digital age are the marketplaces. As we can see from the table below, Fischer™ and Hilti are very actively taking part in online markets worldwide. From 29 marketplaces that we analyzed, in 22 of them, one could find Fischer™ products, whereas in 25 of them Hilti products were listed. Even Though in the level of qualitative representation, both companies were present in almost equal numbers of Marketplaces (18/19 accordingly).

Marketplace	Fischer Products	Hilti Products	Marketplace	Fischer Products	Hilti Products
In Europe			South America		
Amazon	YES	YES	Amazon	YES	YES
Ebay	YES	YES	Mercado libre	YES	YES
Allegro	YES	YES	Ali Express	NO	YES
Bol.com	YES	~	Americanas	YES	NO
Cdiscount	YES	~	Asia Pacific		
AliExpress	YES	YES	Rakuten	YES	YES
Etsy	~	NO	Taobao.com	~	~
USA			Tmall.com	YES	YES
Amazon	YES	YES	Jd.com	YES	YES
Ebay	YES	YES	Flipkart	NO	NO
Target	NO	NO	Tokopedia	YES	YES
Walmart	NO	YES	Shopee	~	~
Africa			Lazada	NO	~
Jumia	YES	YES	Amazon	YES	YES
Souq	~	YES	Ebay	YES	YES
konga	NO	~	trademe	NO	YES

Table 3. Marketplaces online: An analysis of product availability

We all should agree that in the new online business world, there are four organizations that control almost the whole online ecosystem, the so-called GAFAs organizations. They achieved such an integration level that we can freely say that any kind of business or communication that we have today, is initiated from one of these platforms. This does not mean that manufacturers should be discouraged and not work in the direction of finding better ways to sell their products.

At the end of the day, people still consume products, and manufacturers must try to produce and market products that are in demand by people. When we look at new manufacturers, we can see that they can often deal better with the platform economy than manufacturers who see their added value primarily in product development. Manufacturers who maintain an end-to-end relationship with customers, such as Hilti, Würth, MKT, Spax, Förch, etc. can of course generate significantly more added value than manufacturers who have to rent customer access via Amazon & Co. In addition, manufacturers with large marketing departments are likely to have an advantage because they tend to have the competence to control the platform interfaces. Manufacturers whose marketing is primarily based on the distribution of tools to dealers are likely to have problems (ex. Fischer™, Bosch, Pferd, etc.). But, on the other hand, manufacturers like Hilti and Fischer™, which have a deep integration in correlation with their customer infrastructure, can easily become platforms in their industry and in this way gain greater marketshare.

B2B2C	B2C
<ul style="list-style-type: none"> ● Highly complex to maintain ● Highly complex to develop ● High operational costs ● Greater Digital Trade Potential ● Higher Cooperation Possibility ● Remain Business Connections ● Low Complexity in Logistics and delivery ● Share shipping and storage costs ● Benefit from the third party's experience, infrastructure, and salesforce ● Value co-creation between models ● Harder to establish brand loyalty 	<ul style="list-style-type: none"> ● Easy to maintain ● Easy to develop ● Greater Control ● Focus to end-customers ● Collect valuable data on customer buying habits ● Simple Customer Journey ● Avoid sharing profits ● High Stock Costs and Logistics related costs i.e., sizeable costs.

Table 4. Cross-Model Comparison of advantages and disadvantages

One of the challenges and difficulties that Fischer™ faces in the adoption of B2C features is the strong connection of retailers and distributors in their historically evolved business model. What is here meant, is the bargaining power of customers of Michael

Porter which was not the only factor that influenced the actual business model of Fischer™.

The indirect online shop which represents the B2B2C approach of Fischer™ is a very complex implementation, highly hard to maintain, and costly. To lower the costs, Fischer™ decided to buy some shares from a few companies or to acquire them completely, like for example the web services provider Nexmart, or the software developing company “Smart Commerce” with 80 developers. The Fischer’s goal was to keep the ownership level as high as possible through digital developments. Everyone should participate and think along, not just handing over digital developments as a “service”, as was in the past.

On the other hand, Hilti was a pioneer in the industry with its own Brand Shop, as they Launched their web shop for end-customers (B2C), achieving very quickly a very high success. The product range and the services offered are therefore adapted to the respective market needs. This also applies to online shops, which Hilti adapts country specific. Thanks to the Sprayer Commerce OS, Hilti can launch new, non-backend-integrated online shops in a wide variety of countries within a short period of time. Hilti is active in 139 countries and operates 75 country-specific online shops. The Spryer Commerce OS is used for their 8 national shops.

The great advantage of B2C solutions is the simple customer journey and very satisfying e-commerce experience. The end-customer in this kind of solutions, can easily compare products and prices, join a great and safe shopping experience without disruption, read user manuals and descriptions directly from the manufacturer, complain if something is not clear, choose the most convenient paying method for him, calculate the delivery time, track their orders, etc.

In cases where there are damages to the products during transportation, Hilti needs to organize the contact with the customer, organize the return policy, re-send the new product, reimburse the buyer if he decides not to re-purchase the product, etc. In general, Hilti needs to organize the whole process and cover all related costs. Whereas in the case of the indirect shop of Fischer™ (B2B2C), the customer buys the end-product from the Retailers’ online shop or other Fischer™ Partner, and all costs with handling and delivery fall to the Retailer.

As one can notice from this case study, the differences between the two business models are becoming from day to day, very thin, as both models get closer to each other. Thanks to technology, these models became so close that one can hardly drive a line between them or proclaim one better than the other. Few authors argued the co-value creation of B2B and B2C models [12] [14], whereas in the research perspective, bridging between B2B and B2C models is a necessity since it is difficult to isolate pure B2B from pure B2C, and vice versa, especially after the emergence of the supply chain management (SCM).

If we take a closer look at the development of the e-business models of Hilti and Fischer™, we will see that Hilti is already organizing B2B online procurement for their

business partner, under the so-called e-Marketplaces platform. Whereas, Fischer™ is providing for a longer time now B2B Platforms for B2B buyers indirectly through their service provider Nexmart, or directly through Fischer™ B2B Portals (including personalized product lists and prices). Lately, Fischer™ also introduced its first B2C shop in the Check Republic, as a testing platform for them up at line of products.

Conclusions from the Case Study

This study has elaborated and analyzed the e-business models of two well-known engineering companies, Fischer™ and Hilti respectively. Both companies have an impressive growing performance on a global scale. Their success in international business has recently been largely relied upon B2B and B2C through the implementation of their online strategies to reach the customers worldwide. Apart from other companies, the two are rivals or facing competition between each other. In their strategy, they have adopted multiple channels, such as: e-mail marketing/newsletters, online shop, social media, customer guidance, mobile material service, pre and after sale services, professional applications, and other e-services.

By annual turnover and number of employees as of 2019, Hilti is significantly larger, with a turnover of CHF5.9 billion and employing 30 000 workers, of which half of them directly with the customers. Its rival Fischer™ based in Germany had its annual turnover of €887 million and employed 5 200 workers. The global network also favors Hilti by being active in 139 countries and operating 75 country-specific online shops, while Fischer™ has representatives in 37 countries. Their e-business success has inspired other known companies such as Würth, MKT, Spax, Förch to follow a similar strategy. So, what are the main strategies the two companies under consideration employ? Both apply B2B and B2C models. When considering separately, the study was unable to find any clear distinction between the two companies. This has brought the focus on a more complicated or combined cross-model analysis B2B2C. Although here too, many similarities exist, there are however, few distinctions. While Fischer™ applies B2B and B2B2C simultaneously; Hilti relies on B2C and B2B as business model. In the revenue model, Hilti applies direct sales and Fischer™ does not. Another difference, which has more distinctive elements, can be found in the opportunities and implementation in which the two companies rely. Product quality requirements, application of know-how, fulfillment price-performance ratio and customer relationship are the features of Fischer™, as opposed to its competitor which focuses on construction tools, wastewater treatment, physical infrastructure, public transport, and petrochemicals. In implementation, Fischer™ has placed the priority in renovating buildings and associated installation of infrastructure, BIM... which is like the priorities of Hilti. The difference can also be found by the stages of e-business model development, where Hilti is in more experienced or advanced stage, while Fischer™ at a mature phase.

RECOMMENDATION AND FUTURE SEARCH

As from the Case Study and the Cross-Model analysis, one was not able to clearly draw a conclusion which business Model is better than the other, since for different companies, one Model may be more suitable than the other. Maybe, exactly because of these slight differences, we witnessed the birth of another sub-Model or modified B2B Model, namely the B2B2C Model. Thus, further diluting the difference between these two models. For larger Companies with strong business base i.e. Retailers, we strongly recommend similar solutions like the ones implemented from Fischer, since they address to a large extent the final client needs, by not losing the business with the retailer's base. In long terms, we believe that all companies should seriously think of investing in pure Brand Online Shops like Hilit's, because of the growth potential witnessed from our Case Study. Further research should be done, in respect to closer revenue analysis of both e-business models since both are very quickly changing in the fast-evolving e-commerce market.

From the survey we gained an interesting feedback. *The Research Question, to what extent Business are acknowledged about B2B2C business model?* as we were assuming that this Model is very rare and less known in the business community and academia, was approved, since only 23.1% of our respondents answered to have knowledge about this Model.

In any case, 53.8% of the respondents reported to have used credit cards, PayPal, and Net-banking as their main payment instrument, among all those that realized e-commerce transactions. In the flourishing digital era, most of respondents (92.3%) answered that it is time to open an online business. It seems that the online market in this sector it has still place for new online businesses. For what purpose they think there is place for further development in the online market, in which way, with what kind of business models they will come up, how they will deal with it, remains a task for future research.

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Appendix A

Fischer™ Service and Content Providers

One of the most serious partners of Fischer™ is Nexmart. As an e-Business process optimizer, Nexmart, plays a crucial role in the world of Fischer™. The aim of the Nexmart solutions are to automate, optimize and speed up processes – all while considering the existing systems of the manufacturers and retailers. Further we will explain a few of the services that are provided from Nexmart to Escher™.

Retail Connect, is a possibility for Fischer™ through which connection can integrate retailers into Fischer™ websites where the product online catalogue is shown. By doing this, Fischer™ ensures a seamless customer journey to end-customers. In practice it works like this: A large number of end customers first find out about a product on a manufacturer's website. If this does not offer online direct sales, the customer must purchase the product through a trading partner. With retail Connect, manufacturers

show selected retail partners on their own website where the product is currently available - be it in the online shop or at the stationary POS in the vicinity of the customer. With one click, the customer selects the preferred retail partner and can now either buy the product in their online shop - it is possible to fill a shopping cart on the manufacturer's website and transfer it in full to the retail partner's shop. Or the customer can reserve the product for himself at the stationary POS, look at it there, get advice and then complete the purchase.

Through retail connect, Fischer™ speeds up the customers' purchase decision, increases conversion rates and generates more sales revenue, ensures an uninterrupted customer journey, and can manage the sales channels in a targeted manner.

Data Abo, it is a possibility for data subscription at Fischer™. Through databox, Fischer™ distributes its product data automatically, individually, and proactively to their trading partners. To do this, they first transmit the product data for the entire range from their ERP or PIM systems to Nexmart. Predefined filters can then be used for export to the respective trading partner. Filtering is done, for example, by product range, by content - trading partner A receives a different long description for product X than trading partner B - or according to technical criteria - trading partner A receives the images in the catalog as image files, while trading partner B receives a catalog file with a link to an external image directory receives. If a manufacturer updates or supplements its product data, the changes are automatically and proactively sent to the trading partners.

Data View is another service from Nexmart. Through data View Fischer™ ensures that its products are always presented up-to-date and in a uniform corporate design on all channels of their trading partners - for example in the online shop or at the stationary POS. To do this, Nexmart collects fischer's product data and processes it so that it can be used to supply all of the retail partner's analog and digital channels. The item data is then integrated directly into a retail partner's web shop, for example using iFrame technology. If the manufacturer updates or supplements its product database, the display in all channels is also adjusted in real time. The data View service helps Fischer™ to shape the presentation of its products to retail partners and ensure correct product information. The trading partners of Fischer™ benefit from attractive and always up-to-date data, saving server capacity for their online shops, and more importantly, with real time information update can better assist and convince the end-customer in the purchasing decision, and that without repetitive manual effort.

Other services that Fischer™ uses from Nexmart and we will only mention here are document to EDI, EDI Connect, ERP Connect, online Market, and sales App.