

Structural Design of an E-Commerce Business: Yemeksepeti.com Example From Turkey

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Electronic Commerce or E-Commerce is the concept of making trade in electronic environment which has emerged by the use of the internet in commerce and increased after 1995. Organizations started to use electronic commerce by internet facilities nearby their traditional marketing methods to increase their sales and profits. E-Commerce has many advantages when compared to traditional trade. This paper aims to take out these advantages for the companies which want to make use of electronic commerce and includes important advices for these companies. The paper also includes the basic version of an e-commerce business, by analysing one of the most successful firms in Turkey, yemeksepeti.com in terms of an Entity-Relationship Diagram (ERD) and Event Driven Process (EDP) to explain the organizations how an e-commerce business model should be constructed systematically. An ERD is a data modeling technique which graphically illustrates an information system's entities and the relationships between those entities. On the other hand, EDP is a chain for the modeling language which is used for describing business processes and workflows of an organization. This study examines yemeksepeti.com for providing an example of these two diagrams, which should be a milestone for the newcomers of an e-commerce. Organizing an e-commerce should start with the software designs and these examples of ERD and EDP which are the base for the software of an e-commerce business. The limitations of the paper include the examination of an only one company which operates only in Turkey, thus the further research should examine a global company and/or an e-commerce business that operates in several industries.

Keywords: electronic commerce, e-commerce, Turkey, yemeksepeti, ERD, EDP

Introduction

The fast increase in the use of the World Wide Web (www) caused a rise electronic commerce (E-Commerce) (Gencer, 2017). Retailers all over the world are constructing online stores, which exist in the cyberspace and offer merchandise and services through an electronic channel to their customers with a fraction of the overhead required in a bricks-and-mortar store (Hoffman & Novak, 1996). Virtual stores enable consumer-oriented commerce, which is an E-Commerce product supported by a wide variety of technological infrastructures and services as described by Vladimir (1996). Both the popular and academic literatures promise many benefits to be derived from e-commerce systems. Some of these include expanding firms reach without compromising richness (Evans & Wurster, 2001); gaining competitive advantage (Schutte, 2000; Warrington, Abgrab, & Caldwell, 2000) and reducing market, administrative, and operational costs (Feindt, Jeffcoate, &

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Chappell, 2002). Successful electronic commerce strategies are also inevitable for small and medium enterprises (Semerciöz & Sözüer, 2012).

Literature Review

Demand forecasting is essential but very difficult for every business (Gencer, 2013). In addition, there appears to be a lack of ecommerce success model(s) to guide and inform studies. As people increase the use of internet in their daily-life, their online behavior becomes more important for marketing managers of these firms and others in different sectors such as fast-moving consumer goods (FMCG) and services (Akkucuk & Turan, 2016). Our study is also examining a company that works in this sector. The emergence of Internet-based social media has made it possible for people to communicate online, and this new world changed rules of old-style offline socialization (Gencer, 2015). Since most online transactions are now carried out via mobile phones (smart phones), the driving forces behind consumer behavior in this area need further investigation (Akkucuk & Esmaceli, 2016). The attractiveness and power of e-commerce lies in its impact on re-shaping traditional value chains in different industries and it represents a fundamental transformation of traditional business models (Chen & Tan, 2004). As the literature includes many examples for the benefits of e-commerce compared with traditional commerce, a little provides examples about the systematic construction for an e-commerce business. Thus, our study starts with systematic construction examples and continues with some analysis including benefits, costs, and advices.

Research Methods

The following is the database design for yemeksepeti.com e-commerce model:

Customers (CustID, Name, Phone, Email, Username, Password),

Addresses (AddressID, CustID, Address, PostCode, LocID),

Restaurants (RestID, Name, Phone, Email),

Order (OrderID, Delivery Time, Payment Type, BasketID),

Product (ProductID, Name, Price, CuisineID),

Locations (LocID, Name, CityID),

Cities (CityID, Name),

Cuisines (CuisineID, Name),

Baskets (BasketID, TotalPrice),

Rest_Cust_Favorite (ResID, CustID),

Customer_Order (OrderID, CustID, AddrID, OrderTime),

Rest_Location (RestID, LocID, Minimum_Delivery_Amount),

Rest_Cuisines (RestID, CuisineID),

Rest_Products (RestID, ProductID),

Product_Basket (BasketID, ProductID, Quantity).

The ERD should be as follows:

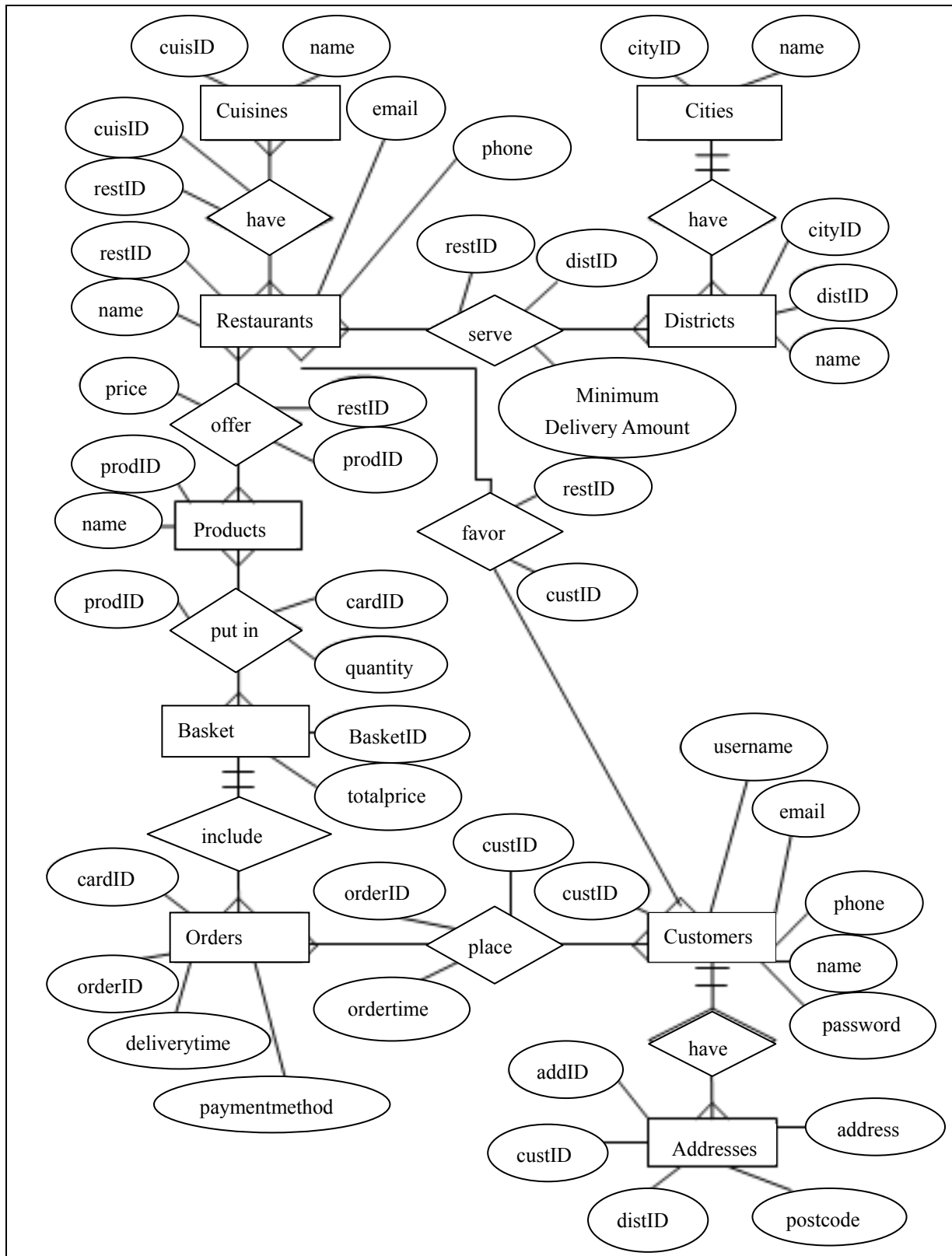


Figure 1. The ERD of yemeksepeti.com.

The EDP Design example of yemeksepeti.com is shown in the following figures.

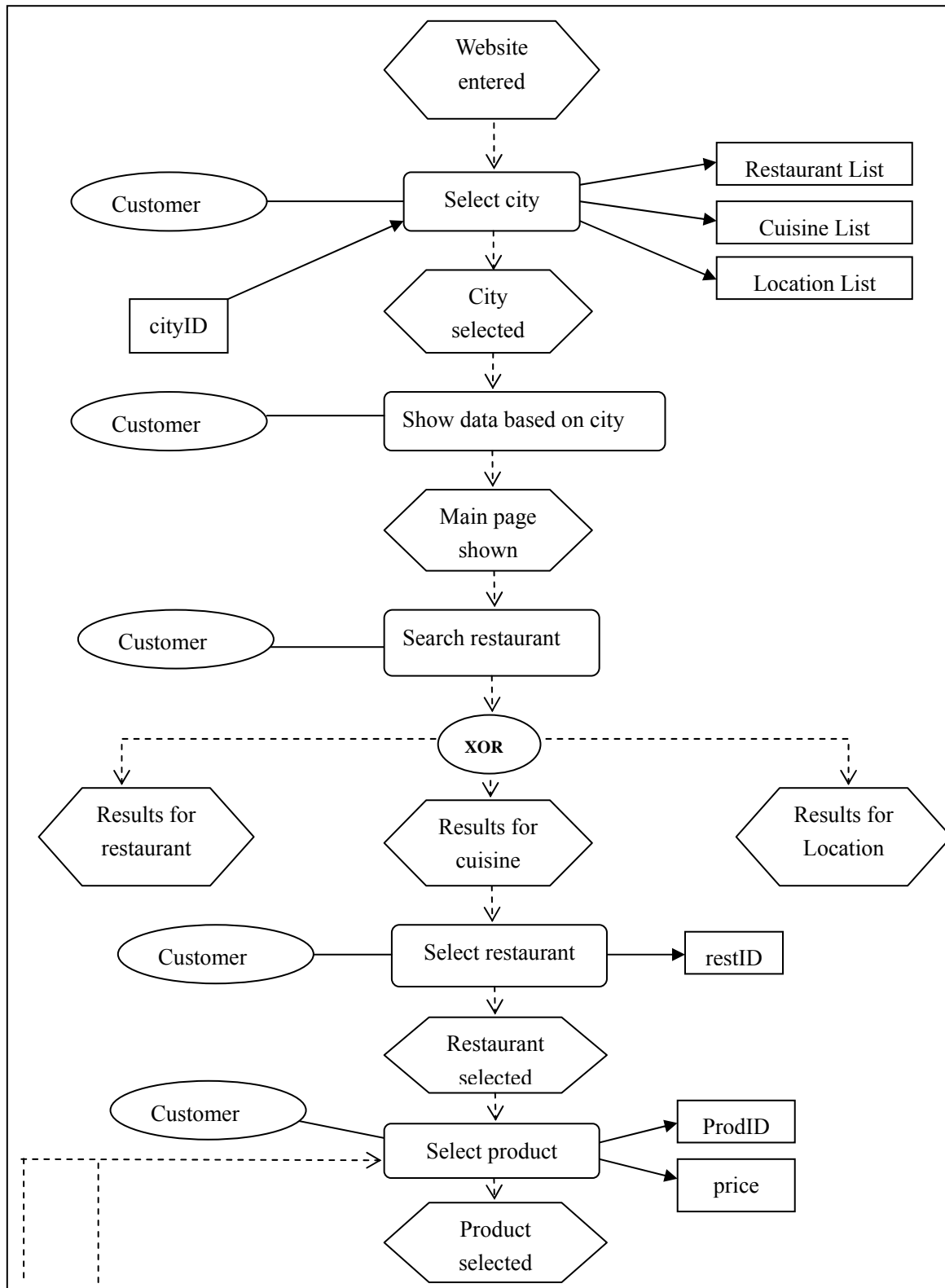


Figure 2. EDP Design of yemeksepeti.com (Part 1).

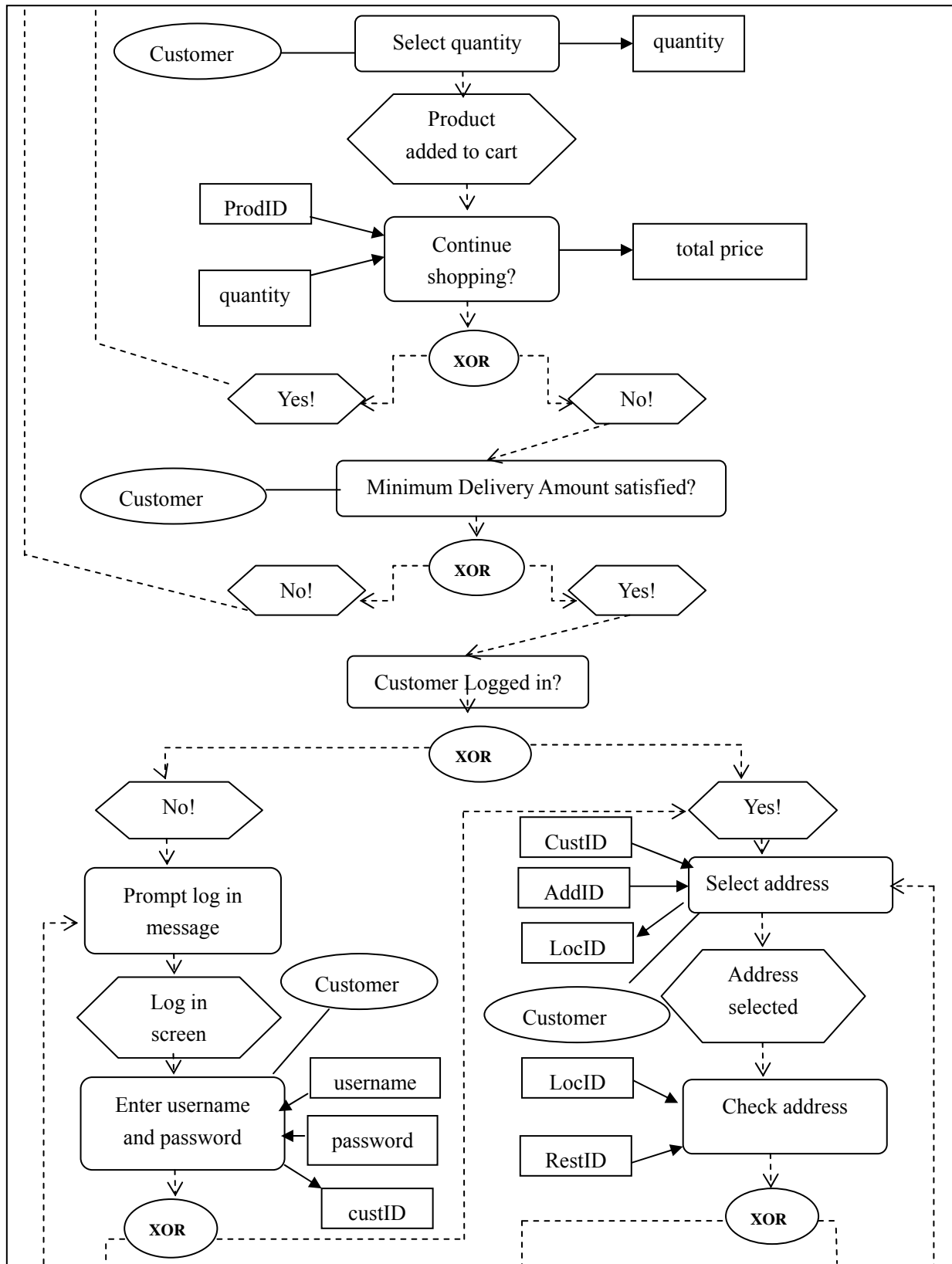


Figure 3. EDP Design of yemeksepeti.com (Part 2).

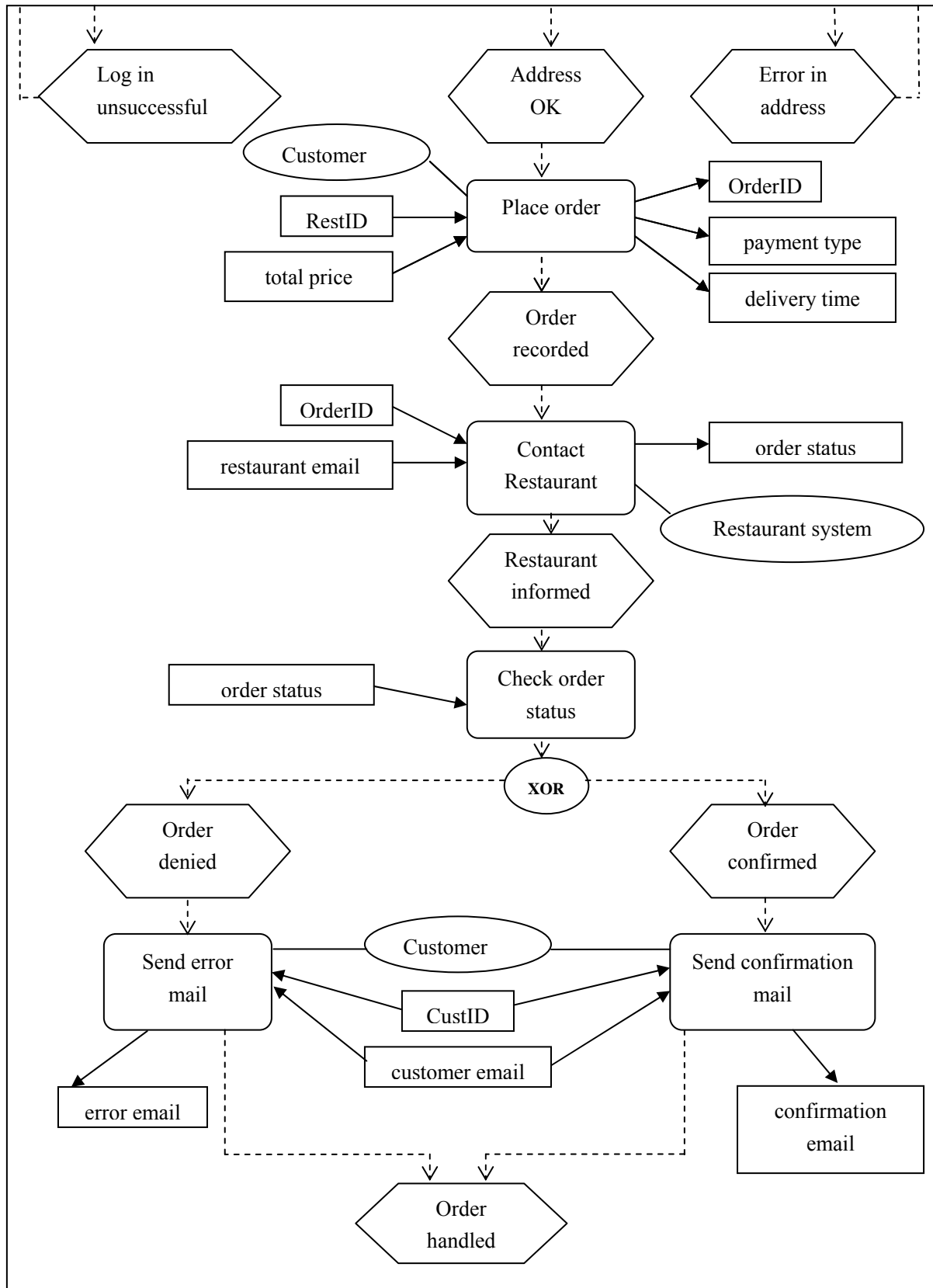


Figure 4. EDP Design of yemksepeti.com (Part 3).

Research Results

Yemeksepeti.com is one of the most successful entrepreneurship examples in Turkey. It has been founded by Nevzat Aydin in 2000 with two other contributors. In this study, the initial stage is assumed and the starting point of examination is moving from doing business by call center to e-commerce and analyzing the benefits and costs of this expansion.

Business-to-Business (B2B) or Business-to-Customers (B2C) business models have many advantages which make them preferable by entrepreneurs. Since yemeksepeti.com should be considered as a B2C business, the benefits from using it will be stated here. However, please note that most of them apply to B2B, as well.

Yemeksepeti.com enables a business concern or individual to reach the global market. Here all of the cities of Turkey are considered as the global market since the website is in the initial stage. Latest news about yemeksepeti.com is that they started doing business in Russia and Dubai, which proves the validity of this argument.

The direct cost-of-sale for an order taken from a web site, is lower than through traditional means (retail, paper based), as there is no human interaction during the on-line electronic purchase order process. Moreover, online selling reduces processing errors significantly.

Yemeksepeti.com provides a 7/24 service. The availability of a 7/24 food packaging system is an invaluable asset for customers. This is a win-win situation since it significantly increases the sales and profits.

Yemeksepeti.com gives the customers the opportunity to look for cheaper and higher quality products. Since food is an income-inelastic product; i.e. increased income does not yield increased food consumption since human-beings eat food in certain capacity, vice versa, there will be a certain demand for food any time. Providing access to cheap and high quality products is an invaluable asset for yemeksepeti.com. Moreover, it provides increased opportunities for buying alternative products which in turn, increases the total amount of customers targeted.

Shopping online is usually more convenient and time saving than conventional shopping. Moreover, people also can analyze reviews posted by other customers, about the products purchased from a particular restaurant, which can help make better purchasing decisions.

For businesses, working with yemeksepeti.com drastically cuts down the cost associated with marketing, customer care, processing, information storage, and inventory management since most of these are handled by yemeksepeti.com itself. It reduces the time period involved with business process re-engineering, customization of products to meet the demand of particular customers, increasing productivity and customer care services.

B2C enables efficient customer/care services. The orders are directly controlled by yemeksepeti.com and feedbacks are sent to the business which is an invaluable opportunity for the business to improve their operations and build increased customer satisfaction.

B2C enables yemeksepeti.com to collect and manage information related to customer behavior, which helps develop and adopt an efficient marketing and promotional strategy for businesses. In fact, today as yemeksepeti.com has grown up, it raises a significant amount revenue from advertises it receives from its business partners.

Analysis

The best advice is to find a company's exact question that it should ask itself during its processes. So, in

this part of our study, some questions are provided for the operator of yemeksepeti.com and an owner of a restaurant in this chain should ask themselves. Thus, as an operator of yemeksepeti.com:

- I would use segmentation analysis based on location in which regions I have the restaurants with the highest turnover?
- I would use segmentation analysis based on cuisine types that in which type do I receive maximum orders?
- I would use segmentation analysis again from the maximum order receiving restaurants which products are demanded most?
- I would use segmentation analysis again from the products that are ordered most, what are the hours that these products are ordered most?
- Maybe, the most important issue I was wondering about would be the TL average per order ratio. How much is the cost of an average order based on different cities?
- Which city has the highest orders in terms of price? What is the TL per order ratio in every city, and which city has the maximum TL/order ratio? Also which district in each city has the maximum TL/order ratio?
- On the other hand, which cuisine type has the highest orders received in terms of number of orders and in terms of total price of orders? What are these ratios in each city and also in each district?
- Which restaurant has the highest number of orders daily? And, which restaurant has the highest TL per order ratio?
- Do the multi-located restaurants or single-located restaurants have higher number of orders received per restaurants? Also do the multi-located ones have higher TL/order/restaurant ratio or single-located ones have higher TL/order ratio?
- What is the number of restaurants that want to join yemeksepeti.com organization? Are there any restaurants that want to quit the organization?
- What are the daily order ratios per number or per TL of newcomers versus quitters?
- Which hours have the maximum orders received per number or per TL ratio? Which days have the maximum orders received per number or per TL ratio? Which weeks have the maximum orders received per number or per TL ratio? Which months have the maximum orders received per number or per TL ratio? Also, maybe what is the monthly or yearly increase in the ratios of orders received per restaurant based on number or TL of orders?
- Which products have the highest orders per TL and per number each hour? Which products have the highest orders per TL and per number each day? Which products have the highest orders per TL and per number each month?
- Which product category (cuisine type) has the highest orders per TL and per number each hour? Which product category (cuisine type) has the highest orders per TL and per number each day? Which product category (cuisine type) has the highest orders per TL and per number each month?
- Does the aggregate number of orders differ on weekdays versus weekends? Does the price per orders differ in weekdays versus weekends?
- In which regions which type of campaigns have the maximum sales increase? City based customer-reply for any type of campaigns in different districts and also in different cuisines (product category)?

Furthermore, as an owner of a restaurant in yemeksepeti.com:

- I would try to learn what is the average daily/monthly number of orders my restaurant receives from yemeksepeti.com? Also, I would try to learn what is the average daily/monthly price of orders my restaurant receives from yemeksepeti.com?
- I would try to learn what is the total daily/monthly number of orders my restaurant receives from yemeksepeti.com? Also, I would try to learn what is the total daily/monthly price of orders my restaurant receives from yemeksepeti.com?
- What is the total percentage of yemeksepeti.com orders in my gross sales? What is the percentage of yemeksepeti.com orders detailed by product type or product category in my gross sales?
- In which hours does my restaurant receive most orders from yemeksepeti.com? Do the hours have the same trend as my restaurant orders? In which days does my restaurant receive most orders from yemeksepeti.com? Do the days have the same trend as my restaurant orders?
- What is the profit per order ratio for orders that my restaurant receives from yemeksepeti.com? Are they more or less from my restaurant's profit per order ratio?
- Which products in my menu have the highest number of orders from yemeksepeti.com? Does this hierarchy resemble in my in-restaurant orders?
- In terms of any campaign planned, in what percentage does my number of yemeksepeti.com orders increase? Is this increase the same in my in-restaurant campaigns?
- What is my restaurant's market share in my region in terms of orders received from yemeksepeti.com?

Conclusion

This study aims to show an outline for the firms that want to start doing electronic commerce. The sample models and some advices are given above. As explained, the real cost of preparing such a website starts with the software design of the e-business model. Once this model is established the cost of operating is significantly low compared to traditional business. The website can be built by an expert in this area within one month. You can pay a knowledgeable website developer a certain amount of money to build the webpage or you can have a partner to deal with this in the initial stage. The second is more appropriate for yemeksepeti.com since it reduces the probability of being imitated in the initial stage which has the outmost importance in such kind of business. The reality for yemeksepeti.com was indeed the second option, where Melih Ödemiş has built the website and has become the partner and the CTO of the company. The web servicing can be done via purchasing web servers and having the deployment and maintenance by itself or hiring this service from and hosting/ISS firm. The second appears to be the most appropriate option for yemeksepeti.com since it does not have data security concerns due to the fact that it does not perform online payment service.

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