# The Paradox of Odd Even Price in Fashion Luxury Sector: Empirical Evidence from an International Direct Observation of Luxury Stores

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## Abstract

Price has always had a key role in the luxury fashion market, because high prices are linked to the uniqueness and the prestige of luxury products and brands. Because of this direct contribution of price to the luxury essence, scholars have partially neglected the possible existence of unintuitive and controversial pricing strategies followed by luxury firms. This article deals with this literature gap, particularly analysing a specific pricing strategy that seems in contrast with the nature of luxury pricing: the odd even price. With the direct observation of physical and digital store windows of 20 luxury brands, this research investigates the role of odd even price in the fashion luxury sector. Particularly, this work examines the relationship between odd even price strategy and the luxury level of fashion brands considering both offline and online channels.

*Keywords:* Price; Luxury; Fashion; Odd-even price; Store windows

## Extended Abstract

Price has always had a key role in the luxury fashion market, because high prices are linked to the

uniqueness and the prestige of luxury products and brands. Luxury pricing has traditionally

gathered minimal interest among researchers because of the general consensus that luxury brands

should always increase their prices to suggest high quality or high status. However, there is a

variety of pricing strategies adopted in the luxury sector. Due to its apparent contradiction with the

nature of luxury pricing, the focus of this paper is on an "odd-even pricing" or "9-ending pricing"

strategy that consists in adopting prices for a product that are a few euros from an integer. Many

academics have attempted to explain the effect that different price endings have on consumer

behaviour: (1) consumers underestimate prices when odd-even prices are adopted, rounding down

prices rather than up; (2) the perception that these prices generate to consumers about the value of

the product that it is a special offer or good value for money; (3) odd-ending pricing is especially

effective for hedonic consumption because it serves as justification for such purchases. However,

there is very limited research that is focused on odd pricing as applied to the fashion luxury market

for three reasons: (1) is related to the data access in this sector that is much more difficult than in

the consumer goods sector where panel data is available; (2) when dealing with higher prices, the

practice might seem to be a paradox, as there is a decrease in the relative size of the difference

between the odd-ending (e.g. -9 or -90) and the adjoining 0-ending price (e.g. 2,000); (3) the effects provoked by this pricing technique seem to contradict the luxury sector requirements: round prices should signal higher quality. This paper aims to investigate odd even price in the fashion luxury market, trying to understand potential strategic patterns undertaken by a set of luxury brands. To the authors knowledge there is no systematic empirical evidences that shows the presence of odd even prices (that aim to reduce the perception of high price) in the Luxury sector. Because of this direct contribution of price to the luxury essence, scholars have partially neglected the possible existence of unintuitive and controversial pricing strategies followed by luxury firms. This article deals with this literature gap analysing odd even price strategy that seems in contrast with the nature of luxury pricing. With the direct observation of prices displayed in the windows of 40 stores located in two European fashion cities (Study 1) and directly retrieving prices from the web e-stores (Study 2) of 20 luxury brands, this research investigates the role of odd even price in the fashion luxury sector. Particularly, this work examines the relationship between odd even price strategy and the luxury level of fashion brands considering both offline and online channels. The study aims to corroborate basal hypotheses: the existence of the odd even price in the fashion luxury sector (H1) and the presence of an eventual relationship between luxury level of brands and the use of odd-even pricing (H2). Furthermore, the growing presence of luxury brands in digital context drove Authors to jointly analyse both physical (monobrand brick and mortar stores) and digital (monobrand e-stores) for detecting eventual heterogeneous patterns between the two distribution typologies (H3). The results of two studies suggest the existence and the application of the odd even price strategy among the fashion luxury firms. The first study in the physical stores reveals that this strategy is used by luxury firms, particularly between brands with a lower level of luxury, according to the luxury pyramid proposed by Heine (2012), supporting hypotheses 1 and 2. The second study confirms the presence of odd even price strategy in the digital stores too but with a minor extent compared with physical stores environment, hence supporting hypothesis 3. In conclusion there is a price paradox in the fashion luxury sector, where the price is used to state the high quality and rarity

of products, but the odd event price strategy is largely adopted. This paradox is partially reduced by the fact that companies with higher level of luxury practice a lower percentage of odd even prices.

## 1. Introduction

Over the last two decades, the luxury market has been booming. According to the Worldwide Luxury Markets Monitor report, in 2016 the global market for luxury goods recorded a new peak with over 240 billion euros (+4 per cent of the previous year) (Bain & Company, 2016). This growth has reinforced the interest in luxury management among both academic scholars and practitioners (Hung et al., 2011; Godey et al. 2013; Parguel et al. 2016; Arrigo, 2015; Da Giau et al. 2016; Ko, Phau, & Aiello, 2016). However, a key aspect of luxury has received limited research interest: price. Price acts as a cue to consumers to influence their purchasing decision and their willingness to pay is reflective of the perceived value they have for a product or brand (Winer, 2017).  Pricing decisions are critical for managers as optimal pricing strategies will maximize profits for the organization. It has generally been assumed that luxury brands should always utilize high prices to signal high quality (McCarthy & Perreault, 1987; Kapferer & Bastien, 2012). Price in luxury has been argued to be reflective of intangible elements such as history and prestige (Kapferer et al. 2014), rather than rational, objective qualities (Vogel and Paul, 2015). There is growing evidence that luxury firms do practice more nuanced pricing strategies including price discrimination across sales outlets and various types of price signaling. In particular, this research investigates mono-brand stores in the world of luxury by focusing its attention on the strategy of odd even price (OEP) and price discrimination strategies across retail outlets. From a managerial perspective, this study shows the ways in which luxury marketers may utilise OEP strategy and heterogeneous pricing strategies in relation to on-line and off-line channels. Specifically, even if luxury firms adopt an OEP strategy, they can differ according to fashion brand luxury levels and to the distribution channel they use.

## 2. Literature review and hypotheses development

Luxury products have traditionally been associated with exclusivity, quality and status (König et al. 2016; Kim et al. 2012a; 2012b; Atwal & Williams, 2009), while at the same time, conceptualised according to functional, experiential and interaction dimensions (Liu et. al., 2012; Wiedmann et. al., 2009). They manifest premium prices, craftsmanship, heritage, rarity, aesthetics, speciality and symbolism (Heine, 2009). There is an implicit acceptance of the link with notions of conspicuous consumption and luxury goods providing a high cultural status (Bourdieu 1984). Wiedmann et. al., (2007; 2009) developed a model comprising four over-arching dimensions to explain luxury consumption through consumer perceptions of the financial, functional, individual and social values encompassed by luxury products. In an attempt to apply Wiedmann et al.'s model to this work, the authors mainly consider the financial dimension as reflected by the monetary. More recently, Godey et al. (2014) identify 10 luxury dimensions, namely Aesthetic, Desirable, Elegant, Elitist, Exclusive, Expensive, High Quality, Prestigious, Symbolic, and Unique; not surprisingly the Expensive dimension is directly related to price. Customers choose luxury products because they associate high price with high quality, and luxury products have their own unique properties and scarcity values that are exclusively distributed that lead to social values when consumers buy them (Hwang et al. 2014). According to commodity theory (Brock, 1968), rarity enhances the value or desirability of anything that can be possessed, useful to the possessor, and transferable from one person to another. However, what is distinctive of luxury goods, is that they appear desirable and appealing especially because of their constructed scarcity (Suri et al., 2007) in availability since, as Catry (2003, p.11) puts it, its "actual scarcity is replaced by a perceived rarity". This is usually either as a result of a structured limitation on distribution or due to its craftsmanship and custom-made approach, or also because they are associated with restricted consumer segments that represent only a fraction of the overall exposed audience (Kapferer & Bastien, 2009; Hwang, Ko & Megehee, 2014; Nueno & Quelch, 1998). Despite every possible definition of luxury, scholars, practitioners and consumers converge on one point: price is a fundamental part of the luxury concept (Kapferer et al. 2014; Kapferer & Bastien 2012; Cervellon et al. 2014; Kapferer & Laurent, 2016; McCarthy

& Perreault, 1987). Anyway, there is a variety of pricing strategies adopted in the luxury sector. Due to its apparent contradiction with the nature of luxury pricing, the focus of this paper is on an "odd-even pricing" or "9-ending pricing" strategy (Kerin, Hartley, Rudelius & Pellegrini, 2015; Kumar & Pandey, 2015). This price strategy consists in adopting prices for a product that are a few euros from an integer. Many academics have attempted to explain the effect that different price endings have on consumer behaviour. First, is the argument that consumers underestimate prices when odd-even prices are adopted, rounding down prices rather than up (Kumar & Pandey 2015; Bizer & Schindler, 2005). Second is the perception that these prices generate to consumers about the value of the product that is that it is a special offer or good value for money (Schindler, 1997). Other research argues that odd-ending pricing is especially effective for hedonic consumption because it serves as justification for such purchases (Choi et al. 2004). Because odd-ending prices are perceived as price discounts, they can be used as justification for hedonic consumption, reducing anticipated guilt and increasing the likelihood of purchase. Finally, there is also evidence that the effectiveness of price endings is moderated by the context in which they are used and this may offer an explanation for the inconclusive findings in past studies (Anderson & Simester, 2003). However, there is very limited research that is focused on odd pricing as applied to the fashion luxury market. According to Fraccaro and Macé (2014), there are at least three reasons for explaining this limited attention to this topic. The first one, is related to the data access in this sector that is much more difficult than in the consumer goods sector where panel data is available. Second, when dealing with higher prices, the practice might seem to be a paradox, as there is a decrease in the relative size of the difference between the odd-ending (e.g. -9 or -90) and the adjoining 0-ending price (e.g. 2,000) (Schindler & Kirby, 1997). The third and most important reason is that the effects provoked by this pricing technique seem to contradict the luxury sector requirements: round prices should signal higher quality (Stiving, 2000), and according to Kapferer and Bastien (2012) "the presumed price should always seem higher than the actual price". So, in the context of luxury the price has to be increased over time to increase the demand. Luxury goods are effectively defined by

virtue of the reverse elasticity towards price (Veblen, 2009). This paper aims to investigate odd even price in the fashion luxury market, trying to understand potential strategic patterns undertaken by a set of luxury brands. To the authors knowledge there is no systematic empirical evidences that shows the presence of odd even prices (that aim to reduce the perception of high price) in the Luxury sector. So authors define the first research hypothesis as follow:

$H_1$: Odd-even price strategies are used in the fashion luxury sector

Furthermore, luxury brands have different positioning strategies and belong to different luxury levels -lower or higher degree of correspondence to the "real luxury"- where the higher the level of luxury, the higher the level of price (Heine, 2010). Hence, different types of brands can be identified relating to pricing strategies (Heine, 2012): 1) Entry-level luxury brands: as these brands rank just above the premium segment on the lowest luxury level, they are not even generally recognized as members of the luxury segment; 2) Medium-level luxury brands: these brands are widely recognized as members of the luxury segment, but are a step behind the forefront of luxury; 3)Top-level luxury brands: these brands are established beyond doubt as leading luxury brands; 4) Elite-level luxury brands: as a niche brands in the top of the top segment, these brands determine the benchmark of the best quality and highest exclusivity within their category. In this paper we investigate whether if an odd even price strategy is present in the fashion luxury sector is it equally undertaken by fashion luxury brands or not? In other words, is there a relationship between the luxury level of firms (Heine, 2012) and the presence of odd-even prices (higher the luxury level, lower the presence of odd-even prices)? Thus it is hypothesised that:

$H_2$: The higher the luxury level, the lower the sOEP

Recent studies (Verhoef et al. 2015; Heine & Berghaus, 2014) analyse the advent of multichannel strategies between retailers and its implications. Marketing channel design decisions are complex and becoming as important as the decisions companies make about product features and prices (Park et al. 2014). Winer (2017) notes that the digital era has influenced how companies set prices and how consumers react to them. For marketers, prices can be set dynamically at

different points in time depending on supply and demand. While luxury products are still mostly sold in traditional stores, more luxury brands are selling through the internet (Parguel et al 2016; Ko et al. 2013). One of this is the differentiation of the retail mix across channels: every multichannel retailer can decide whether and how to apply channel-based price differentiation by setting different prices for the same product across multiple channels (Vogel & Paul, 2015). With regards to price levels the main focus has been comparing on-line with off-line pricing. The findings are controversial with some studies suggesting that on-line price levels are higher, while other studies show on-line price levels are lower. Multi-channel firms have the possibility to exploit different customer price sensitivity in different channels ((Macchion et al., 2017a; 2017b; Lion et al. 2016); Sotgiu & Ancarani, 2004). Thus it is hypothesised that:

*$H_3$: There is price discrimination undertaken by fashion luxury firms that implies different level of odd even prices in different distribution channels*

## 3. Research method and model

In order to answer the hypothesis, Authors conducted a field research by directly observing prices displayed in the windows of 40 stores (Craig & Douglas, 2005) located in two European fashion cities (Study 1) and directly retrieving prices from the web e-stores (Study 2) of 20 luxury brands: Giorgio Armani, Balenciaga, Bottega Veneta, Hugo Boss, Chanel, Brunello Cucinelli, Dior, Dolce e Gabbana, Fendi, Salvatore Ferragamo, Gucci, Hermes, Loro Piana, Prada, Emilio Pucci, Sergio Rossi, Tod's, Valentino, Louis Vuitton, Ermenegildo Zegna (for each brands we analyzed one store in both Cities). Authors decided to study the luxury brands included in Deloitte Luxury Reports ranking (2017) and with mono-brand stores in both European fashion cities considered. In order to avoid any privacy problems and legal issues with the direct observation method, the name of the two European fashion cities is omitted and the 20 brands are later presented only in a blind format. Else, a preventive authorization should be required.

*3.1. Study 1*

Shop windows play a fundamental role in the positioning of a brand (see, for instance, Parguel et al., 2016; Jain et al., 2014; Puccinelli et al., 2013; Law et al. 2009; Sen et al., 2002). Consumers are very likely to attend and to acquire information from window display, which can function both as advertising, sales promotion (Sen et al., 2002) and positioning statement. All that is possible to see in the store window is visual merchandising (Kim, 2013) and price is a component of this merchandise (Davies & Ward, 2005). Authors have collected all the prices exposed by 20 luxury brands analyzed in their stores windows (located in two European fashion cities during November and December 2015); a total 503 prices were collected. To measure the odd even price, we adopted a broad measure of the phenomena (fine-tuned with the luxury price levels), considering the length and the composition of the digit (adapted from Fraccaro & Macé, 2014): from 0 to 99 we consider an odd even price all prices with the end -9 in the units or tens (i.e. 19, 90, 99); for numbers from 100 to 999 we consider an odd even price if the digit ends with -9 in the units or tens (i.e. 109, 290, 999); for numbers from 1.000 to 9.999 we consider an odd even price if the digit ends with -9 in the units, tens or some hundreds (i.e. 1.119, 2.090, 9.900); for numbers higher than 10.000 we consider an odd even price if the digit ends with -9 in the units, tens or some hundreds (i.e. 11.119, 12.190, 19.999). Authors have not considered the decimal number because at posteriori they found no prices with decimal number in the dataset. To establish a greater level of comparison between strategies performed by luxury brands, we focused on the prices of the so called "iconic overlapping assortment" composed, in this case, by bags for women and men, assortment products categorize that are conspicuous in all the shop windows analyzed. According to this rules, Authors have collected 503 prices exposed by the luxury brands analyzed in their stores windows (located in two European fashion cities) detecting the presence of odd-even (H1). Then, Authors defined the ratio (here labelled Single Odd Even Price "sOEP") that measure the number of products with odd even price (oep) over the total of products exposed with price (p) for the "j-th" brand:

$$sOEP_j = \frac{Number\ of\ products\ with\ odd\ even\ prices\ of\ Brand\ j}{Number\ of\ product\ exposed\ with\ price\ of\ Brand\ j} = \frac{oep_j}{p_j}$$

and the overall odd even price ratio for a set of brands (here labelled "OEP"):

$$OEP = \frac{\sum_{n=1}^{k} sOEP_n}{n}$$

where "sOEP" is the single odd even price ratio for the brands that go from 1 to k; hence OEP is equal to simple mean of the n sOEP considered. Having performed a direct observation of real data (prices) and having calculated the sOEP ratios using the same real dataset the data presented in the Tables 1a – 1b (and used in the regression models) are characterized by reliability and validity. The observation method is largely used in descriptive researches. This method involves recording the behavioral patterns of people, objects, and events in a systematic manner to obtain information about the phenomenon of interest. Particularly, Authors adopted a natural observation that involves observing behavior as it takes places in the environment (Malhotra, 2007). Despite the fact, is controversial the existence of OEP in luxury, consistently with existing literature, Authors consider the existence of a causal relationship between "fashion brand luxury level" (FBLL) and Odd-Even Price ratio (sOEP): the higher the luxury level, the lower OEP and vice versa (H2). To measure FBLL, Authors used a structured on-line questionnaire and asked 24 luxury experts (12 top and middle Managers of international fashion luxury firms and 12 international and national top Scholars of luxury marketing) to classify the 20 brands according to Heine (2012) luxury level layers; this lead to the operationalization of a 4-point scale where 1 = Entry-level luxury brand; 2 = Medium-level luxury brands; 3 = Top-level luxury brands; 4= Elite-level luxury brands. In detail, Authors inserted in the first section of the questionnaire Heine's definition of luxury levels, represented in a pyramid with examples of brands for each level of the pyramid. In the second section, a list of 20 brands was presented with a point scale from 1 to 4 for each brand. To validate FBLL scale based on Heine's luxury level layers, other 5 luxury experts were interviewed for collecting their evaluations. Author performed in this way a content validity that "consist of a subjective but systematic evaluation of the representativeness of the content of a scale for the measuring task at hand" (Malhotra et al 1996) asking the experts to evaluate if the scale covers the

entire domain of the construct measured. Expert 1 said "*I think FBLL scale is really useful to understand the different levels of luxury: this criterion clearly explain how brands can have different positioning in luxury industry*"; Expert 2 stated "*As a luxury expert I find this scale a useful and valid tool to represent luxury brands.* Expert 3 declared *"The scale structure gives a clear representation of how luxury brands can be differentiated accordingly to their reputation and thus it can be used a strategic tool*". Expert 4 said "*As far as I am concerned as luxury expert, I consider FBLL based on Heine's categorization of luxury goods a very intuitive and useful tool. Within luxury category there are different levels, so it is fundamental to distinguish different luxury positioning to implement congruent marketing strategies*". Finally, Expert 5 stated "*In my opinion, the luxury pyramid proposed catches the essential elements of differentiation across the luxury continuum*". Then, still in terms of validity, the five experts where asked to express their evaluations on the scale proposed to them also according to a Likert scale from 1 to 7 where 1 means "the FBLL scale doesn't cover at all the entire domain of the construct measured" and 7 "the FBLL scale cover at all the entire domain of the construct measured". A minimum score of 6.35 was obtained that implies a high validity to the responses given. Table 1 presents relevant data and main statistics related to each cases analysed in of Study 1 (brand, date of observation, number of bags exposed in the store, number of bags exposed with price, bags price mean expressed in Euro, bags price standard deviation, sOEP -single Odd Even Price ratio, mean of Fashion Brand Luxury Level – FBLL -, FBLL standard deviation). In order to obtain reliable data related to FBLL we followed a Test-retest reliability approach. We administered to the respondents the identical set of scale item at two different times (3 months) at the same conditions (Malhotra et al 1996). Then we calculated the correlation coefficients between the evaluation scores at the two different times. Correlation coefficients show an acceptable reliability (where the lowest coefficient is .741).

PLACE TABLES 1a ABOUT HERE

Then Authors performed a series of regressions (Hair, Black, Babin, Anderson & Tatham, 1998; Malhotra, Agarwal & Peterson, 1996) attempts in order to reach the most explanatory model

and achieving this configuration: $sOEP = b_0 + b_1\ FBLL + \varepsilon$. Authors have checked all the assumptions which lie at the basis of the performance of a regression analysis (together with the causality one above mentioned) (Janssens, De Pelsmacker & Van Kenhove, 2008): a) All the relevant (independent) variables seem to be taken in consideration since the inspection of the residual graph does not detect any pattern. b) A linear relationship between the dependent and the independent variable is evident from the interpretation of the scatterplot of the variables (Figure 1a) and because the above mentioned residual graph does not display a pattern. c) Dependent and independent variables are interval scales. d) The residuals are independent form one another, they are normally distributed and they have the same variance for each value of the independent variable (homoschedasticy assumption). e) There are a sufficient number of observations (five times the parameters estimated). e) No multicollinearity: because of the high correlation between price average of products exposed and FBLL, only FBLL has been retained as independent variable. f) Attention for outliers. No significant deviations from the assumption have been detected.

*3.2. Study 2*

Study 2 is the replication of Study 1 in the Web based e-distribution channel of the 20 luxury brands under analysis. We collected a total of 2,930 prices presented in the mono-brand e-stores, during November and December 2016. All the 20 luxury mono-brand e-stores selected are under the domain ".com" to avoid eventual country differences; in order to ensure website homogeneity in the countries (where the two European fashion cities are located), Authors checked randomly the web pages of the 20 websites accessing them as Internet user from both countries. OEP ratio and regression model developed and used in Study 1 were adopted in Study 2 as well. Concerning the model, also in Study 2 all the assumptions which lie at the basis of the performance of a regression analysis -conditions from a) to g) considered in the previous paragraph- were positively matched (Figure 1b).

## 4. Results

*4.1. Study 1 – Hypotheses 1 & 2*

Regarding the first hypothesis question (H1) with reference to physical stores authors have applied the algorithm proposed in the methodology (the Odd Even Price ratio) using the data gathered from the direct observation of the prices displayed in the stores of the 20 fashion luxury brands analysed:

$$OEP = \frac{\sum_{n=1}^{k} sOEP_n}{n} = 0.296$$

The OEP is definitely larger than and statistically different from 0 (t (df 19) = 6.44; p< .001; Max-Min = 0.571-0.00, Range of 0.571, and a SD=0.163) revealing the existence of the odd even strategy in fashion luxury sector. So with reference to empirical evidence gained in this study we can confirm H1: there is a presence of odd-even price strategy in fashion luxury sector (Figure 1a where brands are labelled from 1 to 20).

PLACE FIGURES 1b ABOUT HERE

In order to check for the meaningfulness of the model (*H2: The higher the luxury level, the lower the sOEP)* the model summary indicates that 41.5% of the variation in the dependent variable (sOEP) may be explained by the variation in the independent variable (FBLL) included in the model (being the coefficient of determination equal to .415). The model appears to be meaningful since the procedure for p-value (Sig.) in the ANOVA provide a result (F (df 1, df 18) = 12.776; p< .002) that leads authors to reject the null hypothesis ($H_0$: $B_0$ =$B_1$=0). Because a good fit is present between the model and the data, further interpretations are now allowed. In any case p-value for b's are significant ($B_0$; T=10.299; p< .001; $B_1$; T=-3.574; p< .002). So considering the coefficients calculated, here the concrete values for b's ($B_0$ = 0.296; $B_1$= -0.105), in the regression model proposed: *sOEP = 0.296 -0.105 FBLL + ε.* This indicates that an increase of one unit in the FBLL leads to a decrease of 0.105 in the sOEP. H2 is confirmed and an inverse relationship between the Fashion Brand Luxury Level and the Percentage of Odd Even Price has been discovered.

*4.2. Study 2 – Hypothesis 1 & 2*

The calculation of the Odd Even Price ratio with reference to the luxury e-store determines the following result:

$$OEP \ = \ \frac{\sum_{n=1}^{k} sOEP_n}{n} = 0.268$$

Also in this case the OEP is definitely larger than and statistically different from 0 (t (df 19) =

5.442; p< .001; Max-Min = 0.667-0.004, a Range of 0.662, and a SD = 0.220) confirming the

presence of an odd even strategy even in the digital web-space of fashion luxury (Figure 1b; brands

labelled from 1 to 20). In order to check for the meaningfulness of the model in the e-store

environment (H2 *"The higher the luxury level, the lower the SOEP"),* the model summary indicates

that 22.1% of the variation in the dependent variable (sOEP) may be explained by the variation in

the independent variable (FBLL) included in the model (being the coefficient of determination

equal to .221). Even if this model appears to be less capable to explain the variation of sOEP with

the variation of FBLL compared to the results of Study 1, also in the case of Study 2 the model is

meaningful since the procedure for p-value (Sig.) in the ANOVA provide a result (F (df 1, df 18) =

5.106; p< .036) that leads authors to reject the null hypothesis ($H_0$: $B_0$ =$B_1$=0). The p-value for b's

are significant ($B_0$; T=3.396; p< .003; $B_1$; T=-2.260; p< .036). So considering the coefficients

calculated, here the concrete values for b's ($B_0$ = 0.799; $B_1$= -0.181), in the regression model

proposed: *sOEP = 0.799 -0.181 FBLL + ε.* H2 is confirmed in the digital space and an inverse

relationship between the Fashion Brand Luxury Level and the Percentage of Odd Even Price has

been highlighted.

*4.3. Comparison of study 1 and study 2 – Hypothesis 3*

In order to answer to the third hypothesis (*H3: There is price discrimination undertaken by*

*fashion luxury firms that implies different level of odd even prices in different distribution channels*)

results of Study 1 and Study 2 have been compared.  Firstly, the OEP ratios were analyzed using

parametric test. In the physical stores the 20 luxury brand analyzed apply on average 0.296 of odd

even prices over the total price exposed versus the 0.268 in the digital stores. In order to understand

if there is a statistical difference between these two mean scores a t-test was run. The results (t= -

.570; p = .575) suggest the null hypothesis of equal means has to be accepted so it appears there is

no statistical difference between the OEP offline and online. However, analyzing the gap between sOEP offline and sOEP online (sOEP Gap = $sOEP_{Study1}$ – $sOEP_{Study2}$) we observe that the 20 luxury brands follow different patterns (Figure 3). sOEP gap range from – 0.476 to 0.442 with a mean of 0.028 and Standard Deviation of 0.229 hence the dispersion of this variable is very large. As highlighted in the Figure 3 it is possible to detect luxury brands with a more homogenous price strategy that maintain a similar approach in the two different channels; that is to say sOEP Gap = sOEPStudy1 – sOEPStudy2 ≈ 0 (central part of Figure 3, cases 20, 2, 3, 7, 19, 16) with a deviation from the sample mean lower than ¼ of StDev. Figure 3 shows also the presence of luxury brands that practice a larger proportion of odd even prices in the digital stores than in the physical ones (left part of Figure 3) that is to say sOEP Gap = sOEPStudy1 – sOEPStudy2 < 0 (range: min. 0.476; max. -0.106; cases 1, 5, 4, 13, 9, 15). Finally, it is possible to observe other brands that follow an opposite behavior practicing a higher level of sOEP in physical stores than in digital ones (sOEP Gap = sOEPStudy1 – sOEPStudy2 > 0; range: min. 0.093; max. 0.442; cases 12, 10, 18, 17, 11, 14, 6, 8). Considering these results the third hypothesis is confirmed (H3) having detected the presence of a price discrimination practices in the sample under analysis that is to say luxury brands characterized by sOEP Gap = sOEPStudy1 – sOEPStudy2 largely different from 0 (70% of the sample). Finally, Authors investigate the eventual association and relationship between sOEP and the gap between sOEP offline and online (sOEP Gap) calculating the Pearson correlation coefficient and running a regression analysis. Results show r= -0.411 with a model that appears not to be meaningful since the ANOVA provide a result (df 1, df 18, F= 3.652; p< .072) that leads Authors to accept the null hypothesis (H0: B0 =B1=0). Then the association and the relationship among FBLL and the sOEP Gap are analyzed. Interpreting the data Authors discover there is not a linear relationship between the two variables (r=-.00; ANOVA: df 1, df 18, F = 0.001; p< .972; B0 = 0.037; B1=-0.003). Further analysis may be run in order to extend the comprehension of this phenomenon and to detect other association and relationship typologies.

PLACE FIGURE 3 ABOUT HERE

## 5. Discussion, Limitation and Further Research

The study explores the odd even price strategy in the fashion luxury sector, analysing 20 luxury brand both in the physical and digital stores. The results of two studies suggest the existence and the application of the odd even price strategy among the fashion luxury firms supporting hypothesis 1. From *an academic point of view* these counter-intuitive results are quite surprising confirming the existence of the paradox of odd even price in the fashion luxury sector. Even in this context, where high price is ontologically one of the main essences of luxury concept there is a large presence of odd even prices aiming at reducing the perception of expensiveness. However, the practice to apply odd even prices appears not to be homogenously undertaken by luxury brands. The first study in the physical stores reveals that this strategy is used by luxury firms, particularly between brands with a lower level of luxury, according to the luxury pyramid proposed by Heine (2012), supporting hypothesis 2. The second study confirms the presence of odd even price strategy in the digital stores of luxury firms but with a minor correlation with the fashion brand luxury level, the regression models confirm the inverse relation between FBLL and OEP strategy in spite of the two contexts, supporting hypothesis 3. At the same time the model shows the heterogeneity of the 20 luxury brands analysed in the physical stores and in the online stores too. Specifically, the majority of the brands analysed (70%) use the OEP strategy more in the digital context than in the physical one, or vice-versa. The remaining brands apply a similar OEP strategy in both channels. In conclusion the results confirm the hypothesis stated by Authors in this article: there is a price paradox in the fashion luxury sector, such that the price is used to state the high quality and rarity of products, but the OEP strategy is largely adopted. This paradox is partially reduced by the fact that companies with higher level of luxury practice a lower percentage of OEP (confirming the H2) as highlighted by recent literature (i.e. Kapferer & Bastien, 2012). *From a managerial perspective*, the results have strong implications for the practical use of OEP in the fashion luxury sector. Effective use of a variety of pricing strategies can assist luxury firms explore the perceived value of their products

also prices can be set dynamically at different points in time depending on supply and demand (Winer, 2017). In particular, this research has shown the ways in which luxury marketers may utilise heterogeneous pricing strategies in relation to on-line and off-line channels. Exploiting different customers' price sensitivities and a better understanding of consumers purchasing behaviour could inform pricing strategies more effectively. The corroboration of hypothesis 1 and hypothesis 2 mainly lead to the following managerial implications: the model proposed could be a useful tool for analysing luxury firms' strategies both for performing a self-assessment about FBLL and sOEP, for identifying the sOEP strategy of other competitors and for fine tuning the desired luxury level and its consequent odd-even price strategy. Very often pricing decisions in the luxury sector are the results of a composite and managerial process that implies both top-down and bottom-up flows. In this path could occur that the final price of a specific luxury product or service is the result of a multiple stakeholder procedure. The implementation of the sOEP ratio and the measurement of an OEP ratio within the luxury firm management may lead - together with other pricing rules and methods – to increase the level of self-awareness in assuming the right pricing decision and achieving the desired brand positioning. Luxury top managers may decide and control the right level of odd even prices on their area of responsibility, eventually defining in a top-down approach an acceptable range of odd-even prices and then leave the decision of the specific rate of odd even to other actors such as the store managers or sub-managers involved in the price decision process. Luxury managers may take advantage from the knowledge of their specific sOEP and the overall OEP (including one or another strategic group of firms considered relevant by the luxury manager) for actively check and rule their brand price decisions (be placed above-below the OEP level or playing for parity behaviour). The management may then consider the luxury level of the brand and move up or down its positioning with a coherent reduction or increase of odd even prices. Of course the decision of modifying the luxury level of a brand, it is not a sudden or an "ex abrupto" course of action but implies a complex process of repositioning where a coherent mix of marketing stimuli has to be provided to the target customers. However, managers, knowing the

existence of the relationship between luxury level and odd even price strategy, may decide and try to move the fashion luxury level of their brand (FBLL) and consequently change the level of sOEP according to the regression model here proposed. The findings supporting hypothesis 3 generate other relevant managerial implications. Firstly, luxury brand decision makers might check and control eventual channel conflicts and distortions carefully measuring the sOEP in all the channels adopted by the brand and define a price discrimination approach or not. Luxury firms assume different level of sOEP strategy according to the fashion brand luxury levels and to the channel they use. The digital stores are characterized by a high level of clarity, so the price is a relevant component, while the physical stores are more crowded and the prices are less visible. For this reason, luxury firms could differently manage the stimulus of price in order to attract new customers, gain customer loyalty and attract new consumers into the luxury segment. The digital stores are characterized by a high level of clearness, so the price is a relevant component, while the physical stores are more crowded and the prices are less visible. For this reason, luxury firms could differently manage the stimulus of price.

Nevertheless, the models presented have some *limitations*: first of all, the findings are referred to only one category of products, the bags. The assortment of fashion luxury firms is wider and differs from brands specialized for women or for men. Secondly, there are some luxury brands who use the digital store only for show the basic line products, more personalized products are available only in the physical stores, so the price could change. Because this research stream is very novel, many *possible future research areas* are identifiable. Firstly, both the level of odd-even price strategy and the level of luxury fashion brand could be analysed with reference to the variable "sales". This in order to empirically detect and eventually measure a causal relationship between sOEP, FBLL on the quantity sold of a specific luxury brand (higher the sOEP, higher the quantity sold, lower the FBLL higher the quantity sold). Together and in addition to the supply side perspective, further research could directly analyse consumers' perceptions and behaviours (do really luxury customers are influenced in their perceptions and behaviours by odd even prices?).

Moreover, future research could expand this analysis by including other products such as shoes or clothing to discover if the OEP strategy covers all the assortment or whether it is applied only to some categories of products. In case it is present, it could be useful to know if there is the same relationship between fashion luxury brands and OEP strategy. Finally, future research could replicate the analysis in different periods, in order to have a larger dataset to identify price strategies patterns.

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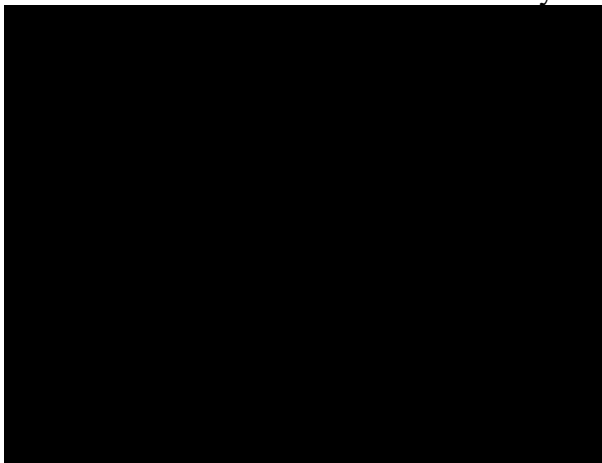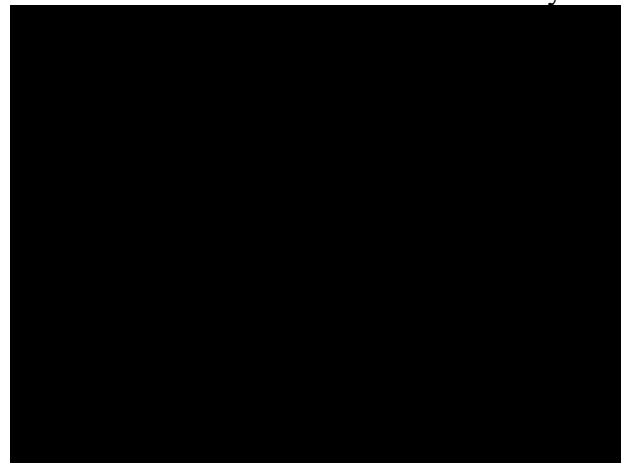Table 1a: Data and main statistics of Study 1

Table 1b: Data and main statistics of Study 2





Source: Authors' elaborations

Figure 1a – Scatterplot and linear relationship between FBLL and sOEP in physical stores
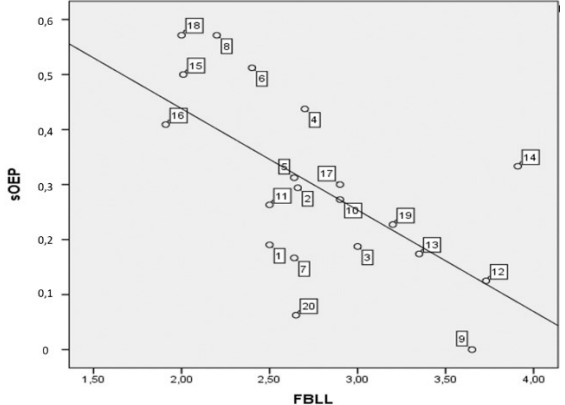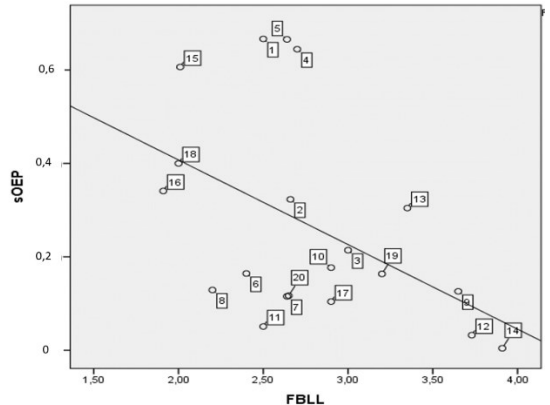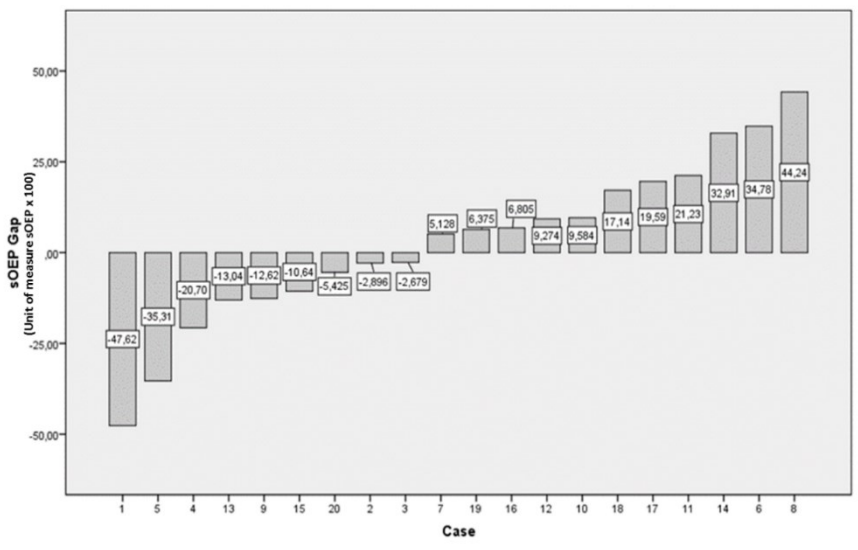


Figure 1b – Scatterplot and linear relationship between FBLL and sOEP in the e-stores



Source: Authors' elaborations

Figure 3 - The gap between offline and online sOEPs (sOEP Gap = $sOEP_{Study1} - sOEP_{Study2}$)



Source: Authors' elaborations