Factors affecting online wine consumption

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ABSTRACT

In this dissertation, the factors affecting consumer behavior while purchasing wine online will be analyzed. First, hints from the literature will be discussed and analyzed regarding new patterns among consumers. Later those hints will be converted in 6 variables aimed to explain the phenomenon from a quantitative point of view, this conversion will be performed using the Eurostat DESI indexes. Doing this, a Person Correlation will be performed to analyzed which factors are correlated to a higher extent to the consumption of wine online. In the conclusion, several considerations, along with recommendations for policy makers, will be made.

Executive Summary

In this brief introduction it is going to be analyzed how to best spur the consumption of a new product in the wine industry in the new business environment of the web 2.0.

I. First, product specificities are going to be reviewed with the literature regarding. Secondly, it will be discussed the online consumer behavior while purchasing wine. Thirdly, it will be analyzed affecting the most consumer behavior: the importance of the website and the importance of bridging with the "Infomediaries".
II. In the second chapter the new phenomenon, addressed in the literature with term "Infomediaries" will be address in detail. The two types of website will be described along with the effects they have on the overall market structure. Also, one kind of these "Infomediaries"- so-called "Clubs" - will be correlated to the wine industry. Furthermore, it will be stressed the dramatic importance of social network activities as they create value for the wine E-commerce as shown in the third chapter.
III. In the third chapter, the test of the both the literature and the hypothesizes will be carried out showing what is vital for Wine E-commerce, taking into account the Variables discussed throughout the dissertation.
IV. In the last chapter, final conclusion will be drawn.

1.0. Literature review

1.0.0. Product peculiarities

Since, as it will explain more in details afterward, wine it is not a commodity product and, on the contrary, has its peculiarities; it is worth mentioning market characteristics and product characteristics common to all its biggest markets; there is to say Australia, EU, and the USA.

1.0.1. Market characteristics – Online and Offline

A various system of laws characterized the offline distribution channel in the USA, EU and, to a lesser extent, Australia. These binds are rooted in the US and EU in Probation Era, in which booze was banned. This shaped the selling process after WWII to these days. Both the offline market and the online market have been affected leading to shared communalities, yet being these environments so different.

For the online, the market both in the US and EU has not grown exponentially as a lot of Business Plans during the "Dotcom bubble" in the '90s, were predicting. Instead, the consumption of Wine, online but sometimes even offline, in some states has been decreasing (e.g., Italy and USA).

Also, regarding the overall market, it has to be stressed that the offline part has not been damaged, so far, by the tidal wave of internet, as other items on the market. It accounts for 2-11% of sales in EU (high standard deviation among different states), 2.31% for the US ,and 6.3% for Australia. Indeed, especially for high-end wineries, there is no dependency on the Internet or Internet marketing strategies for survival. They could sell all their inventory without the need of the mean of the web. The web, in these cases, is redundant and not necessary for their Business Plans so, this innovation does not hit their offline business strategy which has not been changed.

On the other hand, Intermediaries and Aggregators depend on the web just because their Business is born there. Often during the "Dotcom bubble their Business Plans had been deemed suitable and had been backed by Venture Capitalists, but since they were overestimating the market, this was later proved wrong. Moreover, talking about customer reach, pure intermediaries and aggregators are confined to the internet battlefield to find new customers. Even if the web grants them the possibility to reach an unlimited number of customers - there is to say the overall population; nonetheless, the actual

reachable segment is limited to the younger population, even if it is growing in terms of older age segments. Also, the average willingness to pay of the consumers, for wine consumption, is increasing (Johan Bruwer, 2005). This underpins one of the major suggestions for SMEs; while creating a new market, they should try to reach profitability through niche products. Especially building those tied to high-end consumers which not only, they provide higher margins but, it has been proved, they are more likely to be more loyal costumers due to the premium positioning. Even though, as it will be discussed later, this is not always the best strategy on the web since its peculiarity of price comparison. In conclusion, regarding the actors on the supply side, it has to be stressed the fact that this market all over the World is composed mainly SMEs – for example in Italy only 4 companies have an EBIT bigger than 100 million euros. This could be stated checking the Herfindahl Index both in EU and US markets.

1.0.2. Product characteristics

Consumers regard wine as a complex product that requires significant investments in knowledge and terminology, in particular with regard to premium categories. The absence of knowledge or actual information has been proved to be a deterrent of wine purchase online (Bruher, 2005). This concept will be better analyzed assessing the importance of "Infomediaries." The fact that wine is information-sensitive product is shown by these two figures: 40% of consumers seek information about wine and 37% bookmark wine-related website. The web can create a loyal customer base on the "Infomediaries" websites which give informed opinions. Yet, the commercial viability cannot be based on the Infomediaries changing basic consumer behavior, since they can only augment consumer consumptions not create a new one from scratch.

Given that we are coping with the online environment regarding this old product the main characteristic worth mentioning is price comparison, often the motivational reason why a wine website is visited – but this is not true luxury ones. This was noticed by Rasch and Lintner (2001). Also, the online environment is suited for making price comparisons among products. This also gives some credence to earlier statement that wine is a price-sensitive product (Lockshin, 2000). Also, consumer data shows that in the US, and to a lesser extent EU and Australia, most wine is indeed is an impulse buy product and it is consumed within an hour of purchase (Stricker, 2000).

The professor De Figueiredo, proposing a segmentation regarding the types of products suggested that the bottle of wine of being part of two main categories: "quasi-commodities" and "look-and-feel goods." Both of these two require quality assessment by the consumer. The consumer has to evaluate the product according to several dimensions, the professor proposed three: grape, vineyard and year.

During the subsequent acquisition, the consumer deems the product as a commodity in which the main characteristic is now price. The professor draws a line between categories of wine. The process above regards mainly the cheaper categories of wine whereas for the higher end qualities "this process is not always sufficient, as subtle differences require some ‘hands-on' experience, typically in the form of a tasting."

Regarding "quasi-commodities goods" a two-stage approach is suggested by De Figueiredo (2000). In the first step, the company should seek differentiation going towards the ends of the Hotelling space. This can be carried out by meta-search engines that can perfectly match the peculiar taste of the consumer with the particular characteristics of a bottle of wine. In the second step, the firm should try to implement a price strategy along with a differentiation strategy to keep the now existing customer with tools such as loyalty programs to bind and reward her. Along with this, an economy of scale strategy has to be carried out in order to balance the loss for the price strategy (De Figueiredo, 2000). Regarding,instead, the look-and-feel good, the branding strategy is deemed to be foremost important in this case. Since it is able to convey trust and information with the actual lacking taste. In the building process of the brand, companies should focus on the minimization of the perceived risk enacting lenient return and warranty policies (De Figueiredo, 2000).

Being wine a complex good, among scholars there is not accordance if it is suitable to be sold online. While wine is a strongly branded and an internationally traded experience product (Stricker et al., 2001), some scholars claim that this good as a product might not be particularly suitable for online retailing (Richardson, 2002). In fact, while thinking about wine, it should be borne in mind that this item if it is sold online has some flaws. Since it a drinkable substance on the web only two out of the five senses, it stimulates, are arisen, namely sight and sound. Those limitations have to be taken into account while considering a consumer and whether these limitations will affect the purchasing process. This tasting problem creates hurdles during the first online purchase. Due to th lacking of tasting, indeed information asymmetries increase and, along with them, the unwillingness to buy since the quality of the product cannot be assessed.

This impairment in the first purchase has to be inserted in the equation while preparing the online marketing strategy given that this is the leading, which could hamper the subsequent repurchases, nullifying the expected profits. On the contrary, other researchers (Locksin et al.,2000) think that wine is sellable online due to its ability to educate the consumer providing quick information. With regards to tasting notes and the possibility, it allows price and quality comparison. Along with this school of thought, Citrin et al. (2003) pinpointed the importance of tactile input; there is the possibility to handle

the good, and its lack that could lower the rating of buying wine online. Also, Citrin et al.,(2003) tried to characterized those individuals for which the tactile quality was fundamental and, hence, they were affected the most by this deficiency. They found out that women are the segment of the population hit the most by this shortfall. Insofar "females exhibit a higher need for tactility in making product evaluations than males". Consequently, the online wine retailer websites should focus mainly on men and not women since both offline and online market are dominated by male consumption, the online one to even a more extent.

Indeed, the online wine-buyer profile is sharply skewed towards males (68%) in contrast to the average of the online consumer (52%) (Ernst and Young, 2001; Nielsen NetRatings, 2004; Australian Bureau of Statistics, 2005), which could simply be a reflection of the offline (brick-and-mortar) wine market, which undeniably is male-dominated.

1.1. Online Consumer Behavior

1.1.1. Online, the "Long Tail

Since we are approaching the online market. One initial stark change has to be addressed: from mass market and blockbusters, also called "hits," in almost every sector; now, on the web, the market is based on niches of consumers. Once insignificant due to geographically constraints, they were ignored by most of the producers. Instead, nowadays, products in low demand or that have a low volume of sales, can collectively build a better market share than their blockbuster rivals. The "conditio sine qua non" is that their compounded sum has to overcome the blockbuster rivals revenues. This concept has been addressed with the catchy expression developed by Chris Anderson: "The Long Tail."

The term "Long Tail" can be defined as: the retailing strategy of selling a large number of different items, which each sell in relatively small quantities instead of selling large quantities of a small number of popular items (Chris Anderson,2004). According to Anderson who wrote a book on it: popular taste is not real but, instead, an "artefact" created by humans in the quest of poorly matching of demand and supply. This actual mismatch actually represents a market inefficiency; so, in the offline environment consumption is not a symptom of quality and willingness to buy but instead a "familiarity, savvy advertising and broad appeal" (Chris Anderson,2004). This hurdle could be overcome by the web. The concept stated before could be referred to deeming wine, in fact, deem that the web is able to reach the true desires of consumer. Unlimited selection is revealing truths about what consumers want and how they want to get. It turns out that the real demand curve is less hit-centric, as individuals gravitate towards niches because they better satisfy narrow interests. So, wine providers have to adapt to this change and, while selling online, they have to create niches. These products will be targeting only a tiny percentage of the society as a whole, nonetheless, they will create a critique masses to be targeted and be able to provide enough revenues to breakeven. The web offers the possibility to reach a sizeable market all around the world in order to sustain a niche. Regarding wine consumption, this means the most sold varieties are going to decrease as a percentage of the earnings and instead a portfolio of varieties –niches- of wine will keep companies profitable.

Moreover, since the main concern of the paper is SMEs, they should focus on niches also to enter the market inasmuch as main wine hits are not reachable due to production constraints and the incumbents' power on the market. They could exploit this disruptive way of business to shape and address these niches. Otherwise, soon these new segments will be covered by other more tech-friendly SMEs.

1.1.2. Learn from mistakes

The mistake of the start-ups during the Dotcom bubble might have been to wrongly estimate the number and, above all, the age of the consumers. According to the Bruwer (2002), the representation of the online community is not overlapping with the one of typical wine consumer, even though over time these two subsets are converging.

Online presence is characterized by younger age groups while the typical general population is not well-represented. Furthermore, the most lucrative wine consumer has even different characteristics than the one of the general population. His age is typically 55-year-old which is even more underrepresented on the web. In addition, most online wine buyers are, instead, in the 35-44 group. The subset of 18-34, aligned with the picture in direct wine markets, represent only 35% of the all set (Bruwer, 2002).

Also, while discussing regarding the consumption online, the percentage of people actually buying and not merely collecting information is very different from country to country. It is above 70% only in the north of EU and in the richest states of US.

1.1.3. International online consumption

A survey on international online wine consumer indicated that the online wine market remains small, accounting for only 17.2 % of wine consumers, with only a tiny subset of 7.1 % that buy wine on daily or weekly base (Vizu,2007). The majority of consumers maintain an interest in buying more on traditional points of sale, rather than online; only the 9 % claims to shop for wine more often online than offline.

1.1.3.1. Characterizing the online consumer

People who purchase wine offline-online wine can be clustered according to a series of variables regarding their socio-economic status in the manner of "age," "gender," "number of household members," "education level" and, of course, "preferences" regarding wine type.

For Netsod (2008), the typical consumer, on average, is mature, male (84%), well educated, urban, and living in small nuclear with a moderate level of income.

Also, surveys show that the online wine buyer is even more educated and affluent in respect of the normal online purchaser and so this draws hints on the fact that the online buying could be more product category-specific.

One of the features affecting the consumption and the quantity of orders is "age": the average consumer online is 48-year-old and "almost all consumers were middle age" (Nestod, 2008). Moreover, there is medium-positive correlation between the variables "age" and "quantity ordered" - 0.45. Also, Nestod (2008) found a foreseeable positive correlation between "income" and "consumption"; correlation is equal to 0.85 showing at the very end an asymptotic pattern in the plots. The standard deviation is huge, with a ranking of preferences starting from red then white, rosé, sweet, and, finally, Novello. The highest standard deviation - 0.1796 - is performed by sensory attributes (Nestod, 2008).
The quantity of the order has instead a low variance with a maximum of 12 bottles and a minimum 6. This is also due foreseeable quantity discrimination policies from sellers to prompt binge consumption.
To underpin the previous paragraph, an Australian Bureau of Statics survey of 2005, aiming at profiling the online consumer of wine, showed that this was not a heavy customer, as signaled by the number of total transactions which is relatively small.
The average amount spent per order is 79 euros (Nestod, 2008). This is interesting because in the offline market according to the Australian Bureau of Statistics (2005), the average amount spent per purchase was less than 60 euros (Nestod, 2008). Two things are worth noticing: the offline purchase is more well-distributed among the population so also lower income segments buy it, lowering the mean. Secondly as stated before, the cost of shipment creates a very big hurdle to be overcome while purchasing this type of booze online; so, buying massive quantities is a normal way to smooth this shipment burden along several bottles; thus, reducing the cost per bottle. Talking about speed delivery, 70% received the shipment within three days after the transaction and 88% within a week (Nestod, 2008).

1.1.3.2. Latent Reasons to Buy online

The main factor behind online wine consumption is an "extensive prior exposure" while surfing on the web. Ease of navigation is also an important aspect among wine websites. The most impeding fact is risk perception, related to the security of consumers both on personal and financial way.
Furthermore, from a survey - conducted among Australian Consumers in 2000 - Bruwer et al. - the reasons that abduct people from the traditional offline channels are: convenience of easily accessible online shops, broader selection of wine - as noticed by Chris Anderson - and lower prices as the internet reduces the Hotelling space (Fortson, 2007). On the other hand, reasons that keep consumers away from online communities are twofold. First, the lack of trust in the seller website due to transaction unsafety caused mainly by frauds and identities' stealth - 12% describe the internet

environment as "not really safe"(Sultan and Mooraj 2001). Second, according to Bruwer (2005), for 46% of them, the forestalling factors are: shipping costs, time and, only for the US, problems to be identified as eligible to purchase booze due to highly regulation. This explains why most visits were made on a monthly or bi-annual basis. In chapter 3, this aspect will be evaluated with the variable "Individuals whose frequency of Internet access is at least once a week." Here a change in the behavior will be addressed, more recent data points out at reduction in the quantity per purchase and a more frequent repurchase.

1.1.3.3. Suggestions for SME

From these hints early suggestions for the SMEs could be drawn.

Firstly, as SMEs, a substitution strategy with the objective of reaching existing online customer segments is advised in lieu of an expansion strategy owing to the limited consumer market,

This online business sector is not exempt from the necessity to tie the abstraction of the business model (architecture, goods, services, information flows) to a marketing model; there is to say Branding.

Secondly, try to lower transportation fees form at the least from the very beginning -the first purchase. This is due to the fact that the internet environment has a conditioned probability law that leads to monopoly, so getting the early consumers is more difficult than the late majority (Moore, 1992).

Thirdly, try to make the variety the widest possible to attract the more niches available, creating a portfolio of brands.

Fourthly, the online market as a whole has to overtake and over-pace the analog one; so, price has to be lower to bait consumers. This is also due to lower switching cost and more reachability of websites that reduces the bargaining power of companies increasing rivalry driving the price to marginal cost.

But a word a caution has to be inserted; thanks to versioning, customer actually ends up with a smaller Consumer Surplus (Varian, 2012) even though the "consequence of better profits margins is the reduced transport and packaging costs" (Jarosz, 2008; Aguglia et al., 2009). In such wise, both factors have to be handled properly.

Fifthly, further suggestions could be extrapolated from the fears that keep consumers away from the web: improving safety of the transaction.

So, try to make the trademark recognizable and trustable-there is to say focus on Branding. Consumers should be compelled when purchasing. As De Figueiredo (2012) said the look-and-feel good feature is a determinant for the first purchase paving the following expected cash flows.

Sixth, try to improve the quality and, eventually, the price of the bottles since the positive correlation among consumption and customer education and income. In fact, "price does not play a prominent role in the choice of high-end products consumers" (D'Amico, 2014). Experiments show that after consumption evaluation is the main variable taken into account by the loyal customer base to repurchase.

In conclusion, it will be analyzed in the in the following paragraph the website functionality as the main driver among competitors in the online environment as explain by Bruwer in 2005.

1.2. The Website and its importance

1.2.1. Problems

One of the problems the all online wine retailers should aim at solving is to provide a customer-oriented interface. This feature is still currently lacking among most of them. Wine indeed, being a complex good, need an intense brand strategy. This brand strategy has been proved to increase willingness to pay and loyalty. It should convey an experience while buying wine online. Yet, nowadays, still, even the biggest platforms lack of a mobile compatibility or mobile friendly interfaces even being mobile the main mean for internet connections.

Along with it, the website functionality is of supreme significance for the thrift of online wine retailers. This is a long-time legacy from the "Dotcom Bubble," it reads "the site had not been properly designed from an E-commerce perspective" (Miles et al., 2000). This has been slowing down the adoption of this new technology for agricultural products.

Two are the keystones regarding the overall industry infrastructure that support the online wine behavior: navigability speediness and product information. Stating these, in the quantitative part, the variables picked out to analyzed these features will be two, "Standard fixed broadband coverage" and "Mobile broadband take-up" and a weak/moderate correlation will be shown. Also, about the first problem, it was stated that: "Slow navigability presented itself by far the most serious of the issues, receiving a high factor value of 40%" but looking closer at the data provided for the three markets analyzed this issue has been solved - all EU countries have a Broadband above 90%. This, in fact, will be proven no more relevant for the industry. With regards to the second aspect — the product information — in the '00 was stated that insufficient product information appears to have affected 29% of the consumers, then, it was clear that the retailer could have been improved not only the technology aspects of its wine website.

It has to be regarded of paramount importance for this complex type of good. A possible solution to this problem has been shown by Australian firms in the 2000. Whereas the US counterparts were failing, the Australian Wine E-commerce kept the pace paving the way for a new way of doing business.

Their pillar was producing information and sharing them. This has been through the, below better-explained "Infomediaries." They create communities which shared information and opinions on yards and price/quality — it should be kept in mind that the internet medium, even for high-end products, is characterized by price comparison. This aspect will be analyzed from a literature review view in the

following chapter and from a qualitative point of view in the third one, using as a proxy the variable "Individuals used the Internet to participate in social networks." The most symptomatic indicator that online buyers either identify this environment as highly risky or are dissatisfied during the purchase process is also signaled by the high cart abandonment rate of shopping carts. This phenomenon is global even though the abandonment rates show a very high variance but all countries are above 50%, for example, Israel, with a 53 % rate, Australia 75%, USA (78%), and UK (79%).
The reasons behind all these were - according to Ernst and Young (2008): price check (40%); shipping cost too high (38%); changed mind (28%); price too high (24%); checkout process long/unclear (14%). Customers' cost sensitivity is clearly outstanding as the main latent factor resulting in internet shopping cart abandonment. Briefly stated, online shoppers' high degree of financial risk perception manifests itself in their high propensity to abandon shopping carts (Cases, 2004).

1.2.2. Suggestion for SMEs

The following marketing mix perspectives are therefore prevalent in the online situation regarding website (Constantinides, 2002):
First, regarding the product, the website itself is the prime online and brand image for the online organization. Secondly, concerning the price, most websites function as price lists for the organization's physical product assortment. Thirdly, regarding promotion: the website is the promotional medium as well as promotional content. The internet shopping mall shares a number of similarities with traditional bricks- and-mortar retail stores. In bricks-and-mortar or traditional retail stores, the shopping atmosphere can influence the levels of retention, in this case browsing, purchase intentions and shopping time. In fact, in-store atmospherics such as lighting, colors or music can significantly influence the emotions of shoppers and affect their behavior (Menon and Kahn,2002). Businesses need to become more strategic in using the internet to cement relationships with their customers and attract new ones. Fourthly, the place: the website is, sometimes simultaneously the helpdesk, counter and sales outlet where the actual transaction takes place. This is deemed wrong: since a website can be either transactional or informational in terms of its main purpose. When a website is both of these to an equal extent, it runs the risk of not being well-positioned from a customer satisfaction point of view. The primary goal of only E-commerce website is hence either facilitate economic actions or to provide information (Miles et al., 2000) not both. Wisely picking the first, the complementary task has to be carried out by the "Infomediaries."

2.0. Infomediaries

2.1. Introduction

As it will be stressed more, being one of the variables in the following chapter, the importance of creating awareness of wine brands is paramount important for this type of product. Wine is a complex product which needs to be known and understood otherwise easily confusable.
As Plassmann et al. (2008) said, this type of good is easily manipulated. Labelling differently or changing its price, it could misguide consumers making them also perceiving a different taste and having a different propensity of repurchase. This is dramatic important for online wine sellers. They have to be bailed out by this new type of website which provides information either by creating a community or in the form of a journal. Since they are defined as information intermediaries, a nickname was attached to them: "Infomediaries."

2.1.1. Definition

They were described by Sawhney in 2003 as "knowledge brokers" that function as aids for companies to overcome mismatches concerning knowledge. Customers needed an independent effective communication which was impeded on the seller website for reasons of trust. This interaction is indeed twofold; composed by and indirect and a direct way of connection between demand and supply. Information from the indirect side of customer-interaction. The direct side, the selling channel - the profitable part of the interaction - is beyond the scope of this chapter and it will not be taken into consideration here. On the contrary, the aim of the indirect education providing side has been helpful to fully exploit the Internet as an enabler of knowledge about wine. Being an essential part of the communion, its lack was, indeed, one of the main reason of the tumble of platforms during the "Dotcom bubble."

2.1.2. Characterization

The Infomediaries in this industry are vital as in others (e.g. fashion industry). Their main objective is to create a community of consumers. According to many studies, this community must follow three main aspects to gain the trust of the members.
First, there should be an alignment of shared values. Secondly, a significant investment in the community by the company is needed, and thirdly a provision of an identity for the community (Giarrattana, 2013).

For these reasons, it is suggestible that Infomediaries should focus only on information transfer. The selling aspects have to be kept apart to avoid being perceived as deceitful. The community also is an abundant source of knowledge for companies which could fine tune their products, create new segments or drop lines in order to align and to better pinpoint members of the community. In short, communities could take a large part in the innovation process (Giarrattana, 2013).

Also, it has been proven that being a signal product for the community its life-cycle is longer and its margins are higher (Giarrattana, 2013).The first ones to apply this twofold approach were the Australian companies, nowadays all the major platforms in biggest producing countries are unfolding this strategy. This approach could be performed by involving either to control those knowledge brokers or providing direct links on the selling mean, if those points of contact are carried out by third parties. Australia, as mention before, is a drastic example of what Info-mediators could achieve since the consumer in this country were not aware of wine before 2000 whereas, nowadays, the consumption per capita of wine in Australia is higher than most of EU countries, bypassing even those states in which wine is a beverage complementary to the meal - such as Italy.

Online Infomediaries in the literature have also been split into two main categories based on the choice of the type of information they provide to their users.

The first one gives merely a price comparison among websites. The main object is to strengthen the competition and, following the aforementioned Hotelling model, to reduce the space between the two ends up in an increasing competition which dumps prices. Indeed, Baye and Morgan (2001) found out that creating a market crowded by for price listers leads to more competitive pricing by firms from which those prices are taken.

The most famous ones are those related to flight tickets. Nonetheless, being wine not a commodity, like plane tickets, it is really difficult that this type of Infomediaries could thrive in such environment; or at least in regards to the first time purchase according to the De Figueiredo model.

The second type is more in tune with the characteristics of this good since they "provide significant product related information." Here, Infomediaries could create their community either in the form of blog or social network. The effects on the price and the margins, here, is not that straightforward and the relationship is more complex. For instance, Alba (1997) and Lynch (2000) asserted that reducing product related search costs can increase consumers' willingness to pay. This is dramatic important for the wine industry: being a complex good, it could be carried out as a luxury good widening the margin for retailers. Eliashberg, and Shugan (1997) also stated that this could increase sellers' revenues. On the other hand, these clubs could also harm companies' revenues with bad publicity or simply imposing

new trends not encompassing the varieties of wine previous en vogue. This patter has been found out by von der Fehr and Stevik (1998) which noticed both effects: for some an increase in price, for other a decrease and a fallout from the market. For this second type of Infomediaries a Community Focus Strategy has to be suggested.

2.1.2 CFS

In this brief section, Community Focus Strategies (hereinafter CFS) will be addressed; community will be characterized according to the Fosfuri-Giarratana-Roca four community paradigms. Focusing only on one, it will be defined, characterized and appropriate measures will be suggested to address this type of community.

The Authors described four types of communities, created from two dimensions: "Congruence of Firm-community values" and "Power over the identities of the target community"; both these dimensions are binary: showing discrete values: low and high. According to the literature, better explained later, the "Identity-creation CFS" has been picked put as the most effective one for the Infomediaries which can lead a competitive advantage.

First, "Fosfuri-Giarratana-Roca Paradigm" defines a Community following the path of other researchers whose concerns were drawing attention both on social identity theories and strategy theory. In this domain, a Community is described by Calvano et al. (2008) as: "Any social group in which perceived membership offers a sense of inner identity to the individuals who see themselves as a part of that community." This community can and should be targeted by a company that with concrete actions, deemed utterly important, and advertises could align with such low variance cluster of people.

CFS was described as: "Set of action activities policies that firms undertake to established connections for relational links which one or more targeted communities of potential customers"

The CFS was chosen for Infomediaries is the "Identity-creation CFS" in which "Congruence of Firm-community values" is low whereas "Power over the identities of the target community" is high.

Thus, this type of CFS has been chosen for two main reasons: the salience is low due the fact the both the consumer does not think the product as extremely important and as a definer of his identity.

This cannot be a CFS "Identity enhancing" due to the fact the both the values and symbols are not yet in place in the group. The company creates them giving them value.

The second reason for this choice regards the power of the Infomediary on the community due its heterogeneity; regarding this issue, the power of changing the products in which the community identifies itself could be greatly yielded. This owing to the fact that this product is difficult one and the

community does not know the product as well as the expert running Infomediaries websites. The company not only signal is alignment but can also guide the community where it wants creating trends among its members.

Talking about Wineries Communities various suggestions have been made in order to Manage those communities. Teaff in 2005 decided to characterized those strategies in order to implement a customer-oriented website to increase loyalty and expected revenues in the future. He noticed that, nowadays, thanks to Big Data every single consumer can be profiled and classified according to several criteria prompting direct marketing, providing them with peculiar treats.The author proposes a three-folded division of the possible choices to "develop long term relationships with customers instead of just securing one-time transactions." These choices were cherry-picked from more than 2000 stores in the USA.

They are, namely, the Structure, the Benefits, and the Terms and Condition. The most common according to the authors are the Benefits granted to the members the community. Indeed 17 were listed. The first subset is the so-called Structure of the Club in this paragraph the author mentions elements already took into account in this dissertation as tested afterward. They are : price strategy, pace of shipments, number of items in this shipments and as noticed before Brand loyalty. Teaff deems extremely important to emphasis the brand to the extent to suggest to "Include a generous use of brand images, logos, and other brand extension messages on the wine club brochure." The object is to make the brand unique and different the club, gaining a competitive advantage.

Talking about the most common club member Benefits, the 2005 study found: discounts on purchase (adopted by 97% of the clubs), special events invitations (85%), correspondence (71%), complimentary tours (61%), access to wineries (56%), VIP status (36%), Personal service (26%), Membership (9%).

The last subset, the Terms and Conditions, is the section which is very biased toward the US market and its peculiarities (e.g. mandatory adult signature and age-requirements) that will be not discussed. On the contrary the actual seller, not the club has to Adopt different strategies. Several measures have to be followed. First, an alignment between the actual seller and the Infomediary is extremely important. The Infomediary can either forestall or prompt its growth. Second, as stressed before, no formal ties have to be made between the counterpart. In order to lead the community trust has to be kept. So, members should not perceive of being deceived but instead part of a community and its identity co-creator of its identity thus stimulating identification. Thirdly, regarding getting the competitive advantage CFS identity-creation convey a greater level of legitimacy; there is to say:

reputational capital. These relationship base is a valuable and rare intangible asset and, thus, more difficult to imitate or substitute.

This deeper integration between the firm and the target community is characterized by idiosyncratic and path-dependent relations. The company should exploit its position creating, or better co-creating product which defines for the community; those items have been proved to provide higher margins and longer life-cycles.

But, these strong ties are also a threat to the company. This shared-identity inevitably will change over time, the company has to secure its position, for example diversifying the portfolio of wines, to avoid being entrapped and, thus, losing the community.

In the last chapter, this aspect will be analyzed by the variable "Individuals used the Internet to participate in social networks" since it has been proved that people who are more involved in social media tend to engage more in new communities especially those who share with them interests, concerns or values (Giarrattana, 2013).

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3.0. Results from correlation and regression

In this final chapter, it is going to be tested the assumptions on what either prompt or hamper the most wine e-commerce. Each aspect discussed in the 1.1.3 and 1.1.4 will be characterized by a quantitative variable provided for 14 of 28 EU countries by the European Commission DESI database.
It will be shown which the aspect of the web is correlated the most with "wine e-commerce." Based on this correlation matrix, there will be drawn further suggestions. Since these variables, that will be assigned to each behavior, are subsets of bigger indexes, the regression will be performed using this aggregate indicators (there is to say DESI2 and DESI3). The results will help us to suggest further actions according to the other variables also contained in this bigger indexes but not directly encompassed by the theoretical background analyzed in the first chapters.

3.1. The independent variables

Now all 6 independent variables - listed below – will be described and the motivation of their selection will be discussed. Along with it, the particular breakdown, if chosen, will be described with the reasoning leading to it.

3.1.1.

According to the lists of the hurdles blocking consumers from buying wine online and the high rate of cart-leaving consequences, there are: slowness of Internet and its insecurity during the transaction process. For characterizing this phenomenon, two variable were taken into account. First, "Standard fixed broadband coverage." This dimension presents a lot of similarities among EU countries since all the countries score above 90% in this feature; so, the variance – the knowledge behind – is not that much. So, in order to fill up this gap, a similar variable was added: "Mobile broadband take-up." This allows augmenting the variance due to the presence of a higher discrepancy among states. Also, this variable is very important to capture the future of wine sold online owing to the fact that, nowadays, in EU internet surfing is performed more from mobile phones than landlines. The percentage of internet access by mobile overran the landline in 2014 and this trend seems to be irreversible.

3.1.2.

One of the aspects, underlined the most in the literature review, was the rate of consumption of wine. Since this is now an impulse consumption of a small quantity (the 1st quarter and 3rd quarter are

among 6-12 bottle per shipment). It is important if consumers access the web frequently in order to fulfill this sporadic desire. So, the variable "Individuals whose frequency of Internet access is at least once a week" was taken into consideration. The choice was between two breakdowns: the age 44-54 and the urban area in respect to rural areas. To avoid collinearity only one of this breakdown was chosen. The choice was cast according to the more informative one as since the variance of the first one is 8.12, the second one 12.01, the latter was picked out.

3.1.3.

Throughout the dissertation has been underlined that there was a positive correlation between the availability of "Infomediaries" and the technology infrastructure provided in a certain country. Furthermore, Australia provided drawing hints from its ability to overcome the tumble of the "Dotcom bubble" and paving the way of e-commerce in the USA to recover from the plummet of the 2000.
It was stated on several occasions that the true capability underpinning success was to educate in the first-place people of this ‘new' type of beverage. One of the major factor underling the pick out of the platform was their capability to create a social network so called ‘community" on the website. So, in order to see, among EU countries, the propensity of the people to join "club online" or, differently stated, social network, it will be analyzed the variable labeled "Social Networks" defined as "Individuals used the Internet to participate in social networks." This variable has been collected through a survey carried out by Eurostat in 2016. From this indicator, it will be considered one of his breakdown, the population 44-54 which has been shown in the literature to be the most lucrative segment of the population and the one not yet fully adopting internet as a medium for buying alcoholic beverages; indeed other segments convey small variance.
Indeed, it was stated that consumer consumption was crushed the most by insecurity in the transaction process, Internet slowness and that not all the population being well represented on platform – only young tech savvy in comparison with the fact that the offline market is mainly populated by middle age between 50-64.

3.1.4.

As stressed in the first chapter, the wine industry is composed by mainly SMEs enterprises which very few company who exceed the 100 million in revenues. So, it is worth adding the dimension of the percentage of SMEs actual selling online in the EU countries, using the variable "Enterprises selling online (at least 1% of turnover)". This variable is a proxy of the easiness of building enterprises online

and exploiting this new technology. Countries scoring the least in this dimensions are also those who sell the least according to the variable "Wine e-commerce." Countries performing badly on this dimensions are those in which hurdles from both a legal and infrastructure point of view are in place. The breakdown chosen here was the "Manufacture: food, beverages, tobacco, textile, leather, wood, paper; publishing and printing 10+" since one type of beverages - wine - is the aim of the dissertation. Furthermore, it has been stated that only few SMEs were selling online since their storage could be emptied using only the traditional channel, so for the inception of a wine e-commerce market, the country wishing to widen this sector has to score high along this dimension.

3.1.5.

Finally, the variable "Individuals who ordered goods or services online" was used since this is the most critical one. As stated on several occasions, the shipment costs are scoring as second for the unwillingness to buy wine online. Furthermore, there is the first reason from cart-dropping in the momentum of purchase.

Indeed, one of the suggestion prompted to SMEs was to lower, at least at the very beginning, the shipment costs whereas the time lapse between the online purchase and the actual delivery was not that important since the Australian survey was not ranking this as a major issue for buyers.

No breakdown was chosen for this variable since this problem concerns all consumer as whole not a sub-segment of them.

Finally, this last variable addresses the lack of certainty of people buying online in the countries analyzed. The figure, back in the '00, was 1 in 2 not buying. Now, the pattern is different with a huge variance. Some of the countries taken into consideration score more or less the same as the 20 years ago. Others, especially in the north of EU, have abundantly jumped this hurdle and can reach a level around 70%.

3.2. The Independent Variable

To prove the point, it will be calculated the Pearson correlation for EU countries along the 6 main dependent variables listed above and the independent variable "wine e-commerce".

The building process of this independent variable has taken two normalizations described below.

The raw coefficients were provided by "Confederation of British Industry" in the annual report of 2016. In this report the relative percentage of wine e-commerce for a selected list of countries of the

European Union was listed. Further, raw figures were inferred using the "Wine Annual Report and Statistics" report by the professor Ornella Bettini. The total volume took into account is equal to 52.70% - of the total EU wine e-commerce. Even though this percentage could seem low, the four biggest EU producers are included (there is to say Italy, Spain, France, and Portugal).
The figures are in the form of percentages but this does not affect the analysis since the relative figure is what matters as unit of measurement.
In order to carry out the correlation, the figures of the dependent variable cannot be taken as they are but, instead, two normalization has to be performed regarding both the population and its habits.
The first normalization was performed according to the local population since it would make no sense to compare the total consumption in states with huge population differences.
The second normalization of the data has been done according to consumption pro capita of wine in the countries under analysis. For this second process the coefficients were provided by World Health Organization for 2016 consumption of wine per capita. This adjustment was necessary because as stressed in the second chapter, for this particular type of good a culture behind has to be built or has to be latent. The case of Australia is emblematic, the work of the Infomediaries allowed the county to become one of the biggest market in term of wine churning consumer from beer to wine. The Infomediaries prompted the increase in the consumption per capita reaching EU levels. These two normalizations could be found in TABLE I in the Appendix.

3.3 The correlation

For the independent variables, it has been used the dataset provided for the 28 EU countries is the one from Directorate General of the European Commission which provided on an annual basis the DESI, The Digital Economy and Society Indexes. The dataset used regards only 2016.
Below the sum up of the variables and their codes.

"1a1" defined as "Standard fixed broadband coverage"
"1b1" defined as "Mobile broadband take-up "
"2a1" defined as "Individuals whose frequency of Internet access is at least once a week"
"3b2" defined as "Individuals used the Internet to participate in social networks"
"4b1" defined as "Enterprises selling online (at least 1% of turnover)"
"3c2" defined as "Individuals who ordered goods or services online"
The dependent Variable "Wine e-commerce" constructed as described above.

Hint will be drawn from this correlation matrix to suggest SMEs

	Wine e-commerce	1a1	1b1	2a1	3b2	4b1	3c2
Wine e-commerce	1.00						
1a1	0.34	1.00					
1b1	0.25	-0.36	1.00				
2a1	0.54	0.39	0.40	1.00			
3b2	0.49	0.26	0.08	0.42	1.00		
4b1	0.62	0.38	0.20	0.87	0.56	1.00	
3c2	0.35	0.35	0.24	0.90	0.37	0.82	1.00

The correlation matrix using the Pearson coefficient, it is possible to see that regarding the wine e-commerce is positively correlated with all the variables taken into account. This is a proxy for stating that all the dependent variables chosen are important, with different degrees, to wine e-commerce.
The variable correlated the most with "Wine e-commerce" is "Enterprises selling online (at least 1% of turnover)". This proved our point about the composition of the market, both online and offline, it is composed mainly by SMEs. The more are they prone to be online the better is scoring the country. So Governments which wants to catch this wave have to light the burden of SMEs going online.
Regarding the most correlated ones, it can be seen that second highest scoring one "2a1". This allows to state that, being a Wine e-commerce a market built mainly on B2C, consumer access is untimely important. To this respect Poland, Italy and Spain, scoring the least on this dimension, are also those with the least readiness wine e-commerce.
This variable, indeed, is– 0.90 - the most correlated with another variable, 3c2, which is the fourth most important factor characterizing Wine e-commerce.
"3c2" described those individuals who frequently surf the web with the aim of purchasing goods, in our breakdown there were looking for edible or drinkable items. This high correlation could be explained stating that those ones who access the web frequently show more confidence and thus they are more prone to buy online even this breakdown, the least developed among goods bought online.
These two correlations can convey important suggestions for lawmakers who want to prompt this behavior. An environment in which consumer usually surf on a daily basis is also very useful to build online market for wine consumption.
Two aspects affect the most those variables are the broadband coverage of the area and the security of transaction. There is a positive correspondence regarding safety in consumption and the actual purchase. As discussed at length before, the wine being a "complex" product is affected the most by the

fear among consumer of being scammed. So, online trust, in the form of reimbursement or quality check - as suggested in the literature - has to be built by platform or SMEs selling wine online.
Also, 3c2 is "Individuals who ordered goods or services online," still nowadays all around the World, and even within EU, this percentage of people who actually buy online is still ranking low even in the most developed countries.
The third most correlated variable is 3b2 there is to say people who engage in social networking activity. As stressed in the paragraph regarding the need of Infomediaries. This figure proves that in an environment, in which online web community are flourishing, it is possible to exploit this for marketing purposes. It is possible to build "Community Focus strategies" in which the network behaves as a community which related and identifies itself with a certain product.
This community is a "bridge for knowledge" to convey information for this complex type of good. For example, the ItalianWine.com – the biggest online wine e-commerce in the USA - has a 'Club.' This Club worked as a blog in which customers could share information and opinions regarding the various yields and the type of wine in respect of quality and price. Furthermore, in order to lead the community the club also presents every bottle with a professional review by a sommelier.
All the dependent variables were subsets of bigger indexes, this belonging is indicated by the first figure of the label. Since the three most correlated indexes were subsets of a overall Dimensions DESI 2 (2a1) and DESI 4 (4b1): an overall correlations between the "Wine e-commerce" and these two aggregated dimensions is worth tried. Also, based on these, a regression could be carried out to have more hints on the subject. Since DESI 2 and DESI 4 contents other variables is worth explaining the phenomenon

a. The first dependent variable is "Human Capital" = "DESI 2" defined as "The measures the skills needed to take advantage of the possibilities offered by a digital society. Such skills go from basic user skills that enable individuals to interact online and consume digital goods and services, to advanced skills that empower the workforce to take advantage of technology for enhanced productivity and economic growth.
b. The second dependent variable is the "Integration of Digital Technology and Businesses" = "DESI 4" defied as the "dimension measures the digitization of businesses and their exploitation of the online sales channel. By adopting digital technology businesses can enhance efficiency, reduce costs and better engage customers, collaborators and business partners. Furthermore, the Internet as a sales outlet offers access to wider markets and potential for growth. eCommerce by SMEs

also grew slightly (from 15% in 2014 to 17% of SMEs in 2016). Nevertheless, less than half of these companies sell to another EU Member State.

3.4. The Correlation

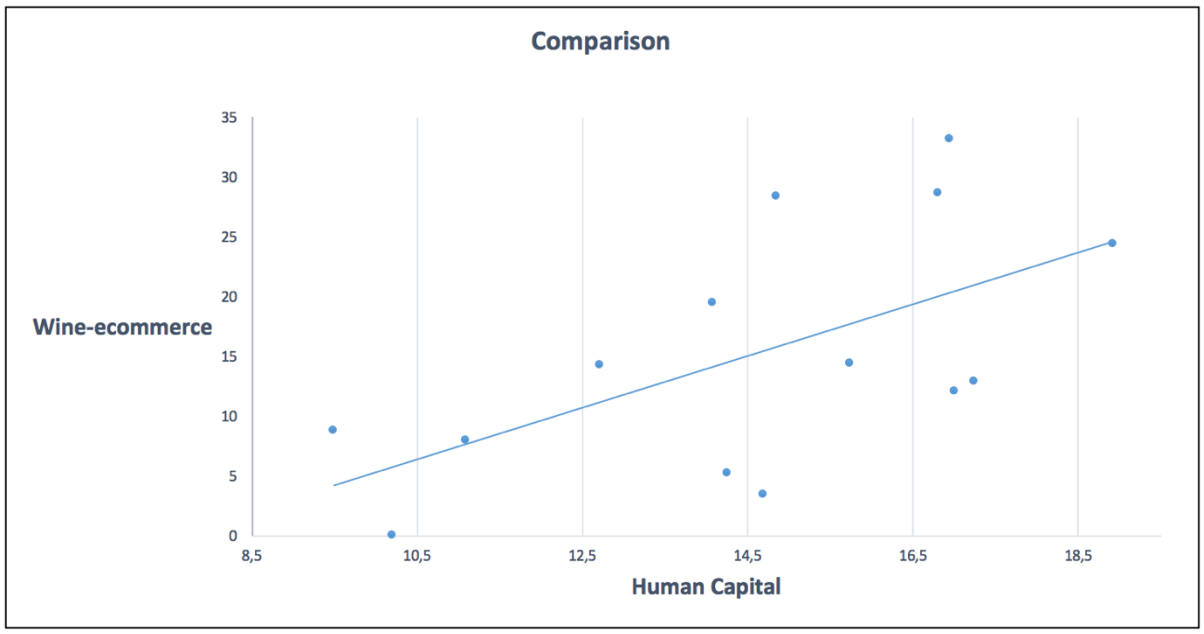
Having normalized the independent variable, it now possible to compute the correlation between respectively variable “Wine e-commerce” “Human Capital” and “Wine e-commerce” and “Integration of Digital Technology and Businesses”. The correlation matrix is provided below.

	Wine E-commerce	DESI 2	DESI 4
Wine E-commerce	1.00		
DESI 2	0.60	1.00	
DESI 4	0.49	0.65	1.00

From this first table some hints could be drawn. The correlation between the “Human Capital and “Wine e-commerce” is very strong. It could be fairly stated that 36% of the variance of one variable explain the variance - there is to the knowledge - behind the other.
This is not a surprise since the consumption of wine requires active and willful consumers rather than a online-ready businesses. It is worth remembering that in the 2000 tumble the culprit was not the lack of infrastructure rather it was a widespread disillusion in the consumption.

3.4.1. The Regression

Since we have two independent variables DESI 2 and DESI3 a multiple regression could be carried out. The first regression due to mainly collinearity between the two independent variable is not useful. The F statistics is relevant but the p-value of all the factor is bigger than 0.05 due to collinearity. As STATA suggests one variables has to be dropped and, since DESI2 is the most explanatory one, DESI3 will be dropped. Thus, this second regression, on the other hand, is meaningful: the F-statistics is 0.04 and the p values of the dependent variable is less the 0.05.
Below the scatter plot of DESI2 and the normalized values of wine e-commerce.



It can be seen a strong linear correlation, few are the outliers, to better fit the graph a higher degree equation could be deployed but it could run the risk of over fitting the data losing its capability of predicting for an informed country volume of sales. In the Appendix, the residuals and their normality are shown along with the two run regression outputs.

Since DESI 2 is the most important and significant (p value <0.02**) predictor for wine e-commerce, it worth mentioning all the other variable in this compounded index and see their correspondence with the literature reviewed in the two chapters. The index as two major components "As" and "Bs."

"Bs" is out of the scope of this discussion since it regards the knowledge at basic and advanced level of building website.

"As," on the other hand, is in line with our focus, being the consumer the aim of the wine selling process.

The complementary part of 2a1 the variable analyzed above is 2a2 defined as "the overall indicator an individual has to have basic or above basic skills in all the four Digital Competence domains included in the index: information, communication, content-creation and problem-solving." This strengthens our recommendation, the failure of 2000 during the "Dotcom bubble" and the lack of wine e-commerce in the south of Europe is mainly due to the lack of basic skill with computer that impedes digital enterprise to flourish.

4.0. Concluding remarks

In this final chapter, some questions will be posed and relatively answers will be given consistently with the two theoretical chapters and the qualitative one.

- Question 1: Which are the factors discouraging consumers the most with regards with wine consumption online?

Hypothesis 1: The factors discouraging consumption are regulation, the overall malfunctioning of the structure regarding connectivity both on security and speediness.

Answer 1: Regarding the first no data were provided but an interesting phenomenon could be mention to address them. This concerns US state of California, this state has witnessed a remarkable increase in wine e-commerce since Jerry Brown, the governor has developed a deregulation agenda to ease the selling of booze along with a higher taxation.
Regarding the second aspect, the quantitative analysis showed that the literature was right but only to some extent. This is due to the party solved slowness of the internet – now broadband is in all analyzed countries covering more than 90 % of the population. On the other hand, the cyber security remains an issue. Indeed, this factor is behind the correlation between "Individuals who ordered goods or services online" and "Wine e-commerce" in 2016.

- Question 2: Which are the factors encouraging the most consumers to buy wine online?

Hypothesis 2: The factors prompting consumption are knowledge about the wine, the alignment with Infomediaries and the daily access of consumers.

Answer 2: With respect to factors encouraging consumption of Wine. There are two main factors who have to be dealt in different way. It has been asserted that information is the key for this product not known at large. As been stressed on multiple occasions, in order to hone their strategies the companies must align their products with the ones suggested by the Infomediaries, there is to say the ones praised within their communities. By doing companies could keep up with the speed of change and they can avoid being disrupted. Also the fact that the online consumption of this item is not heavy, a continuous interaction has to be kept alive.

This latter factors: social communities and daily access have been tested giving extremely positive results. The correlation is at the peak talking about social network activities and online wine consumption. This proves the hypothesizes listed in the second chapter.
The second treated variable has been the frequency of access by the population in a country also gave a positive feedback.

- Question 3: Which could be further suggestion to prompt wine e-commerce for a policy maker?

Hypothesis 3: In order to increase the volume of Wine E-commerce, Governments have to improve the Human Capital variable of DESI index along with lighting the burden of SMEs going online.

Answer 3: It has been shown that, nowadays, one of the problem concerning scholars in the previous decade is no longer an issue: there is to say widespread of the broadband. But, as underlined in the second regression that a significant positive affection between advancement in "Human Capital" and the "Wine e-commerce". People's pattern, those more educated about the web, could be better targeted by wine e-commerce companies. These aggregated variable regards the society at large encompassing both who build website – SMEs selling online - and who shops on them. A mayor developed country on this aspect will have a stronger e-commerce market in general, no matter the item, insofar increasing the wine sold online.

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Reports

- CBI Product Factsheet: Online market channels for wine in Europe ,2016
- Quali prospettive per l'eCommerce del vino in Italia? Analisi dello scenario di mercato, maggio 2016 Svinando Wine Club, 2i3T

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Data

- ec.europa.eu/digital-single-market/digital-scoreboard
- ec.europa.eu/digital-single-market/en/desi

APPENDIX

TABLE I

Country	Percentage of EU wine e-commerce	Standard fixed broadband coverage	Mobile broadband take-up	Individuals whose frequency of Internet access is at least once a week	Individuals used the Internet to participate in social networks	Enterprises selling online (at least 1% of turnover)	Individuals who ordered goods or services online
	Variables	1a1	1b1	2a1	3b2	4b1	3c2
Finland	0.01	96.982	147.184	91.0277	42.6962	22.9489	49.7286
Denmark	0.03	99	123.366	94.3402	60.2346	37.2512	79.1138
UK	0.11	99.9777	91.37	92.9212	54.3825	35.4145	81.4577
Switzerland	0.05	98.25394655	89.79465517	91.31911034	71.29	34.80390517	80.0532569
Germany	0.03	98.3	73.3076	86.5994	33.8055	23.655	71.9115
Netherlands	0.03	99.998	84.5826	92.0147	48.5072	27.2313	69.1011
Belgium	0.03	99.925	67.8147	83.9933	65.7377	31.8151	52.3923
Austria	0.03	99.2497	77.2326	81.8069	27.9032	28.9152	49.0057
Sweden	0.017	98.9725	119.849	90.958	59.5335	35.9365	73.5059
Poland	0	86.1741	114.557	69.8938	34.5744	11.9978	36.0039
Italy	0.08	99.27	85.4468	66.9073	37.6688	6.4953	30.7915
Spain	0.05	95.0557	86.2559	76.4505	43.3243	25.9905	40.3491
France	0.08	99.7556	80.7061	81.8379	24.0248	22.0365	63.8823
Portugal	0.02	99.7659	54.9066	67.9702	53.1351	12.8799	22.935
Total	0.527						

TABLE II

Country	Compound DELE Index 3	Compound DELE Index 4	Compound DELE Index 2
	Use of Internet by citizens	Integration of Digital Technology	Human Capital
Finland	9.02843	10.0936	18.9244
Denmark	9.57836	11.1508	16.8161
UK	8.51144	7.04258	17.2524
Switzerland	8.3647	6.9212	16.95494483
Germany	6.78881	8.30631	14.7029
Netherlands	8.38443	8.30631	15.7503
Belgium	7.40144	9.55162	14.0757
Austria	6.24896	7.78614	14.8517
Sweden	9.83783	10.1509	17.0128
Poland	5.53347	4.27877	10.2057
Italy	5.0921	5.96882	9.48467
Spain	6.71559	6.95982	12.724
France	5.55049	6.48329	14.2543
Portugal	6.26392	8.12885	11.0902

TABLE III

Country	Percentage of EU wine e-commerce	Norm by pop	I norm.	Litres per capita	Real Terms	II norm.
	Variables					
Finland	1.00%	0.0107	0.9346	17	3.84%	24.354041
Denmark	3.00%	0.0111	2.7027	42	9.48%	28.507079
UK	11.00%	0.1267	0.8682	30	6.77%	12.82031
Switzerland	5.00%	0.0163	3.0615	41	9.26%	33.079329
Germany	3.00%	0.1592	0.1884	25	5.64%	3.339196
Netherlands	3.00%	0.0332	0.9036	28	6.32%	14.296472
Belgium	3.00%	0.0221	1.3575	31	7.00%	19.398628
Austria	3.00%	0.0168	1.7857	28	6.32%	28.252551
Sweden	1.70%	0.0190	0.8947	33	7.45%	12.011164
Poland	0.00%	0.0759	0.0000	9	2.03%	0
Italy	8.00%	0.1198	0.6678	34	7.67%	8.7007758
Spain	5.00%	0.0917	0.5453	17	3.84%	14.208737
France	8.00%	0.1298	0.6163	53	11.96%	5.1516121
Portugal	2.00%	0.0205	0.9756	55	12.42%	7.8580931
Total	52.70%				100.00%	

Regressions I

(DESI2= "Human Capital"; DESI3= "Use of Internet by citizens"; Y=Sales Volume)

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.604120035
R Square	0.364961017
Adjusted R Squ	0.249499384
Standard Error	8.844365127
Observations	14

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	2	494.5066134	247.2533067	3.160885626	0.082300434
Residual	11	860.4507395	78.2227945		
Total	13	1354.957353			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	-16.68167961	12.88087321	-1.29507366	0.221816228	-45.03229039	11.66893118	-45.03229039	11.66893118
DELE3	0.657489219	2.999618944	0.219190914	0.830515433	-5.944627563	7.259606001	-5.944627563	7.259606001
DELE2	1.850086618	1.659111205	1.11510706	0.288574005	-1.801592523	5.501765759	-1.801592523	5.501765759

Regressions II

(DESI2= “Human capital”; Y=Sales Volume)

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.601820039
R Square	0.36218736
Adjusted R Square	0.309036306
Standard Error	8.48630724
Observations	14

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	490.7484261	490.7484261	6.814302573	0.022783886
Residual	12	864.2089268	72.01741057		
Total	13	1354.957353			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	-16.35902613	12.27842917	-1.33233868	0.207497859	-43.1114251	10.39337287	-43.11142513	10.39337287
DELE2	2.16072565	0.827730428	2.610421915	0.022783886	0.357255973	3.964195327	0.357255973	3.964195327