Socio-Economic Impactof Taxi-Service Deregulation on Dubrovnik citizens: Good vs. Bad

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2019

Socio- Economic Impact of Taxi- Service Deregulation on Dubrovnik citizens: Good vs. Bad

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The purpose of this paper was to study the sociocultural impacts of the deregulation of taxi services on Dubrovnik locals. The Taxi Deregulation Act was implemented on 1st of July 2018, in Croatia, and since then, was a subject to a lot of controversies. The main goal of the study was to measure whether the deregulation of the taxi industry in Croatia impacted Dubrovnik locals and to which extent. The instrument for this study consisted of two surveys. First measured a social impact perception scale (SIP) ranging from negative -5 to positive 5. The second survey measured demographic characteristics. Overall results were positive, with 34 participants or 97% being positive about the deregulation, while only 1 participant or 3%, was neutral regarding the taxi deregulation.

Keywords: taxi industry, deregulation, liberalization, sharing economy, third-party apps, social-economic impact, Dubrovnik, Croatia,

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Deregulation

Economic regulation can be understood as both direct legislation and administrative regulation of both prices and entry into certain industry or market. Further effects of the economic regulation depend on various factors such as: ‘’ the motivation for regulation’’, ‘’the nature of regulatory instruments and structure of the regulatory process’’, ‘’the industry's economic characteristics’’ as well as ‘’the legal and political market environment’’ in which regulation is occurring (Joskow & Rose, 1989).

One of the easiest ways to measure the outcomes of the regulation is to simply compare the samples of "regulated" and "unregulated" companies. If the only difference between two representatives are the regulatory constraints on which businesses are subject to, the differences in the demeanor and performance can be ascribed to regulation (Joskow & Rose, 1987). However, over a couple of decades, private companies stated that proposed regulations have been overly burdensome, inefficient, as well as at some point inappropriate, unjustified and out of date. To promote more ‘’ business-friendly regulatory climate’’ worldwide regulation policy moved forward to the regulatory reform policy or deregulation (Regulation & the Economy The Relationship & How to Improve It, 2017). In this manner, deregulation is seen as a ‘’ major public policy reversal’’(Kaserman, Mayo & Pacey, 1993). Deregulation is here referred to as reduction or a decreased existing governmental regulation (Buren, 2016).

Deregulation of specific industry implies that government or regulatory "management" is exchanged by the invisible hand of the market economy. Further, this implies that price, output, and investment decisions which were previously managed by regulatory rules and management are now free to match the market signals. This makes an immediate impact on various stakeholders or parties affected by deregulation (Regulation & the Economy

The Relationship & How to Improve It, 2017).

However, imposed changes impact different groups differently. For instance, customers are being exposed to price changes, private companies are confronted with an increase of rivalry; regulators and professional intervenors can experience a drastic decline in the demand for their services, etc. (Kaserman, Mayo& Pacey, 1993) Overall, it is believed that deregulation affects the marketplace in a way that it reduces entry barriers, encourages diversification, and increases competition (Kurian, 2013).

Deregulation of the Airline Industry

One of the prominent sectors to be deregulated was the US airline industry, and thus it represents a symbolic shift in global economic policy towards neoliberal practices and '' deregulation mindset''. The concept which took over was called "deregulation mindset" and it seemed like the well-established, purposeful and commonsense regulations no longer mattered. Everything was left to the invisible hand of laissez-faire to solve all the problems. The Airline Deregulation Act was introduced in 1978 with the purpose of removing the U.S federal government and Civil Aeronautics Board (CAB) from economic engagement in the airline industry in the United States. This meant that private airlines were finally allowed to make all decisions regarding entry, exit, the frequency of service, and fares. The authority over mergers and acquisitions was passed on the Department of Transportation and later on to the Department of Justice (Goetz & Vowles, 2009).

The overall experience with the airline deregulation has been mostly positive. Reports from the Transportation Research Board on airline industry stated that a vast majority of customers have benefited from the deregulation. The total number of passengers traveling with the U.S airlines have tripled since the deregulation took place. In 1987 the number of passengers was roughly

275 million while in 2006 this number was almost 750 million. It can be argued that this number would have increased regardless of the deregulation act, but it certainly would not have been this high (Goetz & Vowles, 2009).

Most observers have also stated that the deregulation has been successful for customers in terms of lowering average fares, introducing more flights, increasing carrying capacity while maintaining a good safety record (Goetz & Vowles, 2009).

The ugly part of the deregulation in the airline industry was financial performance. U.S airline industry performance was very cyclical and it varied from highly profitable to highly unprofitable periods. For instance, 1995.-2000. was a highly profitable period in the U.S airline industry, while 1990.-1994. and 2001.-2005. were highly unprofitable periods. Financial results led to many changes in the industry structure (Goetz & Vowles, 2009).

Sharing Economy

In contrast to the traditional market model, which is characterized by pure ownership of goods, the ‘‘Sharing Economy’’ model is associated with an economic activity which includes using and sharing products and services among each other. This model existed for a long period of time in terms of economic transactions between business-to-business (B2B), such as sharing of machinery but also in business-to-consumer domains (B2C) in car rental industry, self-service laundries, etc. Lately, the ‘‘Sharing Economy’’ phenomenon has received rapid expansion as its interaction has become popular between consumer-to-consumer (C2C) domains (Barbu, Bratu & Sîrbu, 2018).

Even though these interactions between consumers have been present since ancient times, it was performed within groups of people who knew each other. The current participative economy has advanced in terms of bringing in contact people who do not know each other and who yet share

the goods and services (Barbu, Bratu & Sîrbu, 2018). This produced completely new business models and employment opportunities (Puschmann & Alt, 2016). The digital sharing economy allowed people to find new jobs, earn additional revenue, increase reciprocity, increase social interaction, and get resources that otherwise cannot be accessed (Barbu, Bratu & Sîrbu, 2018). Studies in the USA have revealed that the ‘’Sharing Economy ‘’ in the sector of travel, car sharing, staffing, finance, as well as music and video streaming is expected to magnify its revenues from USD 15 billion to USD 335 billion in the next 10 years (Puschmann & Alt, 2016). According to Botsman (2014) & Hamari (2015), there have been three main drivers associated with the rapid expansion of the ‘‘Sharing Economy’’. Those are 1) changing consumer behavior 2) social networks and electronic markets and 3) mobile devices and electronic services. (Bothun (2015) as cited in Puschmann & Alt, 2016)

1) Changing consumer behavior, this driver includes mainly consumers’ switching preference towards temporary usage rather than usual ownership for using products/services. Reasons for this are numerous, such as reduced prices, more convenience, ecological sustainability, etc. (Eckhardt (2014) & Bardhi (2015); as cited in Puschmann & Alt, 2016).

2) Social networks and electronic markets, this driver is associated with an increased level of networking which has been made possible by social networks and community platforms. These digital platforms connect users who are willing to share goods among themselves. The mechanism for trust, in those anonymous sharing markets, has been created in forms of rating and feedback. To ensure a pleasant experience and ensure easy and reliable compensation, payments functions (e.g., social media payment) have also been established (Puschmann & Alt, 2016).

3) Mobile devices and electronic services, this driver is related to the ‘‘app economy’’ which naturally has come with smartphone devices. In the case of the car-sharing model, an intelligent hardware solution is much more pleasant compared to the physical gear (Puschmann & Alt, 2016).

For these reasons, digital sharing economy business models could be characterized as follows: 1) access-based business model; 2) marketplace/platform economy; and 3) on-demand service provider, even though there are many overlapping points between them. The success behind the business models of the sharing economy can be explained by the fact that these models as such are able to create, deliver and capture value (Demary, 2015 as cited in Barbu, Bratu & Sîrbu, 2018).

1)The access-based business model is grounded on underutilized resources and because of it can also be characterized as “surplus capacity” business model. Rather than buying the product, consumers are able to access available goods and services through an online platform when they need them (Bardhi & Eckhardt,2012 as cited in Barbu, Bratu & Sîrbu, 2018). Online platforms which consumers are accessing supply both tangible and intangible assets. The products or services can be supplied by the platform owner or by other partner organizations with whom platform cooperates. This business model enables the consumer to switch from ownership to usage of products or services and this presents the value creation achieved within this model. When the access-based business model has been introduced in the marketplace, many traditional companies recognized it's thus developed so-called “product as a service” business model (Barbu, Bratu & Sîrbu, 2018).

2)The marketplace/platform business model is based on the channel or platform which is a component of the marketplace/platform model. In this particular model, customer relationships

are most often automated. The operator of the channel or platform actually facilitates access to the transactions. One of the instances of this business model is Airbnb. Airbnb connects hosts with those who want to rent the place. In this sense, the marketplace/platform business model connects demand and supply. The value here is created through ensuring faster and safer market access for all stakeholders (Barbu, Bratu & Sîrbu, 2018).

3)On-demand service provider business model can be characterized as customer-focused service activities which are being deployed. The service requesters have to be in need of particular services which can be delivered by other persons or specialized service providers. For this reason, the exchange is beneficial for both stakeholders involved. The on-demand service provider can be seen as intermediator or basic tools channel provider. This business model makes relationships between two parties of a higher level of confidence and trust. The value creation within this business model is being achieved by quickly connecting the two categories (Barbu, Bratu & Sîrbu, 2018).

The success behind the business models of the sharing economy can be explained by the fact that these models as such are able to create, deliver and capture value (Demary, 2015 as cited in Barbu, Bratu & Sîrbu, 2018).

Sharing economy business models are disrupting traditional market models throughout the world. In this sense, Airbnb which is a classic example of ‘’sharing economy’’ model is currently valued at $10 billion which is more than the entire the Hyatt hotel chain (Cannon & Summers, 2014).

As Airbnb is one of the pioneering sharing economy company, extensive research on Airbnb’s influence on the local economy or counties in the U.S has been conducted in 2018. The research

results suggested that Airbnb expansion caused poorer hotel performance in the local county, reduced unemployment rate and increased household income (Mao, Tian & Ye, 2018). Another example of a pioneering sharing economy company is Uber. In 2015, Uber was valued at $68 which was significantly above the valuation of large companies such as of General Motors, Ford Motor Company, or Honda Motor Co. Ltd (Chen, 2015 as cited in Schneider). Sharing economy companies are significantly contributing to the economic, environmental, and entrepreneurial benefits within the specific markets or industries. Regulations within these markets or industries are usually the most prominent barriers for the future growth of sharing economy firms (Cannon & Summers, 2014).

Uber

Uber is a third-party platform in the form of a mobile application which offers driving/riding services to users. Sophisticated services beyond the strictly necessary to network, but still increasing the attractiveness of the network. This concept is often called verticalization. Users are connected to the network via mobile network and GPS in their phones. Drivers are connected to the same network, and both parties are aware when the ride will actually happen. Push notifications are sent to both phones, and passenger and driver can communicate via phone calls which are also connected through Uber network. Uber acts as an intermediary in the transaction and charges 25% of the commission (Schneider, 2017). Card payments are processed through Uber terminals, while cash payments are collected by the driver. At the end of the ride, riders receive a receipt stating the price they paid, driver's name and the company which issued the receipt. Uber offers different tailor-made services for different riders. Company original service was Uber Black, but shortly after the company recognized that they have to cater to different customers segments. They developed Uber X as a low-cost option, Uber SUV, Uber LUX for

luxury vehicles, Uber Assist for riders who need special assistance and Uber XL for larger groups. After the initial offering Uber recognized that lots of riders were going at the same time in the same direction (commuting to work), so they introduced Uber Pool (Schneider, 2017).

With the increased control of the transportation market, Uber also branched into food delivery and bike sharing. Uber EATS a food delivery platform was launched across all major cities in the US in 2014., and soon went worldwide (Perez, 2016).

This allowed drivers to cluster their capacity and make more money in less time, but it also decreased the waiting time for the riders. Furthermore, Uber controls the price of the ride. There is a fixed price for the start of the ride, and then per mile and per minute charge. Every city and the market have a different price. Fare estimates are seen before ordering a ride. Surge pricing operates based on supply-demand principles. This is the Uber wat to encourage drivers to drive during the busiest period of the day (Schneider, 2017).

Past research on how Uber has transformed the traditional taxi in New York City found that the evidence of the sharing economy has impacted the existing market in a positive and welfare-enhancing way and further provided significant benefits to New York City consumers (Kim, Baek, Lee, 2018).

The research methodology included implying a time-series regression model, which controlled various factors that can impact a taxi trip and discovered no direct evidence that the number of taxi trips, the revenue per driver, or occupancy rates have declined since Uber came into the taxi market. Dispersion of pick up and drop of locations is something which was new in New York City, and it forced the change in the industry. Regular NYC taxis were all flocking to Manhattan and busy downtown streets where there was the biggest chance of catching a ride. Uber, however, using their Surge pricing directed drivers to the wider New York area and served

customers which were ignored by the traditional taxis. Uber developed surge pricing for this reason. It is a system in which application recognizes where rides are being ordered from, and if there is not a sufficient number of drivers there it raises the price from 10 to 400%. This system forces the drivers to disperse through the whole city area. This disruption impacted the NYC market and traditional taxis had to react and move to the wider city are which brought benefits to customers (Kim, Baek, Lee, 2018). Regular NYC cabs suffered huge damage with the rise of the ride-sharing apps, back in 2013., the rice of the taxi medallion was $1,3 million, while in 2018, they are sold in bankruptcy auctions for $ 180k (Chatham, 2018).

While positive for individual rides, the result is at the same time unsustainable for larger cities. The negative externalities associated with Uber and other transportation network companies have already made significant damage. Harmful consequences of congestion, air quality degradation, and land use conflicts are felt by the general public. For these reasons, many cities are introducing capacity restrictions while seeking government policy responses to the entire urban transportation system (Sherman, 2017).

The optimistic shared ride vision of Uber POOL, Uber Express POOL, and Lyft Shared Rides while introduced as ‘’less traffic and greater ease of movement for everyone’’ has actually increased the mileage to city streets, as most of the riders are shifting from non-auto modes to this medium (Schaller, 2018).

Uber has been a source of controversy from the beginning. It was one of the companies which made the most significant global impact and can be compared to Apple, Tesla, and Facebook. It is one of the most successful startups ever. However, their goal of world taxi market domination could not be reached easily, as they faced different obstacles. Regulatory issues and controlling

authorities were in their way during every step of the new market penetrations (Barot, & Chhaniwal, 2018).

The first country which fined Uber was France, as the executives were found guilty of starting an "illegal car booking service". Uber Pop, was a platform which connected amateur drivers to passengers in France, and the sentence was "complicity in the illegal practice of the taxi profession". However, the court still let Uber continue working in France, but only with professional drivers (Chassany, 2016).

One of Uber executives was punished with $ 90000,00 for illegal lobbying of Chicago mayor Rahm Emanuel. David Plouffe, Uber former senior vice president of policy and strategy, who served with Rahm Emanuel in President Obama's administration (Heath, 2017).

Medallion system

The heavy taxi regulation dates all the way back to the 1930s and the Great Depression. During what became the biggest crisis in the history of the US, there were no employment opportunities, so people started driving cabs. Too many cabs on the streets lowered the prices and drivers were unable to make for a living. City council came up with the idea of giving a single company monopoly on the taxi service, but the plan collapsed after it turned out the NYC mayor had shares in the company. In 1934. during the strike, arguments between drivers became violent, and NYC came up with the solution to cap the number of drivers. In 1937, Haas Ordinance was passed and the medallion system was introduced. Taxis had to conform to strict rules and fares were set by the city. The cap was set to 16000 medallions, but in the time of crisis, not everyone could afford the 10$ medallion renewal price, and initially, only 11787 were used. This number did not change until 1996, and after that, only a few dozen a year were issued (Fruhlinger, 2018).

This entry restrictions of taxi industry ultimately resulted in monopoly rents for the bearers and medallion owners (Barot & Chhaniwal, 2018).

Taxi medallions were considered a safe investment by many financial institutions in the US. They brought in steady streams of cash, and lenders were ready to loan up to 90% of the medallion value. Owning a taxi medallion was a safe way of reaching the American dream and putting your kids through expensive colleges. However, this was before the new technology and thousands of ridesharing drivers who took over the streets. Medallions were sold for $1,3 million pre-Uber and Lyft, and in 2018 the price fell down to $175000. The American dream quickly turned into the nightmare as it left a lot of medallion owners owning more than the worth of the medallion (Berger, 2018).

Taxi Industry

First recorded similarities to taxi were recorded in London, in 1605. Horse-drawn hackney carriages transported passengers through the busy streets of London. Industry remained basically the same for the next 200 years, with the innovation in the shape of the carriage. Major advancements in technology after the industrial revolution brought first electric powered engines which replaced the horses, soon followed by the gas-powered vehicles. First ever recorded gas-powered taxi was in 1899. in Paris. First modern taxis in the US were imported from Paris in 1907., with pre-installed meter and this is considered the beginning of the taxi industry. Horse carriages soon became obsolete (Weekend Sunday Edition, 2007 as cited in Rahel, 2016).

Next big step for the taxi industry was the introduction of the assembly line and the first mass-produced vehicle, Henry Ford's Model T in the late 1920s. Low interest and affordable car brought disruption to the market as already established big players had to cut their fare prices in order to keep their share of the market (Rahel, 2016).

Taxi industry due to the strict regulations has been heavily protected over the last 100 years. This has slowed the progress and innovation compared to the other industries. During that time society and other industries evolved and changed their production and technological processes. Advancements have been made in almost every variable of the taxi business. Cars became more efficient, the internet brought huge advancements, yet the taxi regulations remained unchanged, very similar to the regulations which were introduced 60-80 year ago. Taxicabs have been the dominant means of transportation in cities worldwide. Most cities had to regulate the number of taxi vehicles with government regulations in order to stop the oversupply of the market. The positive side was that this move stabilized the price of the fares, increased safety, and drivers could live of their wage. The negative side was that through capping the supply of taxis, taxi monopoly was created in a lot of cities (Snead, 2015).

Economics of the taxi industry works in this way. Almost 100 years after the first taxi industry disruption, Uber brought disruption to the worldwide taxi market. Snead (2015) has withdrawn a parallel between what has been happening now and the disruption in 1920. The new competition came to the market which has not changed for a long time, they adapted their product to the need of the new customer, and the taxi market could not match the price or the level service. Uber used mobile technology to disrupt the traditional, old-established model of the taxi industry (Barot, & Chhaniwal, 2018). Traditional taxi drivers had to go to the regulators and prevent every entry to the market. There were strikes against Uber in almost every major city in the US and France (Rahel, 2016).

Taxi Industry in Dubrovnik:

Before the deregulation of the taxi industry was introduced in Croatia, Dubrovnik taxi market was heavily regulated. There was a limited number of licenses issued, and it was regulated on a

local level instead of national level. This meant that the Croatian government let each city decide how many licenses are to be issued and they got to decide the specifications of taxi vehicles. There was no regulation of the age of the car, only regulation was the color, number of seats, air condition and size of the trunk (‘’Kako će ubuduće izgledati dubrovačka taksi vozila?’’, 2017.) Initially, it was not a very attractive industry as tourism in Dubrovnik started recovering slowly after the homeland war. Rides were expensive for the locals and taxi drivers mostly drove foreign officials from Dubrovnik to Montenegro or Bosnia-Herzegovina. The number of licenses slowly rose from the initial 60 to 120 (‘’Kako će ubuduće izgledati dubrovačka taksi vozila?’’, 2017).

With the return of massive tourism and more arrivals of cruise ships to Dubrovnik port, there was a need for more taxi drivers and in 2008 the number of licenses issued was 180. Tourism changed the whole business, and taxi service in Dubrovnik became luxury for the locals with the price of 25kn for the start of the ride and 10 kn per each kilometer. In 2012. the number of licenses issued was 220 and this number stayed the same until the deregulation in 2018. (‘’Istražili smo evo koji je taksi najjeftiniji u Dubrovniku’’, 2015).

Licenses were issued based on the same criteria for everyone which would add up to points. 220 drivers with most points on the list would get the license. This was the criteria for the last licenses issued in 2018, just before deregulation happened: 1)operating as a taxi driver in between 2011 and 2016; 2) number of year in the homeland war; 3) child of a dead or a missing Croatian soldier; 4)residence in the city; 5)ecological criteria; 6)taxi as only source of income; 7) statement of using the Dubrovnik Taxi Card (‘’Pogledajte tko je dobio koncesiju za taksi prijevoz’’,2018)

Deregulation of the Taxi Industry in Croatia

The deregulation of the taxi industry happened on 1st of June 2018. This act signed by the minister of transport Mr. Oleg Butkovic. This act allowed for anyone to be able to enter the market. New rules and regulations were applied (‘’Narodne novine’’, 2018).

Cars cannot be older than 7 years, all new drivers have to pass the exam in order to get the license to operate. Cities were no longer in charge of organizing the taxi business, it was all done by the government instead (Nakic, 2019). Cap on the number of cars on the street was also removed. The new act also allowed for electronic applications to be used instead of meters, which allowed Uber to enter the market. The new deregulation act is still going through the adaptation phase, and it is not yet fully implemented. (Narodne novine, 2018; Jurak, 2018, Nakic, 2019)

Methodology:

The instrument for this study consisted of two surveys. The first survey measured the social impact of taxi deregulation using the model designed by Delamere (2001). This model was called FSIAP (Festival Social Impact Attitude Scale) and it measured the social impact of music festivals on people. For the purpose of this study, it was adapted to the context of taxi deregulation. In the first part of the question, respondents were asked to decipher whether the impact regarding the regulation has occurred (yes meaning the impact exists, and no meaning the impact does not exist). In addition, in the second part of the question, respondents were asked to answer whether it has impacted their life positively or negatively, using a Likert scale ranging from negative five to positive five. The responses were coded from -5 to 5 so that the higher numeric response relates to a positive impact of taxi deregulation, and, in contrast, the lower response indicates the negative impact of taxi deregulation on the local community. The second survey examined the demographics of the sample and it consisted of 7 questions, regarding the

age, gender, educational level, years of residence in Dubrovnik, possession of driver's license, frequency of being on the road, etc.

Both surveys were distributed in the printed format in a Croatian language. Out of 38 surveys distributed, 35 participants responded, making the response rate of 92%.

Results:

Out of the 35 respondents, 18 are man, making it 51% while 17 are women, making it 49%. This data can be seen in figure 1. Concerning the age group, the majority of respondents or 49% (17 out of 35) belong to the age group of 23-30. This is followed by the age group of 16-22, (10 out of 35) or 28% while 23% of them (8 out of 35) belong to the age group of 45-60. This data can be seen in figure 2.

In terms of the years of residency in the Dubrovnik area, majority or 51% (18 out of 35) live in Dubrovnik for more than 10 years. This is followed by the 35% of them (12 out of 35) that lives up to 3 years. Only 5 out of 35 respondents belong to the category that lives up to 3 years, making it 35%. All of this data can be seen in Figure 3.

Out of the 35 respondents, the great majority, of them or 27 out of 35 live in Dubrovnik, over the summer season, accounting 77%. Only 8 participants do not live in Dubrovnik over the summer season, making it 23%. All this data can be seen in figure 4. Regarding the driver's license, 25 out of 35 respondents own it, making it 71% while only 10 respondents do not own it, accounting 14%. This data can be seen in figure 5.

Overall results regarding the deregulation are positive with 34 participants or 97% perceiving it as positive, and 1 participant, or 3% perceiving it as neutral.

Since the deregulation, 30 out of 35 respondents have used taxi services, making it 71%. Only 5 out of 35 have not used it, making it 29%. Out of 35 respondents, 20 of them are "once or more a

day in a car or on the road", accounting 57%. This followed by 11 out of 35 that are in the car or on the road " once a week" making it 32%. The smallest amount of them, or 4 out of 35, are in the car or on the road "once a month", accounting 11%. This can be seen in figure 7.

In the second survey, the mean and standard deviation for the sample is 1,433 and 0,582 respectively. Regarding the individual participant scores, they range from -0,071 to 2,571. Out of 35 respondents, results have shown that 34 or 97% of them perceive regulation positively, whereas only one, or 3% of them, is neutral. This data can be seen in figure 8.

The most positive impact of the taxi deregulation has been found in questions regarding the increased interest of locals to use taxi service, the impact on the tourist offer, increase in employment opportunities and increased awareness about offered taxi service. The mean and standard deviation for the questions regarding the increased interest of locals to use the service, the impact on the tourist offer, an increase in employment opportunities, and increased awareness about offered taxi service are 3,371 and 1,114; 3,371 and 0,843; 3,114 and 0,993; 3,086 and 0,853 respectively. All this data can be seen in figure 9.

The most negative responses associated with the deregulation of taxi services are questions related to an increased number of traffic jams, greater difficulties in finding parking, increased air pollution and increased number of taxi providers. The mean and standard deviation for the most negative questions related to an increased number of traffic jams, greater difficulties in finding parking, increased air pollution and increased number of taxi providers are -2,857 and 1,033; 2,657 and 1,110; -1,371 and 1,215, respectively. This data can be seen in figure 10.

Discussion

Results have shown that the overall results were positive, and Dubrovnik locals feel that impacts of the deregulation are mostly positive. Cheaper fares raised awareness, and impact on the tourist

offer attracted more people to use the taxi service. This, of course, created more job opportunities and increased the number of cars and drivers on the street. Dubrovnik, as a very delicate tourist destination, was not prepared for the number of taxi vehicles on the street doubling and this resulted in the very negative scores of increased traffic jams and difficult to find parking spots. Deregulation is generally perceived as a positive thing. However, in order for it to work, there has to be some kind of control over the market, especially when there is a significant change, which this definitely was. According to Marko Pavic, a journalist for Jutarnji list, more than 50% of the companies which entered the market are using the system and not paying taxes. This is a significant number, as those companies can have as many cars as they want in the market. This was especially felt in the coastal cities such as Dubrovnik, where the tourist crowds are enormous and the traffic infrastructure is outdated. If the government decides to regulate this huge problem, there will definitely be fewer cars on the streets (Pavic, 2018). This would probably impact the most negative scores in the survey, and the overall results would be even better.

Another matter which could impact the number of cars on the street is the fact that the new deregulation law is still going through the adaptation phase. New entrants to the market in July of 2018. had to adapt to the rule of the car is a maximum of 7 years old. This, however, did not impact the taxi drivers which were already in the market, and they can still drive cars which are older, the only thing they are obliged is the car having 4 doors and air conditioning. Both of these groups, however, will have to adapt to 5-year-old cars in 2021. This will impact the market significantly, as then, all the taxi drivers will have to take into consideration the amortization cost of the car (Nakic, 2019).

Limitations of this study relate to the relatively small number of participants and the timing of data collection. Taxi service is something which people use every day, and it is a part of their lives. If the survey was conducted for a longer period of time, the accuracy would be higher. Due to the time constraint, the number of people was surveyed was only 35. Also, the survey was conducted outside of the tourist season, and Dubrovnik is a very seasonal destination. Perception of the participants might be different if the survey was done during the tourist season.

The opportunity for further research will occur in 2021. when the law will be fully implemented, the situation on the market will be more realistic, as right now it is quite chaotic. It will be interesting to see whether the number of cars on the streets would go down. This will also create an opportunity to hear feedback from the city councils, as they no longer have the power to organize taxi stands and taxi parking. Further research should also address how to remove the pain points of negative impacts associated with the taxi deregulation.

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Appendix:

Figure 1.

Gender category of the surveyed sample

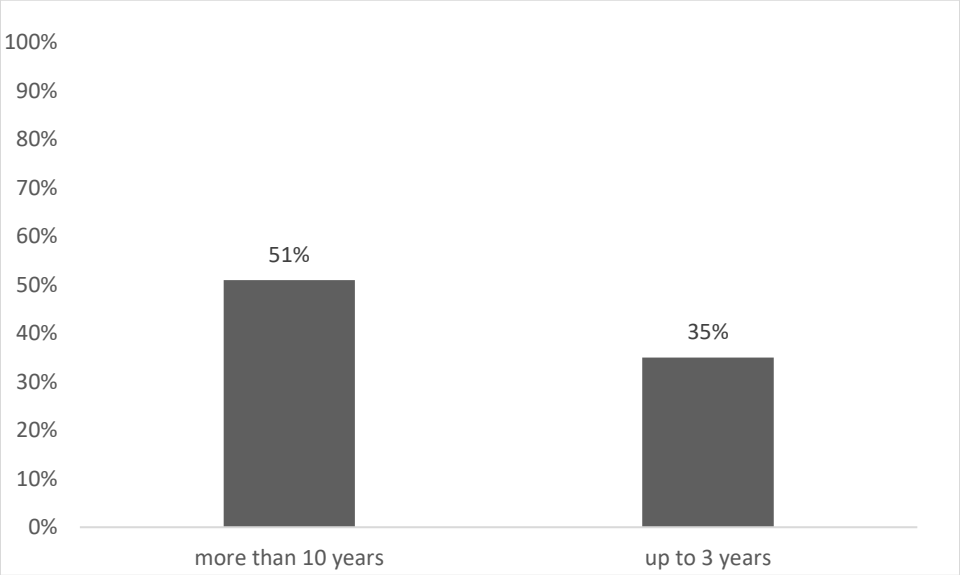


Figure 2.

Age category of the surveyed sample

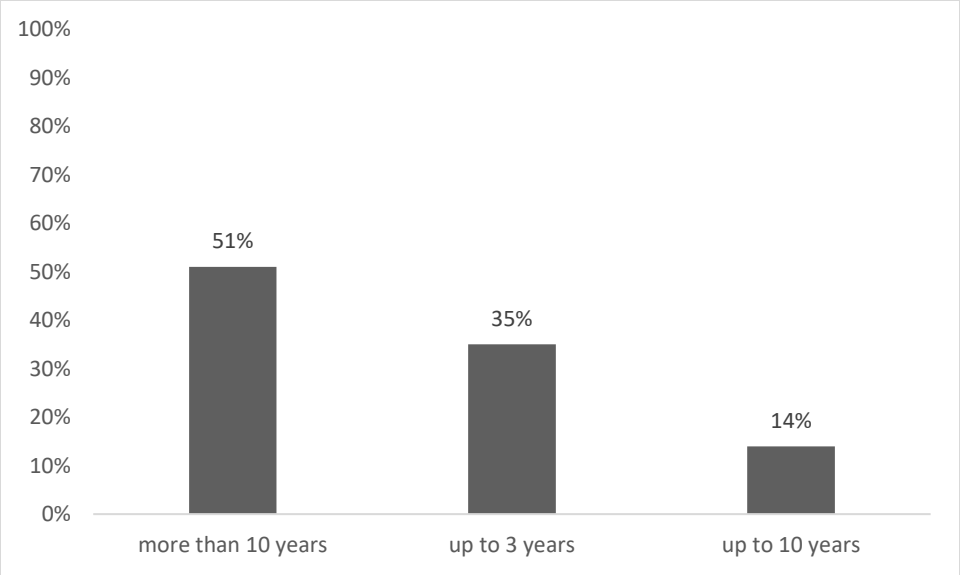


Figure 3.

Residency in Dubrovnik in years

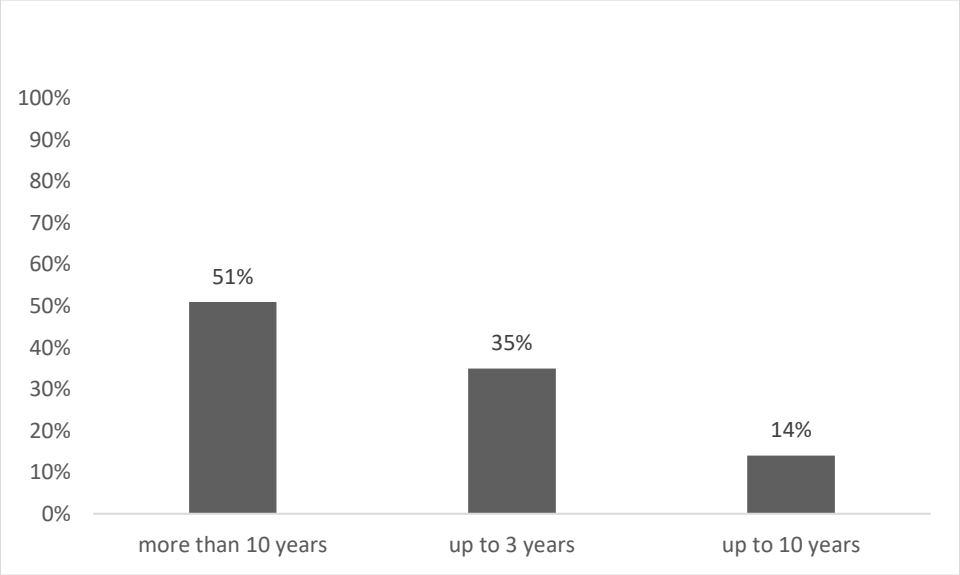


Figure 4.

Residency in Dubrovnik during the summer period

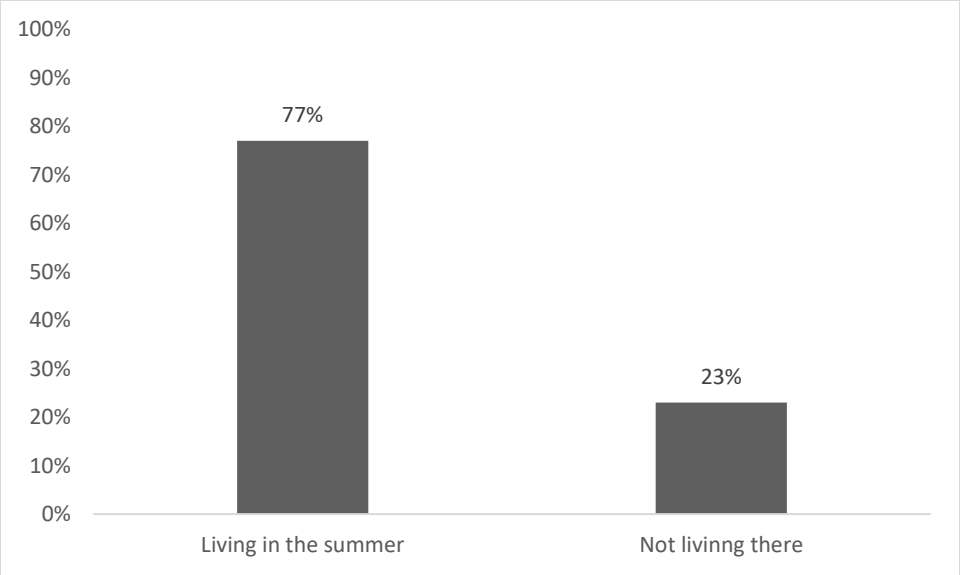


Figure 5.

Respondents owning driver's license

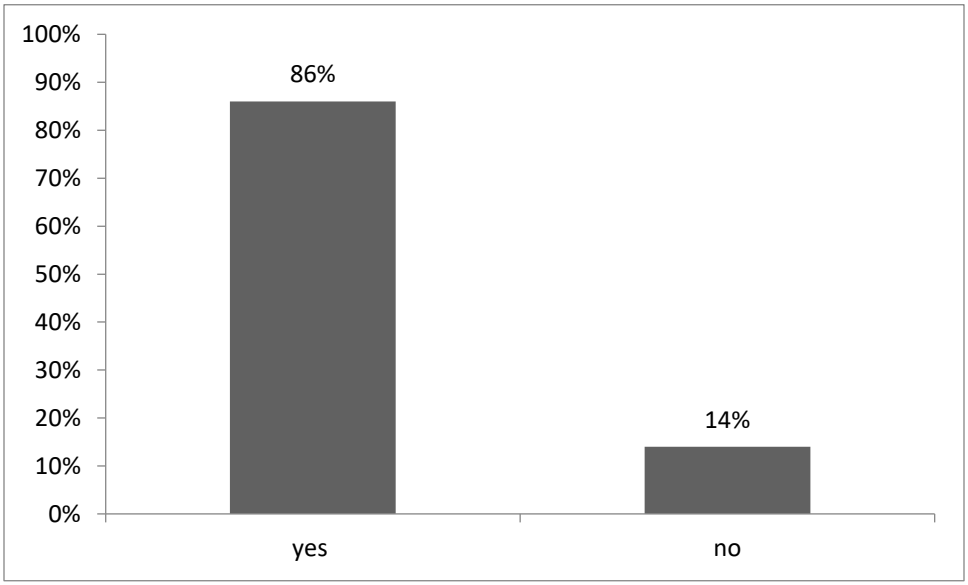


Figure 6.

Overall positive/negative scores regarding the deregulation

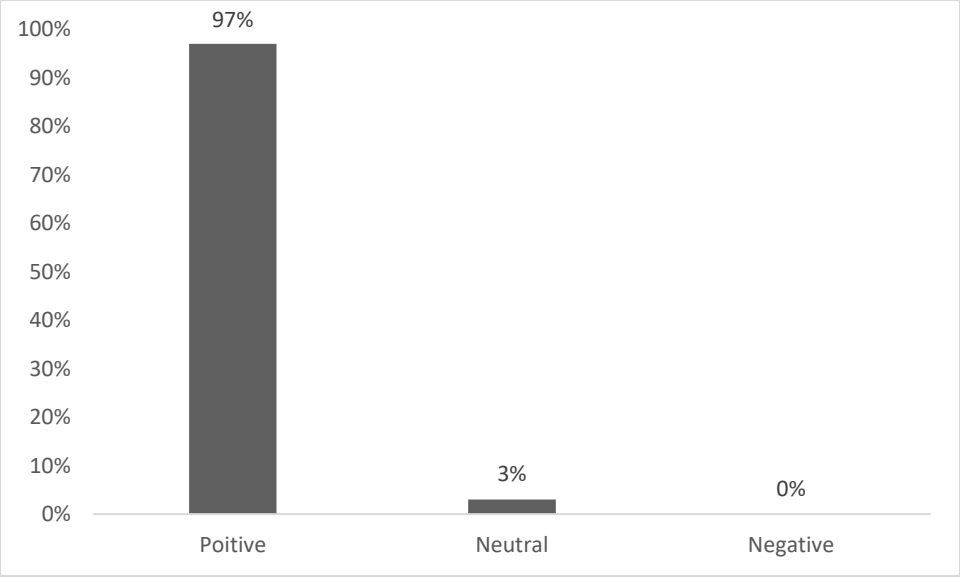


Figure 7.

The use of taxi services after deregulation

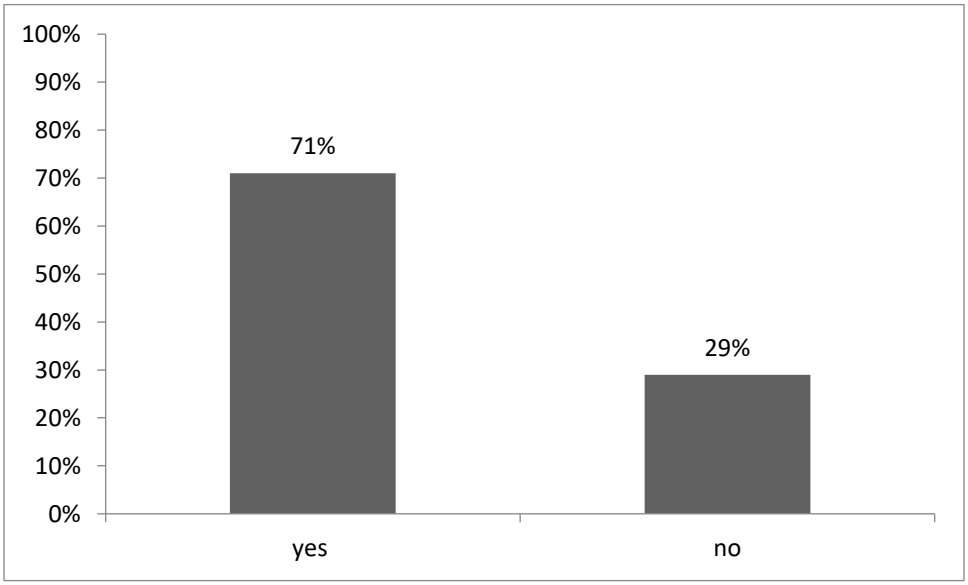


Figure 8.

The frequency of being on the road

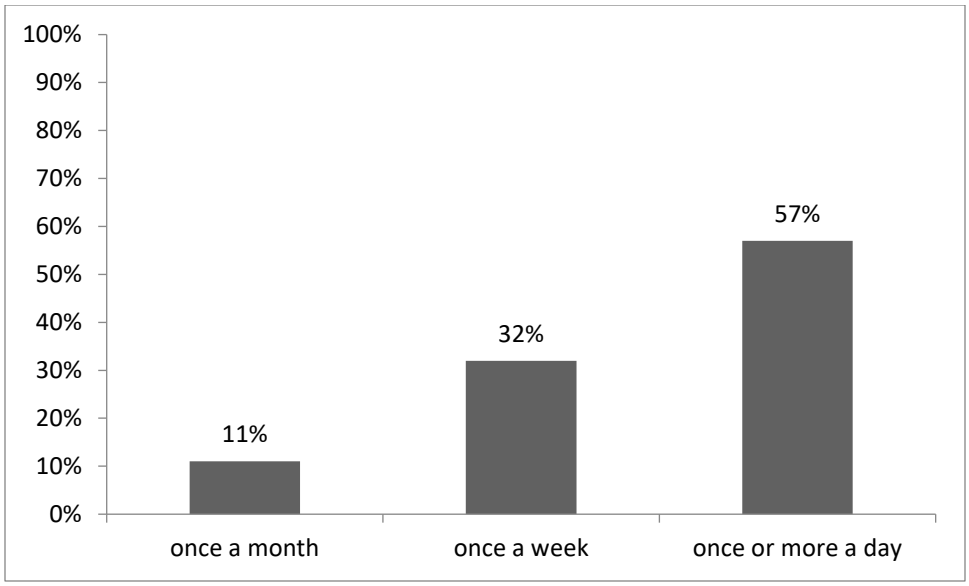


Figure 9.

The most positive impacts of taxi deregulation

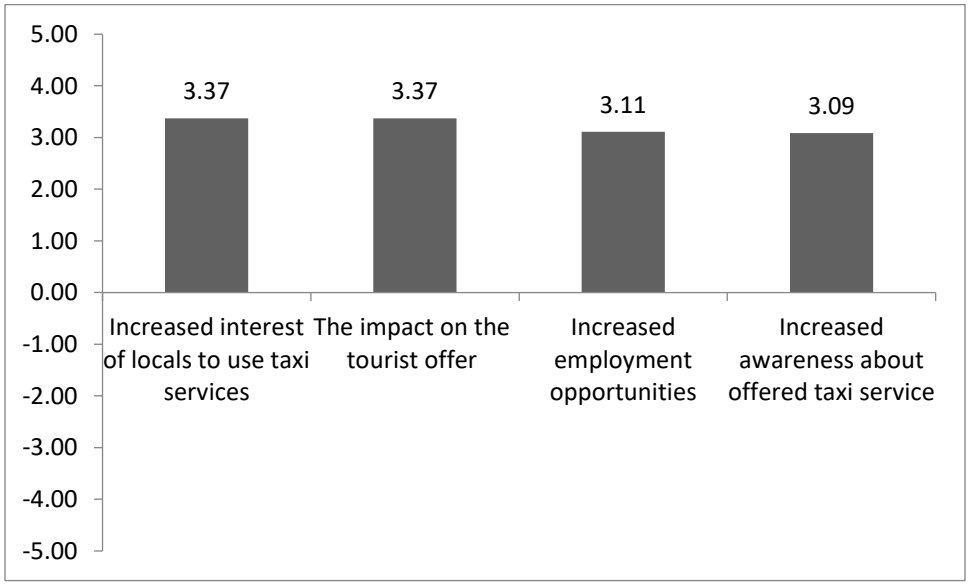
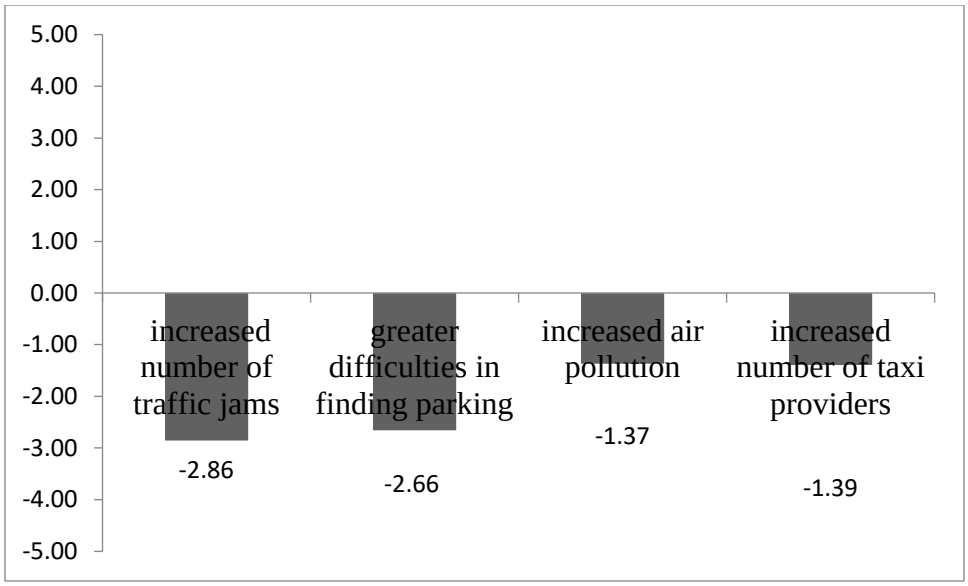


Figure 10.

The most negative impacts of taxi deregulation


5.00
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
increased number of traffic jams
-2.86
greater difficulties in finding parking
-2.66
increased air pollution
-1.37
increased number of taxi providers
-1.39