

## Analysis of the integration social-economic between the Nayarit and Jalisco states, Mexico; from the tequila industry; for the year 2018

## Análisis de la integración socio-económica entre los estados de Nayarit y Jalisco, México; desde la industria del tequila; para el año 2018

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### Abstract

The present investigation centers as an object of study the economic region composed by the center-south part of the Nayarit state and the north of the Jalisco state, both states belonging to the Mexican republic. The regional integration referred to considers the tequila industry as the one that generates the economic linkages, in the three economic sectors, namely: primary, secondary and tertiary, to establish the region in question. The hypothesis from which it begins is that there is an economic region that is shaped by the tequila industry. Research that uses the analysis of the economic policy, in its regional approach, to perform the interpretation of the findings. In the same way a mixed, but predominantly qualitative, approach has been used to address the present.

**Region, Regional integration, Tequila industry**

### Resumen

La presente investigación centra como objeto de estudio la región económica compuesta por la parte centro-sur del estado de Nayarit y el norte del estado de Jalisco, ambos estados pertenecientes a la república mexicana. La integración regional a la cual se hace referencia considera a la industria del tequila como la que genera los eslabonamientos económicos, en los tres sectores económicos, a saber: primario, secundario y terciario, para establecer la región en cuestión. La hipótesis de la cual se ha partido es que existe una región económica que se conforma a partir de la industria del tequila. Investigación que recurre al análisis de la económica política, en su enfoque regional, para realizar la interpretación de los hallazgos. De igual manera, se ha utilizado un enfoque mixto, pero preponderantemente cualitativo, para el abordaje de la presente.

**Región, Integración regional, Industria del tequila**

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## Introduction

Mexico has given the world a number of cultural elements that have become national icons, from folk dance, indigenous handicrafts, traditional food, among many others; but without a doubt there is a drink that is tasted by millions of people around the world, known as tequila, and in no less parts of Europe they call it Mexican tequila, it does not matter if it's a pleonasm, it's tequila and it's from Mexico.

*"Tequila is generally a mezcal liquor made in the lower north east of the city of Guadalajara, Jalisco; Mexico. This brandi is the distillation obtained by cooking the heart of the agave (agave tequilana and similar species), it is produced in many parts of Mexico but it is concentrated in the Tequila municipality"*  
(Walton, 1977. P. 113).

This drink that is tasted, sometimes with pleasure and, at other times, with sadness; possibly because at all times tequila has even been used as a remedy "heal it all", and it is not because it really heals, but what is very proven is that for the moment it is forgotten, which gives a sense of relief. But knowing the bottled product, from the finest glass container or that with double distilled and stored in barrels, gives a partial knowledge of the drink; Behind the drink and bottles, are around 500 years of Mexican history in its development, from the dawn of the 1500s to the present.

Much has been written about tequila, by national and foreign researchers, each from his vision of the object of study, sometimes with a historical look, in others with a view of the meeting of the two cultures (native and Spanish), others more from a goal of tasters, and many more orientations. But other visions have studied the tequila region of the Jalisco state, and there are almost no researches that have addressed the integration of the region between the Nayarit and Jalisco States from the tequila industry. With the idea of contributing to the explanation and to dimension how it is gestated and at what level the tequila region of Nayarit and Jalisco is integrated, it is that the publication that you now have in your hands is presented, not without noting that it is the second publication, of the authors, addressing this topic; of this, the reader is suggested to review the first publication entitled: *Why is tequila called tequila? An approach from regional economic history*, so that the idea of the investigation as a whole can be followed up.

The document is composed of five sections. In the first category, the conceptual theoretical discussion is framed under which the interpretation of the research that is exposed is suggested; In the next chapter, the methodological process that was applied to carry out the investigation and exploration of the object of study is externalized, from which the information and findings that are made explicit in the fourth unit were obtained.; not without first corresponding to a historical reference of the object of study, in the third section, of the tequila region formed by the South of the Nayarit state and the north of the Jalisco state, antecedent that is transferred, briefly, to the time colonial; Finally, the conclusions are presented.

## 1 Conceptual theoretical pulpit

Talking about the economic, and more when it is done simply pointing out the local, regional, national and even international, as if they were categories established a priori, without an understanding of the dimensions and their construction, is something that what the authors of the present consider not very serious.

*"The economic explanation is not determined unisonously in the abstract, but also is agreed in the concrete relationships of material life; At the same time, the study of economics is expressed in different dimensions; international, national or regional, relations that are gestated and explained in one sense and in another, moving from one economic dimension to another, in a multidirectional manner; on many occasions, the explanation of the concrete economic object entails a driving dynamics in the dimensions referenced above, moving from the international to the regional and in the opposite direction, going through the national. In view of the above, the explanation of the concrete economic, in turn, becomes a multidimensional and multidirectional consequence of the determined historical moment; no matter what, apparently subjective and limited understanding of reality, the concrete, is manifested in a particular point of the national, or, in the regional."* (Camelo y Rodríguez, 2018. P. 17,18).

The regional economic is not, by any means, dimension of analysis a priori, as a mere delimiting instrument of space, even to the absurdity of annexing geographic polygons, subsumed at the level of exact science, such as physics, chemistry or mathematics.

Nothing could be more wrong to consider the historical social construction of a production process as such, what determines the region, from this vision, is the dialectical historical construct of the ways of valorization in the production process of capitalist merchandise, which is dynamic and as changing as society and its way of organizing social production. Seen this way, the economic region is dynamic, changing, totally free of pre-established polygons, as dynamic as society itself and the economy.

*"It is established that the validity of the regionalization proposed here will not be perpetual over time, but rather, the only clearly constant and accelerated trend in the municipality is the dynamic, and this dynamism will end up going beyond the reality under the which regionalization was built, and as the new reality goes beyond the generalities of the, now, old reality, proportionally the current regionalization will no longer correspond to the new reality." (Camelo, 2011. P. 44).*

As an attached note, it can be seen that there are other ways of approaching the study of the regional, but to some extent there is a coincidence in the vision of the dynamic "In the economic sciences, the urban-regional economy has the purpose of understanding the relations between occupied space and economic life (...) Geographic space, as time, is a key factor in the explanation of human events; however, the frontier of the urban and regional economy, as a field of study, also called space economy, are not fixed or static" (Torres, 2009. P. 12)

Although, the region is the expression of the valorisation of the appropriation of nature for its transformation, be it at the primary and / or industrial level, the same, as we have seen, is not given a priori, but as processes of social production, that is, for this case, by economic processes, and the economic is not pure, it will always be social and at the same time political. From this, regionalization has in its conformation, with processes of integration or disintegration to the regional socio-economic dynamics; it is in itself, this, the fine part of study that gives the characteristic of dynamics to the regional conformations, the integration or disintegration to the productive dynamics in particular belonging to a region. When talking about socio-economic integration, it must be understood that it is not only in terms of production as a finished object, but that in order to achieve this, production, economic linkages, productive chains, purchase contracts are manifested. -sales of raw material and semi-finished products, and others.

*"Development is accelerated by investment in projects and industries with strong forward and backward link effects. The backward links lead to new investment in facilities supplying inputs and forward links lead to investment in facilities employing products (...) consumer and fiscal links" (Urrutia, 2008. P. 69).*

But it also externalizes with it, the labor force, social relations, the cultural, affective and identity relationships, and others. "(...) labor force, this being any physical and / or intellectual activity that is offered in exchange for a benefit amount, eventually it will be capital, generating a contribution to the total or partial production of a good or service " (Camelo, 2009. P. 19) or as Marx points out (2010) " The total combined worker who forms the living mechanism of manufacturing is, in reality, a sum of partial workers " (p. 274), The study of the regional, seen this way, becomes something more complex than simple.

When it is externalized that the region is the consequence of an integration process, it must be understood, by basic negation, that it is integrated to those who, for a certain moment, are excluded; and the exclusion has to do with various dimensions, from the productive, and in turn the labor, or a certain productive orientation of the locality, which is modified to stop being excluded from certain capitalist production. That is, from this view, regional inequalities and exclusions are given in terms of production and its orientation "In reality, inequalities and exclusions are two sides of a single coin, one thing supposes the other. Our approach shows the exclusions that in each case leads to the existence of a certain inequality." (Morales, 2016. P. 15).

In fact, what is referred to as social dynamics, from the perspective of political economy, is referring to the set of elements that are shaped and configured to make way for production, it is then a set of social relationships that they are established from the production, the social and their relations for the production and the establishment of the economic "when we speak of a mode of production that is an abstract-formal object, we continue to situate ourselves on a general and abstract level, although the concept of the mode of production already covers, as such, the relations of production, the political relations and ideological relations ... but these modes of production do not exist or present themselves only in historically determined social formations" (Poulantzas, 2005. P. 21)

When the volume of production begins to increase, and in a much more pragmatic than scientific or philosophical sense, the dissection of production is made from something that has been called "economic sectors", as an accounting tool of production, but for practical purposes allows to stratify the total volume of production in primary, secondary and tertiary sector. Namely: The primary sector refers to the most basic form of direct appropriation of nature, from direct activities with the land, such as agriculture, aquaculture and others; as well as the use of it, directly, as fishing, the extraction of mineral materials, and other.

In the case of the secondary sector, it reflects the transformation, artisanal or industrial, of the product obtained in a primary way, in the process of capitalist production. Finally, the tertiary sector is conceived as one that is responsible for generating the circulation of capitalist production, known as the services sector, and for production to circulate has to do from the transportation of the produced, like the commerce in smaller and greater scale, as well as the set of financial and governmental institutions required so that the circulation of the merchandise can be carried out, and even, the services related to the legal contracts related to production; this service sector is also intangible production that distributes tangible production; until the haircut, which is in its form a service, takes shape in its material aspect at the same time as the scissors is shaping the desired arrangement of the hair; a bank that in its form gives a service, acquires its material aspect at the moment in which the other person can transform the byte set -deposited- of the bank in notes and coins, even in another part of the world, for the transaction of production in its retail form; or, those same - bank byte - reflect a bank byte sum, before a similar, to give mobility to wholesale trade.

## 2 Methodology

The method used in the present investigation was the hypothetico-deductive, with an approximate theoretical framework towards political economy in its perspective of regional studies; a cross-sectional study to the year 2018, even though some historical antecedents are rescued but the relevance of these do not make the investigation a longitudinal study. A predominantly qualitative mixed approach was considered as the most pertinent for the orientation of the present investigation, also, some numerical data are handled, as is necessary in economic studies, but they do not determine the total of the research as quantitative; of this, the predominantly qualitative mixed approach is presented.

For the development of the present investigation it was necessary to detect those municipalities of the Nayarit state that produce blue agave, which is used in the production of the tequila drink.

Cultivation / Municipality	Total planted area (ha)	Surface harvested or ready to harvest (ha)	Obtained or planned production (ton)	Obtained or planned performance (ton)	Weighted rural average price (\$/ton)
Agave					
Ahuacatlán	827	120	4,584	38.2	5,706.87
Amatlán de Cañas	236	61	2,379	39	5,993.44
Compostela	85	18	504	28	6,698.00
Ixtlán del Río	389	39	1,599	41	6,596.15
Pull	40	3	126	42	2,600.00
San Blas	2	0	0	0	0
San Pedro Lagunillas	2,520	445	20,025	45	7,754.61
Santa María del Oro	942	128	4,493	35.1	6,060.34
Tepic	105	6	356	64.7	2,600.00
Xalisco	36	0	0	0	0
Total	5,182	820	34,066	41.569	6,989.69
Total	5,182	820	34,066	41.569	6,989.69

**Table 1** Sowing and harvesting of agave in the Nayarit state, for the 2016 production cycle

Source: Nayarit Delegation of SAGARPA (2017)

The above table shows the hectares planted as well as those expected to be harvested in the 2016 cycle, but it is worth noting that the agave production cycle lasts between 5 and 8 years. Of this, a direct comparison between planted and harvested should not be considered, what should be of attention is the yield obtained. Considering for the study those municipalities of greater relevance in terms of agave production, making the review that they also produce other crops, so the relevance is relative to the volume produced in the Nayarit state.

From the above, it was obtained that there are six municipalities that participate in the blue agave producing region in the Nayarit state, namely: Santa María del Oro, Jala, Ixtlán del Río, Ahuacatlán, Amatlán de Cañas and San Pedro Lagunillas; explaining that even though the municipalities of Tepic and Xalisco are part of the denomination of origin of tequila, really these two are very devoted to the production of sugarcane, and their production of blue agave is imperceptible with the total of their production of sugarcane, in the case of Compostela, the production of agave is very much in the limits of the municipality of San Pedro Lagunillas and linked to this region, more than the rest of the municipality of Compostela.

Here it is worth noting that, the production of agave, not necessarily blue, or maguey continues to coincide with the regionalization that has historically been pointed out by Camelo and Rodríguez (2018), where they expose the maguey producing regions since the late 18th century and early XIX century, for the case of the northwest part of the Nueva Galicia or seventh canton of Jalisco, once in the independent Mexico.



**Figure 1** Planting of blue agave and sugar cane, in the municipality of Santa María del Oro, Nayarit; Mexico  
*Source: Own photography*

Once the object of study has been determined based on the aforementioned criterion, a further criterion is attached to obtain information, it is considered convenient to have a complete view of those who participate directly or indirectly in the agaverous dynamics. Interview as a source of information acquisition on the subject and, adnexally, it is convenient to interview the municipal administration, in its dependency related to the field, such as the Municipal Rural Development Directorates; on the other hand, to agave producers.

Having enough clarity about the actors to interview, holders of the Municipal Rural Development Directorates (MRDD) and agave producers, from each of the six municipalities under study, we proceed to determine the sample size to be interviewed, as which did not apply any formula, since in the case of the holders of the MRDD a census was carried out, involving each owner of the six municipalities; In the case of the producers, the procedure was different. Initially, the presidents of the ejido commissioners had been interviewed, which was not possible due to various reasons, ranging from being able to locate them to a certain political environment of conflict that was considered could bias the interview.

Therefore, another mechanism was implemented, assisting each of the six municipalities and interning between the paths where blue agave crops were observed and proceeding to interview the producer who was taking care of the crop, from the previous proceeding to interview to two producers per municipality, looking always that they were not in the same plot, and also that the plots were not so close to each other, with the aim of being able to rescue the vision of the producers of different geographical points of the six municipalities; a task that turned out to be quite complex, since locating the producers taking care of their crops is quite complex to coincide, since the blue agave is not a plant that is to be taken care of every day.

Then, the interviews applied were to the six holders of the MRDD of the municipalities under study; as well as, two producers of blue agave by municipality, although in this particular it is highlighted that in the case of the municipalities of Ixtlán de Río and Amatlán de Cañas, there was an opportunity to interact with a greater number of producers.

In terms of the applied interview, it is pointed out that it was guided, at first, by seeking information about the ways of integration, participation in the tequila industry; in a second moment, he left himself to an open interview, leaving the interviewee to present everything he wanted to comment on the subject, to obtain information that could in some way enrich the research.

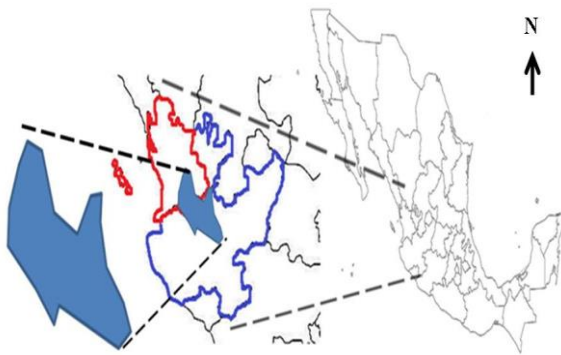
### 3 Historical background of a region producing agave and tequila

The production of a drink based on an agave pineapple juice dates back to the pre-colonial era " but what is more important in this case, is the vestige that at least 9 thousand years ago that in the center of Mexico the cooked mezcal was already consumed by its inhabitants " (Muriá, 2016. P. 32) but the creation of the drink that is now known as tequila is considered at the beginning of the 16th century (Muriá, 2016., Camelo and Rodríguez, 2018) expose that to the process of cooking the pineapple of the maguey, still in the earth well, and its juice was annexed the distillation process, presumably devised by a Spaniard, to give life to the brandy or mezcal. Although this drink was produced in a large part of the Kingdom of New Galicia and the Kingdom of New Spain, for the present it will focus on such an important geographical region of the production of the product, which would coin its name; There is a publication by Camelo y Rodríguez (2018) that presents the arguments to explain the particular.



**Figure 2** Conformation of the kingdoms during the colonial period of Spain (1492-1810)  
Source: Leoncio, 2016

It is then, the tequila region of the middle west of the Spanish colony, in the kingdom of New Galicia, currently of Mexico, in the Nayarit and Jalisco States, one so old that it comes from the colonial era itself.



**Figure 3** Macro-location of the agave and tequila production region in the north of the Jalisco state and south of Nayarit; Mexico  
Source: Camelo and Rodríguez, 2018

Vale states that according to Camelo and Rodríguez (2018) there are other tequila regions within the Jalisco state, towards the highlands of Jalisco and towards the part of the municipality of Tonaya, Jalisco; both regions of considerable size, it is understood that a large part of the territory of the Jalisco state has this production; as well as the Nayarit state that practically serves half of its territory, from the municipality of Tepic to the south of the state.

Of the previous thing, to speak of the producing region of maguey or agave, for this zone of the territory of Mexico, to produce tequila, is to go back to the first years of the Spanish colony; and in turn, to consider this same plant, for the production of native beverages, is to venture into the pre-colonial era, as it is exposed in enough literature, as (Muría, 2016; Casa Cuervo, 2017; Camelo and Rodríguez, 2018).

The precedent for this publication is to observe how the maguey, or agave, region of the Nayarit state integrates or participates in the tequila industry, either by integrating into the economic linkages to the south with the Jalisco state or by generating the production of The drink in the Nayarit state, which as is known, is part of the denomination of origin, according to the Tequila Regulatory Council.

*"For the purposes of this declaration of protection, the territory of the Jalisco state is established as the territory of origin; the Municipalities of Abasolo, Ciudad Manuel Doblado Cueràmaro, Huanimaro, Pènjamo and Purísima del Rincòn, of the State of Guanajuato; the municipalities of Briseñas de Matamoros, Chavinda, Chilchota, Churintzio, Cotija, Ecuandureo, Jacona, Jiquilpan, Maravatio, Nuevo Parangaricutiro, Numarán, Pajacuarán, Peribán, La Piedad, Régules, Los Reyes, Sahuayo, Tancítaro, Tangamandapio, Tangancícuro, Tanhuato, Tingüindín, Tocuambo, Venustiano Carranza, Villamar, Vistahermosa, Yurécuro, Zamora and Zináparo, of the State of Michoacán; the Municipalities of Ahuacatlán, Amatlán de Cañas, Ixtlán, Jala, Jalisco, San Pedro de Lagunillas, Santa María del Oro and Tepic, of the Nayarit state" (Tequila Regulatory Council).*

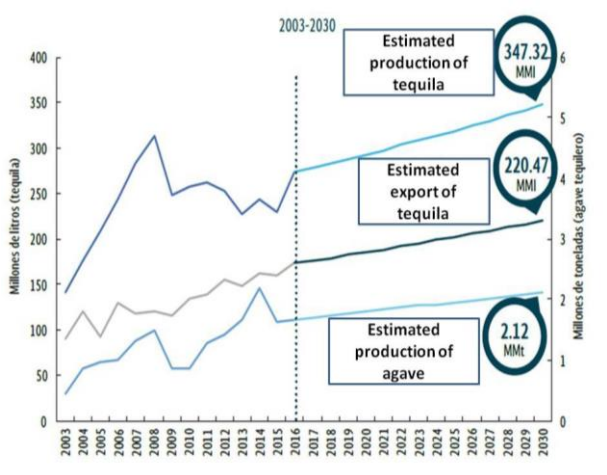
From the historical background, the objective is to observe the current dynamics, by 2018, of how the south of Nayarit participates in this dynamic of productive orientation, either in primary production (agave) or in the transformation in the secondary sector (tequila industry).

This is how a regional economic integration is conceived, between the south of Nayarit and the north of Jalisco, since pre-colonial times and that it continued in the colony, during the independent Mexico, with the seventh canton of Jalisco, and with the nascent free and sovereign Nayarit state in the year of 1917. It is in itself, an economic region of centuries.

#### 4 Findings

The findings that the research exposes, are made up of an intense field work, in the municipalities mentioned in the methodology section, and that rescues the experience and the feeling of daily living, of the actors involved, in their participation in the industry of the tequila.

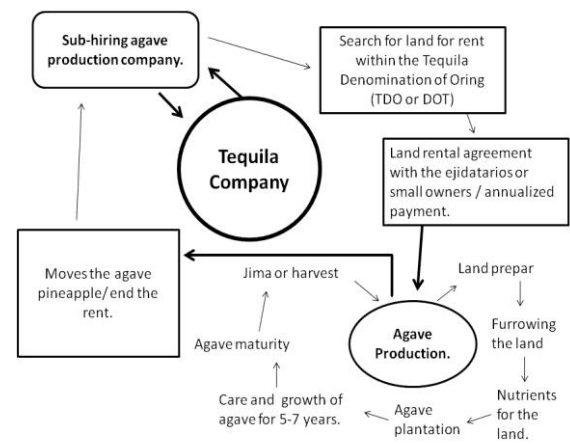
To contextualize the present investigation, it is exposed that, after the dynamics in the tequila industry, in the study region, experienced in the 19th century, the south of Nayarit, during the 20th century, continued participating in the agave production of relatively thin way; however, unlike as it has happened historically during the last century, in the last 20 years, approximately, agave cultivation has increased in the municipalities of the center-south of the Nayarit state, not being oblivious to economic cycles, it can not be ignored that this increase coincides with the periods of scarcity of the raw material for the production of tequila, this scarcity referred to is not due to a net reduction in the production of the raw material, the net behavior of the volume of the production of agave is incremental, but it is a relative shortage because of the increase in the volume of demand for the tequila drink.



**Graph 1** Production of the tequila drink and tequila agave plant, from 2003 with projection to the year 2030  
Source: SAGARPA, 2017

The graph shows several elements, an incremental process of the production of both tequila and its raw material, during the period indicated, with a contraction during the global crisis cycle of 2008-9 for the case of agave production. In the case of the production of tequila, there is a longer contraction, during a period of stagnation until the year 2010-11 and after a contraction process from 2011 to 2012-13. In the case of exports, it has been incremental after 2007-2008, during that time it has been the domestic market that lost tequila consumption capacity; after these periods of global economic turbulence, it has remained incremental and production is on the rise; without underestimating, which are projections and therefore with a degree of uncertainty.

But note that since 2003 to date, with its cyclical periods, has been an incremental production, not even the lowest point of contraction in 2009 reaches the lower levels of production in 2003, on average has been a period of expansion, of the production of the tequila drink and its raw material, of this the exposure of the relative scarcity of the raw material. A first finding that you want to expose in a graphic way, and that serves the same as a preamble to what is presented below, is the production cycle of agave, very particular and sui-generis, which is carried out in this region producing tequila agave; Observe the following image.



**Figure 4** Production cycle of tequila agave in the region formed by the south of the Nayarit state and north of the Jalisco state; Mexico  
Source: Self Made

**4.1 Social Perception of the object of study**

The feeling of the people who are participating in the Tequila Industry (TI), is of considerable diversity; However, there is some agreement between the interviewees. It is stated that some years ago (10 or 15 years), the different municipalities where the interviews were conducted, there were no sources of employment or they were very difficult to access, agave production, mainly, It has been a space where it has absorbed part of the work force that is unemployed, those excluded from the labor market, who locate in the production of agave, and TI in general, the labor redoubt that allows them to sell the power of his muscles and intellectual skills in some space of the productive chain of the drink called tequila.

This fact, finding a space, to be integrated into the tequila capitalist production, where sell their productive capacity, allows those who participate, have an income to be incorporated into consumption in the capitalist market, be it: food, clothing, footwear, education, among others, and of this the population that found in the TI the opportunity to be employed, expresses in a very pleasant and grateful way with the integration in the TI, since it opened the opportunity to be used.

Another element in which there is a certain coincidence in the perception of the interviewees, is a neglect, a neglect of the Mexican government and the Nayarit state to support the field, since they mention that mostly, between 90% to 95% of the planted area of agave, is ejidatarios who rent their land to tequila Cuervo, and to a lesser degree, the Teucer Sauza, since there is no capital to make the investment, since the pure agave plant, to start the plantation, costs between 10 to 12 pesos per plant, and there are no channels for marketing, it was external that did not necessarily expose the agave plantation, but there is no support for other crops, even corn, beans or sorghum; of it, when not having any type of support on the part of the government, that the interviewed ones consider irresponsible, it is happened to rent the lands to the tequileras of Jalisco like an option to receive an economic entrance "The Mexican government has not articulated broader objectives that support its Global Industry (GI) policy, beyond protecting Mexican products from substitutes produced abroad. Therefore, the tequila GI was allowed to be designed and implemented in a way that excludes peasants and fails to protect local resources." (Bowen, 2012. P. 91).

The following is a breakdown of the findings of the interviews, seeking to present the ideas in order from the three economic sectors, in order to present the research carried out with greater structure; of the foregoing, what is external in the wording of each of the economic sectors, does not correspond to a specific interviewee, but rather is the discoveries that come together, of the different consulted, in a certain section.

#### **4.2 Integration of the center-south of Nayarit to the tequila industry in the primary economic sector**

The construction of this section has shown a degree of complication, in its preparation, by the amount of experiences and ideas shown by the interviewees. The thirst to expose what is lived becomes palpable in the interviews; this sector, which has to do with primary production, and which some classical authors of political economy expose as the source of wealth.

The desire to expose what is lived becomes palpable in the interviews; this sector, which has to do with primary production, and which some classical authors of political economy expose as the source of wealth. Some of them of greater astonishment, but all of them, systematically oriented to the logic of the accumulation of capital of the tequila companies, not of the ejidatarios. First of all, there is a coincidence in the total of the interviewees that, from the area planted with agave, 90% to 95% of the surface corresponds to land rented by the tequila producers to the ejidatarios, from the above only from the order of 10% to 5% corresponds to ejidal or small property plantation, they are known as independent agave producers; the tequila plants that are mentioned as those that carry out the production of the agave are two, namely: Cuervo and Sauza, with the exception that in the total of the analyzed municipalities all mention that they cultivate for the Tequila Raven; only in the municipality of Amatlán de Cañas, they make reference to the fact that they also cultivate for the Sauza tequila, not to mention that it is a small part of the agave production that is worked with the Sauza tequila, that most of the production of agave goes to tequila Cuervo.

The rent of the land, for tequila plants, is developed in the following way. It is understood by a productive cycle of agave, which is between 5 to 7 years, so that the plant obtains the corresponding maturity to be used as a primary material for the production of tequila; the price paid by tequila producers per hectare of land, is variable depending on two main criteria, namely: the steepness of the land and the accessibility of the communication routes to it; of the above, the price paid per hectare ranges from 5 to 8 thousand pesos per year; This payment is made exclusively by bank transfer, which generates a cultural clash between the ejidatarios and the tequila houses, since, the ejidatario, not accustomed to managing a bank account, must meet such a requirement if he wishes to rent his land to the tequila.



Another element added, which adds to the culture shock, is that the tequila producers ask landlords for a certain registration before the Sistema de Administración Tributaria (SAT). The above, takes material form with an annual payment for the hectares of land rented, there are no monthly or weekly payments, but the tequila companies make the deposit once a year, for the total amount of the leased hectares, in such a way that if the lands are rented for 7 years, there will be 7 annual payments.

Regarding the way in which the production, planting and harvesting of the agave is carried out; it has some variants; that is, an artisanal production or a production with machinery. It is expressed that it can be carried out entirely with equipment and machinery; however, it is not possible to be done in such a way because there is a physiographic restriction, It is not due to lack of investment capital of the tequila plants, but sometimes the land where the agave is planted is too steep, which makes it difficult and makes it inconvenient to use machinery to carry out said production, in such case does it in an ancestral or artisanal way; in other cases, the physiography is more accessible and it is where tractors and other machinery are used that accelerate the planting and harvesting-jima of the agave; what is still irreplaceable, until now, is the jima (de jimar) of the agave, once it reaches its point of maturity to proceed to process and industrialize it to produce the tequila drink.



**Figure 5** Sowing of blue agave using machinery, as tractor and trailer, in the municipality of Amatlán de Cañas, Nayarit; Mexico  
*Source: Own photography*

It is activated agave production, generates a considerable integration of labor, it has different characteristics in terms of school education levels as there are day laborers who have primary studies, and even without completing, and some others have with undergraduate studies truncated.

This work force, integrated mainly to the work of the field, has a division of functions, and of it, with differentiated wage payments. The division in the structure of work in the field is composed of: Laborer, tractorista or machinist and corporal of cuadrilla. The day laborer is the one who does the direct work in the planting and care of the plant; the machinist is the one who operates the tractors and trailers; the corporal is responsible for organizing the day laborers (a crew consists of 68 day laborers) and machinists to take care of the hectares that are responsible for the production of the agave; there are also the engineers in charge of taking care of the growth and maturity of the plant, and the jimadores responsible for assisting the lands where it is advised that the maguey plant is ready to be jimada. The work schedule of those who participate in the production in the field, regardless of whether he is a day laborer, machinist or gang leader, is from 6:00 a.m. to 5:00 p.m.



**Figure 6** Laborers planting blue agave in Amatlán de Cañas, Nayarit; Mexico  
*Source: Own photography*

The payment of the labor force, contracted by the tequila houses, varies according to their insertion in the production of the agave; everything is paid from a wage, which amounts, for the year 2018, to \$ 88.36 pesos (corresponding to a minimum wage of the Mexican Republic) for the day laborer, the wage for the machinist is increased to \$ 111 pesos and for the corporal of gang amounts to \$ 125 pesos. With this base the calculations are made to assess the payments: The day laborer has a remuneration of 3.37 wages, to cover a schedule of 6:00 a.m. to 5:00 p.m., of this multiplies  $3.37 \times 88.36 = 297.77$  pesos per day, from 6:00 a.m. to 5:00 p.m., worked; in the case of the machinist, he has a payment of 3.5 days' wages, for which the remuneration amounts to  $3.5 \times 111 = 388.5$  pesos per working day; and for the case of corporal, his payment corresponds to 3.5 days' wages, valued at \$ 125 pesos, of which  $3.5 \times 125 = 437.5$  pesos per working day.

It is worth mentioning that the labor force integrated in this way to the production of maguey, has all the benefits set by the Federal Labor Law. In the case of ejidatarios who are independent producers, who do not rent their land to the tequila houses, the foregoing does not apply, since in this case it is mainly the family that participates in the production of the agave, this can not be done consider a workforce hiring, but it is the contribution and family cooperation to the production for the sustenance of the family, independently of if the obtained production is sold, or not, to the tequila houses; but for this case, of independent production, it has to pass the supervision and certification of the Tequila Regulatory Council (TRC) so that this independent production can be incorporated into industrialization to obtain the tequila drink.

It is important to outline how the production of agave takes place, on the part of the tequila house; note that the above is the productive chain of the tequila drink, from primary production to its subsequent process of industrialization. The strategy used for the production, of the raw material, of tequila is carried out under a subcontracting scheme of another company<sup>2</sup>, and it is the subcontracted company that does the whole process of land rental, purchases of inputs and everything related to the production of agave; of it, the workers of the field Do not work, or are contracted, directly by the Tequila house Cuervo or Sauza, but it is done through companies that belong to these firms but has its own business name; mention, among others, to: Agaveros de Magdalena, Farmers and Agaveros de Tequila, Producers and Agaveros of Tepic and Nayarit, and some others.

It is from companies like these, how hiring day laborers, machinists, crew chiefs, jimadores, engineers, clerks, etc are carried out; likewise, they are in charge of making the lease contracts of the lands with the ejidatarios. That is, these companies are responsible for carrying out everything related to the production of agave, from the most basic to the final point, and once you have the primary production its sale is for the Tequila houses Cuervo, Sauza, others, according to work for each of them.

Regarding the perception of those who rent their lands to the companies producing agave, there is a certain discontent when their land has been returned, since they mention that they are given "very salty" (less fertile) by the chemicals that they use so that the agave is achieved with the quality required to be incorporated into the production of tequila.

Each stalk, or pineapple, of mature agave has a weight that ranges from 40 to 50 kilograms (Kg.) And is paid between 20 to 30 pesos per kilo, it also depends a lot on the market. "In the reality of the world, we do not deal with natural resources that can be treated as commodified goods, since these resources are the basis of the reproduction not only of society but also of biological life." (Amín, 2001. P. 16) At the same time, there are theoreticians who since the mid-nineteenth century had the analytical capacity to refer to this last point pointed "Furthermore, every process carried out in capitalist agriculture is not only a progress in the art of fleecing the worker, but also in the art of fleecing the earth, and every step that takes place in the intensification of fertility within a period of time determined time, is in turn a step taken in the depletion of the Perennial sources that nourish said fertility" (Marx, 2010. P. 423).

Finally, it is necessary to highlight that all agave production is commercialized with the Jalisco state.

#### **4.3 Integration of the center-south of Nayarit to the tequila industry in the secondary economic sector**

The economic integration of Nayarit with Jalisco, from the tequila industry, to the effect of the secondary sector, is circumscribed exclusively in two dimensions. On the one hand, the sale of the total production of Nayarit agave is made for the Jalisco state, which is the commercialization of primary production, for the transformation into tequila; and eventually, of some amount of tequila production, which is carried out in Nayarit by Tequila Real de Ixtlan, which can be sold and / or bottled in Jalisco, which can be considered more of the tertiary sector; in neither case does it generate, this economic dynamic, a participation of Nayarit, in a dignified manner, in the tequila industry in the secondary sector; and even, the impacts that the Real Tequila of Ixtlán could generate, in the region of Nayarit, is as relevant as the size of the production of the tequila in question, which is not large.

<sup>2</sup> Something that is known as Outsourcing

The above, states that there is not really an integration of inputs that, the tequila industry installs in the Jalisco state, demand, of Nayarit, for the process of production and packaging of the tequila drink, generating industry in Nayarit, generates virtually nothing in the process of tequila industrialization in Nayarit, nor horizontal or vertical linkages of any kind, there is no industry, relevant, in Nayarit from tequila, no barrels are produced, neither the rings of the barrels, nor the cooking tanks, nor the bottles, nor the labels of the bottles, nor the required nails or screws, absolutely nothing, everything is produced in Jalisco. In the total economic dynamics of the Nayarit region, the secondary sector of TI is almost imperceptible.



**Figure 7** La Aguirreña Distillery, in Tequila, Jalisco; Mexico

*Source: Own photography*

It is rescued that in Ahucatlán, Nayarit there was a tequila called Tequilera Miramontes, which closed about 5-7 years ago; Likewise, the interviewees mention another tequila that operated in Jala, Nayarit, called El Ceboruco Tequila, it also closed about 7 years ago. The reasons for the closure of these tequila houses could not be rescued from the interviewees.

#### 4.4 Integration of the center-south of Nayarit to the tequila industry in the tertiary economic sector

The participation of this sector of the economy, in relation to TI, is of greater intensity; but with the peculiarity that it is, mostly, only one direction, from Jalisco to Nayarit. Since it does not generate the commercialization of the required inputs to do everything related to the productive chain of tequila; since, all that it requires, is brought, by the companies producing agave, directly from the Jalisco state, of it, in Nayarit they are only installed to take advantage of the availability of land suitable for production.

But it is external that, the agrochemicals, equipment, spare parts, etc., buy it in the Jalisco state. In the services sector, eventually the rent of real estate to install the offices, warehouses and others is an increase; as well as the use of private banking to perform transactions is also used; Another element that is considered is transport, although companies from the Jalisco state are also contracted here. Occasionally, some local transportation is also hired, but not being the most usual, due to the fact that there are no companies in the region dedicated to the said turn.



**Figure 8** Warehouse of a company producing blue agave, in the municipality of Ixtlán del Río, Nayarit; Mexico.

*Source: Own photography*

## 5 Conclusions

The price per kilo of agave, is determined by the market, and as it is explained in section III, it is in expansion, according to graph 1, so the lack of agave supply for the tequila industry is relative, the demand for tequila demand more raw material, although it is growing in total volume of production, this imbalance between demand and supply of agave, allows concluding that the price of the same does not experience a contraction in the short and medium term, it can be considered that by the year 2021 there is no reduction in the price of the agave that will make it unaffordable, the problem observed is that the production cycle is from 5 to 7 years, and although the projections of the demand for tequila are incremental, the current global environment does not ensure that this projection is maintained without cyclical contexts.

Section 4.2 and 4.4 The process of regional integration between Nayarit and Jalisco, is a very peculiar one, which allows observing disparities within the same region. The way in which these two states are integrated, starting from the tequila industry, is basically by the sale of the productive capacity of their population, as a labor force, and by the sale of the fertile capacity of their lands.

Both way of integration to the tequila industry, are the most primary part of the productive chain to obtain the tequila drink. With this form of integration, the economic spillover to Nayarit is evident, it does exist, but potential is not exploited as a trigger for regional development, thus, the image that is the object of regional development is a utopia.

Section 4.2.- Working under a scheme of subcontracted company, or if you like to call outsourcing, has a great disadvantage for people who are employed under that approach, since if, at some time of crisis, the subcontracted company, beyond if it belongs to the same firm of a tequila house, is forced to close and dismiss the total of the hired labor force, it can do it without generating direct responsibility to the tequila house. Likewise, it can be liquidated according to law, but it has no direct effect on the finances of the tequila house, except in the context of a cyclical economic context.

A general conclusion is that, in the regional dynamics of the object of study, only the regional, productive, legal facilities related to the DOT are taking advantage of Nayarit, but there is no income through the transformation of the raw material that allows the distribution of the same in Nayarit; Of course, there is still an advantage in generating jobs for the southern region of Nayarit dedicated to the planting of agave, of which the area in question is very needed; it is considered that this regional integration is being taken advantage of by Nayarit.

## 6 Dedication

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