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Entrepreneurship Networks in the Covid-19 era

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Abstract

Anti-COVID-19 policies follow the epidemiological traffic light that goes from red in total confinement to green in total deconfinement. In both scenarios, entrepreneurship is a response to the health and economic crisis. Based on distancing, confinement and immunization, the literature related to entrepreneurship configures a network structure that the present work set out to explain. A documentary, exploratory and cross-sectional work was carried out with a selection of findings published in journals indexed to Conacyt, Latindex and Redalyc. The information was selected considering the criteria of expert judges on the topics. A network was established from clustering and centrality coefficients. The results were discussed from the reviewed literature.

Keywords: Higher education; Educational innovation; Transformational leadership model; OECD Member Countries; Tic

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Introduction

Until November 2022, the pandemic has claimed the lives of eight million, although governments agree that atypical pneumonia would increase the figure to 20 million [1]. Anti-COVID-19 policies are distinguished by following an epidemiological traffic light. In red, confinement is recommended, as well as distancing and the use of preventive devices such as face masks or alcohol gel (PAHO, 2022). In green, deconfinement is recommended, but with measures to prevent infections, diseases and deaths, among which immunization stands out [2]. In both scenarios, innovative entrepreneurship is a response by society to the health and economic crisis [3] Gross Domestic Product shrank by up to 8% and entrepreneurial opportunities in retail trade emerged.

The educational system in Mexico, at the higher level, shows a greater presence of private Higher Education Institutions (HEIs) compared to public HEIs. Mexico City is the entity with the most private HEIs, followed by the State of Mexico and the State of Puebla. While it is the state of Veracruz, which registers the highest percentage of public HEIs, followed by Mexico City and the State of Mexico (SEP, 2022). On the other hand, to make a comparison of the distribution of both public and private HEIs, with other countries of the Organization for Economic Cooperation and Development (OECD) structured under a scheme that favors public financing of the educational sector, over others, such as the health sector; o balanced funding; It is observed that Mexico is among the countries that allocate the most public financing to the education sector. However, at the same time, it is at the same level as the Czech Republic, a country that allocates more economic resources to the area of health. In addition, it is in a lower level than Canada, which has a balanced system of financing in education and health.

From the above, it can be deduced that, although Mexico occupies intermediate places in the OECD lists, it is considered a type of financing in health and education. However, to include other indicators of educational quality, such as educational innovation, research, collaboration, and the availability of talent or competition, the country ranks lower than Brazil, Chile, Costa Rica, and Puerto Rich. Synthetically it is possible to say, considering the indicator of competitiveness and talent training, both public and private HEIs, located in Mexico in poor quality indexes compared to other member countries of the OECD, and even the Latin American region.

The rational choice paradigm that assumes the ability to collect and process enough information for decision making that reduces costs, while increasing benefits, led to the human capital theory, which aims to explain the dependency relationship between the citizens considered and named as "Talents" or "Human Capital" and the implementation of public policies, in which the educational and health fields are all crucial factors for the correct development of the so-called Human Capital [4]. For, Human Capital is the result of combining educational policies, educational systems and HEIs, seeking to promote people's capacities (in the form of emotions, discourses, skills and knowledge) oriented towards entrepreneurship, innovation, productivity and competitiveness.

In other words, human capital is a process of educational training that is made up of two aspects: on the one hand, there are the academic training opportunities generated by the State, while on the other hand there are individual capacities [4]. Consequently, those with more educational background and experience in the processes will be considered talents. This is so because the knowledge and skills are perfected and accumulated to provide solutions in public management and administration.

It is emphasized that in the case of educational quality indicators, such as research, collaboration and innovation, they not only determine human capital, but also their place in key sectors of the economy, they explain the development of a country, since that it is these talents who will carry out the management and administration of public goods and resources [5]. If the agenda is rather inhibited by audience styles like stalker, buller or troller, then digital entrepreneurship must not only include these disadvantages in the business model, but also identify the reasons that these Internet users have to discredit the entrepreneurial initiative or the innovative proposal [6]. If rational choice and human capital reflect a propositional audience style that coexists with inhibitory styles of entrepreneurship and innovation, then business models must adjust to this complex dialectic, while identifying the reasons for actions, it will be possible to establish a dialogue to highlight the competitive advantages of the product or service that is intended to be carried out on the Internet, social networks or email.

Within the framework of the information society and socio-digital networks, the management of the State and the self-management of the community have been differentiated in terms of objectives, tasks and goals [7]. In this sense, the social sciences have built comprehensive models such as socio-state co-management consisting of; the diagnosis of the social representations of the State and citizenship indicated by the establishment of a public agenda on security-sustainability, the dissemination of information on trust, commitment, entrepreneurship, innovation and satisfaction as determining factors of social representations of the State and of the citizens; the evaluation of the diffusion of the determining factors of the representation of the State and the citizenship.

Studies of educational institutions warn; the administration of a traditional culture and leadership as the guiding axis of the academic programs; the establishment of an agenda focused on knowledge management, entrepreneurship and innovation; strategic alliances between universities and companies as the central axis of professional training; multidisciplinary collaboration networks [8].

Studies related to entrepreneurship establish the synergy between Higher Education Institutions and micro, small and medium enterprises [9]. The establishment of knowledge networks between universities, technological institutes, research centers and industries; The formation of scientific, technological and industrial agendas prior to multidisciplinary academic exchange; The framework of topics such as techno science, nanotechnology and digital entrepreneurship converge in the training of talent and leadership.

Innovative entrepreneurship refers to civil initiatives and citizen proposals on security and sustainability in order to integrate such amendments into the political agenda, government policies, crime prevention programs and delivery strategies. of justice and sustainability [10].

However, the construction of a civil agenda or social self-management supposes the informative diffusion of the demands and resources, opportunities and capacities, since it is the digital networks that question the public agenda -Trolling-, or, better said, strengthen it - Stalking, Trending [11]. Therefore, cyber political entrepreneurship refers to the intensive use of Information and Communication Technologies, as well as electronic devices for the establishment of an agenda regarding trolling, stalking or the tendency towards a political figure or process. This is the case of voting intentions or elections.

The relationship between State and citizenship, mediated by an agenda in which education, science and technology are central issues of human development [12]. The agenda supposes; the influence of contexts, sources, audiences and devices on public opinion; the establishment of symbols from which the impact of citizens on public policies is interpreted; the representation of progress indicated by strategies, discourses and styles of knowledge; the intensive use of electronic devices for the diffusion of innovations; the barriers to digital entrepreneurship identified in audience styles such as stalker, troller or bully.

The specified model included hypotheses, constructs and indicators for each of these, all related to the trajectories of the correlations between the variables. Study in relation to other models of leadership and use of electronic devices, identified the scope and limits of the specified model, as well as the possible integration in future research A comprehensive model for the study of digital entrepreneurship would include leadership and psychological variables around the acceptance, adoption and intensive use of Information and Communication Technologies (ICT).

From the theoretical, conceptual and empirical review, it was possible to establish a model for the study of cyberpolitical entrepreneurship. The proposal includes four explanatory hypotheses of the trajectories of the dependency relationships between the factors established as determinants in the literature consulted. The model includes hypotheses of correlation trajectories between the variables used by the state of knowledge to explain: the establishment of an educational, scientific and technological agenda; professional training of human capital, talents and leadership; knowledge networks around strategic alliances between universities and for-profit organizations; the quality of educational processes and products in terms of evaluation, accreditation and certification; barriers that inhibit and/or stimulate entrepreneurship and digital innovation.

The model assumes that there is a close relationship between values and motives since then [13]. If entrepreneurship is driven by cooperative values and is intrinsically motivated, then it is an altruistic style that does not seek to maximize benefits over costs. Although entrepreneurship is the result of the expected benefits but interrelated with the belief that opportunities are increasingly scarce, it is determined by deeply rooted traditions,

uses and customs in productive and innovative sectors. This is how values, beliefs, perceptions, motives and knowledge anticipate the appearance of dispositions in favor of innovation given the scarcity of opportunities. If such provisions are in favor of an innovative culture that coexists with the authoritarianism of traditional leadership, consequently, decision-making will favor innovative entrepreneurship. Precisely, the balance in favor of benefits over costs, not only reflects the rational choice of human capital or the perspective of talents and leadership, but also predicts the emergence of a lifestyle with provisions inherited from the academic or work culture. and dispositions learned from tests of more successes than failures.

In this way, the establishment of an agenda in higher education, science and technology, at the local level, consists of the orientation of cooperation, the beliefs of scarcity of opportunities, the perceptions of areas of opportunity that will determine intrinsic reasons such as the need to be informed about the alternatives for prosperity in knowledge networks, as well as the provisions to know and acquire skills that define entrepreneurial decisions and generate proposals, agreements and co-responsibilities within academic groups Values, beliefs and perceptions related to needs, expectations, demands, opportunities and available resources for security and sustainability as determinants of entrepreneurial attitudes, motives and knowledge indicated by Trolling (aggression), Stalking (espionage) and Trending (promotion). Values, beliefs and perceptions that determine attitudes, motives and knowledge that influences the intention to undertake. Indirect determination of values, beliefs and perceptions of entrepreneurship through attitudes, motives and knowledge that determine intentions.

The objective of the present work was to establish the hypotheses related to the theoretical, conceptual and empirical trajectories around political entrepreneurship through some Information and Communication Technologies (ICT) or management device in order to specify a model for the study of the phenomenon. The purpose of this work is to specify a model for the study of the correlation trajectories between the variables reviewed in the theoretical, conceptual and empirical frameworks related to digital entrepreneurship. The specification of a model for the study of innovative entrepreneurship was carried out with an exploratory, retrospective and systematic study. The selection of sources indexed to international repositories was carried out considering a search by keywords. Axes, trajectories and relationships between variables that explain the phenomenon were found, suggesting extending the work to other repositories and categories [14-17].

Method

A non-experimental, cross-sectional and exploratory study was carried out with a non-probabilistic selection of sources indexed in repositories. Indicators of educational quality of the Organization for Economic Cooperation and Development (OECD) located in Mexico in recent times. This text aims to carry out a study of three portals that collect and give access to scientific documents published in Spanish, also called "indexed sources", in order to: review the theory of human capital to extract training quality indicators; establish the hypothesis of correlation trajectories between quality of life indicators; compare the specified model with others to discuss its scope and limits; propose a comprehensive model considering the revised theoretical, conceptual and empirical frameworks. The specification of the model includes five explanatory hypotheses of the trajectories of the dependency relationships between eight variables: beliefs, values, perceptions, knowledge, motives, attitudes, intentions and behavior.

A non-probabilistic selection of findings reported in sources indexed to national repositories such as Conacyt, Latindex and Redalyc was carried out, considering the edition period from 2019 to 2022, as well as the search by keywords: "entrepreneurship", "opportunism", "innovation", “optimization” (**Table 1**).

Opportunism, C3 = Process innovation, C4 = Optimization of means

The Delphi Inventory was used, which includes the criteria of expert judges on the topics, considering three rounds: qualifying, feedback, and reconsideration or reiteration [18] it includes questions related to the effect of the pandemic on entrepreneurship and the indicators of opportunism, innovation and optimization (**Table 2**).

The information search was carried out in the national repositories: Conacyt, Latindex and Redalyc considering the four categories. The Delphi inventory was delivered to the judges after guaranteeing the confidentiality and anonymity of their answers by the writer. The document followed the guidelines of the Helsinki protocol and the American Psychological Association (APA) in its sections related to studies with cognitive and behavioural processes in professionals and expert peers. The judges were selected by their h-index in google scholar and contacted in their institutional emails. Attached is the inventory and the response that informed about the objective of the study and those responsible for carrying it out. Once the judges sent the resolved inventory, the information was captured in Excel and the statistics were processed in JASP version 15.

Neural network parameters were estimated from the equation

Table 1. Sample Descriptive.

				C1				C2				C3				C4
	A	B.	C	D	A	B.	C	D	A	B.	C	D	A	B.	C	D
r2	2	3	2	5	3	1	1	4	4	3	3	4	5	3	5	3
r3	3	4	3	4	4	3	2	2	5	4	1	3	3	2	4	4
r4	1	3	1	2	2	4	3	1	3	5	2	2	2	1	2	2

Table 2. Descriptive of the judges.

Sex	Age	Profession	Degree	Experience	Entry
Male	45	Psychology	Post doctorate	10 years	37'234.00
Feminine	57	Management	Doctorate	19 years	28'563.00
Feminine	64	Psychology	master's degree	14 years	21'987.00
Feminine	38	Economy	Post doctorate	10 years	30'897.00
Male	51	Management	master's degree	15 years	26'954.00
Feminine	49	Engineering	Doctorate	15 years	23'087.00
Male	50	Sociology	Doctorate	12 years	18'975.00

Source: Prepared with study data.

recommended by Otero (1988) in which the estimates are detailed considering a basic neuron structure, inputs and outputs of information (**Figure 1**).

Results

Figure 2 shows the parameters that measure the centrality of the findings analyzed from the categories of entrepreneurship, innovation, optimization and opportunism. It is possible to notice that the values of the relationships between input and processing of the network suggest a learning that is located in a threshold of permissible risk. That is, entrepreneurship is centralized with innovation, opportunism and optimization (**Figure 2**).

Figure 3 announces the grouping of the findings related to the four categories of entrepreneurship, innovation, opportunism and optimization. The grouping parameters suggest that the criteria established by the judges allow them to identify an observable, measurable and comparable structure (**Figure 3**).

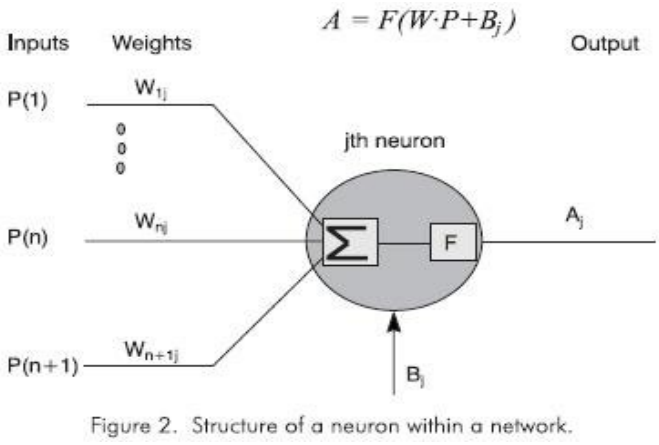

Figure 1 Neural network equation.
Source: Otero (1988).

The values of centrality and grouping allow interpreting the structure of neural relationships. Figure 4 shows the hegemonic nodes of the four categories of entrepreneurship, innovation, opportunism and optimization. It is possible to notice that positive relations prevail between the indicators of the categories. The structure begins with the optimization of resources that culminated in areas of opportunity and entrepreneurship. In other words, according to the criteria of the expert judges to qualify the findings published in the literature from 2019 to 2022, the neural network of entrepreneurship is linked to the optimization of resources rather than to micro-financing opportunities for process innovation. This would be the case of communities accustomed to the scarcity of resources or in conflict with their municipal government for the administration of micro credits. The literature consulted seems to reflect this fatalistic scenario of decoupling between the rulers and the ruled (**Figure 4**).

Discussion

The contribution of this work to the state of knowledge lies in the specification of a model for the study of entrepreneurship considering: the context of few opportunities and abundance of initiatives that, however, are disconnected from the agreements and co-responsibilities between citizens and the State; business development policies limited to MSMEs that force them to merge or ally with multinationals; the absence of a culture of social and organizational entrepreneurship ignored by an ideology of corporatism where profits do not exceed costs; the knowledge networks established in professional practices or social service, but without follow-up by the university or the company; the dissociation between theoretical subjects with respect to professional practices; the confinement of disciplines and the

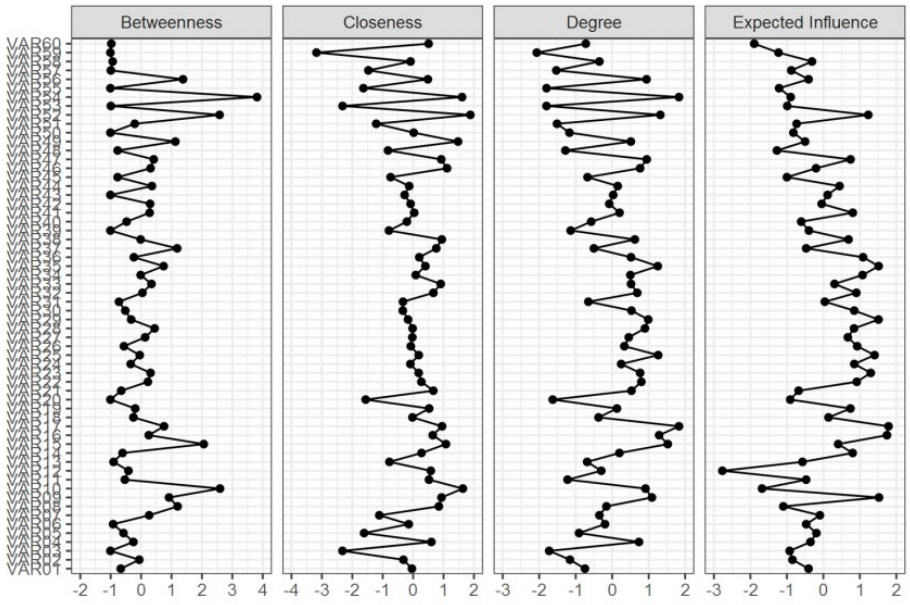

Figure 2 Centrality.
Source: Prepared with study data.

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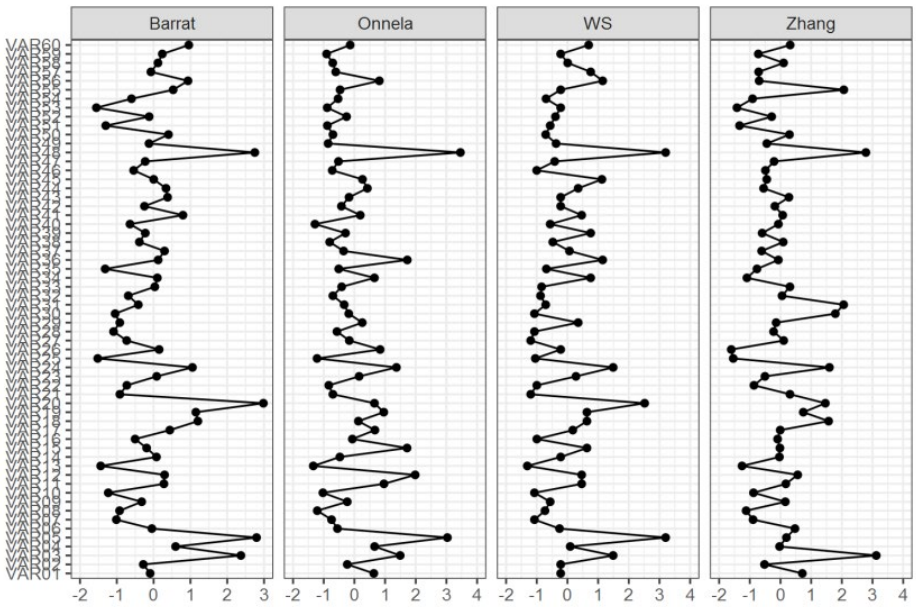

Figure 3 Group Source: Prepared with study data.

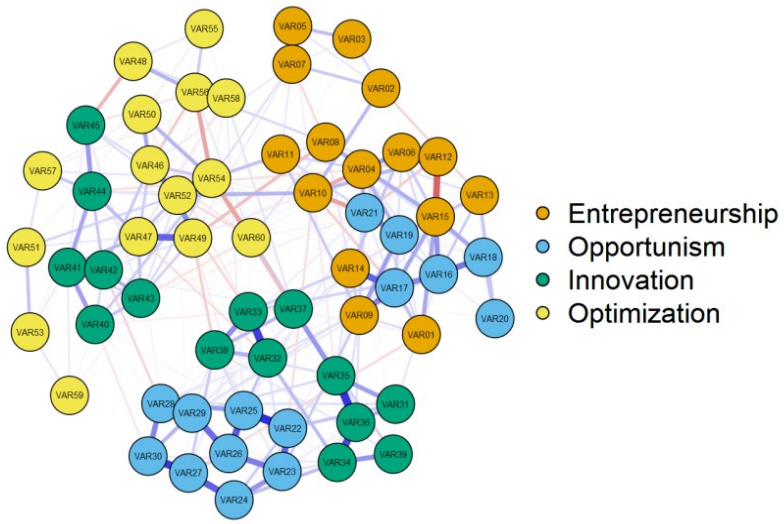

Figure 4 Neural network.
Source: Prepared with data from the study. Note: Links in blue represent relationships.

lack of multidisciplinary systems [19].

However, educational institutions have been the predominant barrier that not only inhibits, but also minimizes any initiative or proposal that contradicts its principles of reproducing the differences between talents and leadership; unilateral or majority decisions against dissident groups; predominance of the climate relationship over task climate; management and control from traditional leadership; preservation of processes that have not always been efficient, efficient or effective The institutional framework determines entrepreneurship directly through financing and resource distribution policies, but indirectly the institutional framework has a greater dissipating effect because it determines the priorities of an institution among which entrepreneurship and innovation are not central issues on the institutional agenda because they allude to change and the quality of processes and products [20].

Once the institutionally has penetrated the academic spheres, its reproduction is imminent. Through the teaching-learning process, as well as the extracurricular process, the agenda is established as a legacy of the public agenda. In other words, if public opinion is immersed in issues established by the traditional media, then student, teacher or administrative opinion will also

be influenced by those same issues. Institutionally generates academic exclusion, since those who do not follow the guidelines of educational policies, their voice and vote will be considered peripheral in the discussion of the central issues established by the media and disseminated in the classroom and other university spaces.

Dissident groups to institutionalism are organized in collaborative spheres and knowledge networks in order to counteract the effects of the agenda in professional training, professional practices and social service. The disconnection between academic objectives and business purposes and two types of entrepreneurships emerge; one mediated by cultures and traditional leadership styles that limit innovations, but reinvent the institutional framework, and the other mediated by information technologies that promote proposals, agreements and co-responsibilities. Enterprising Internet users can build a personal agenda and contrary to the institutionalist agenda. Since Internet use is limited, only those who have the resources and funding are eligible to set a personal agenda in the classroom and elsewhere.

Consequently, digital entrepreneurship is subject to a context that limits its emergence as an alternative to set the agenda and build collaborative networks. Culture had no direct or indirect influence on innovation strategies, but instead developed a model in which decisions and behaviors were closely related to capabilities. Skills and knowledge as determinants of innovative Internet entrepreneurship are based on transformational and leadership cultures where there are no differences between talents and leaders. In other words, if knowledge management has an impact on talent proposals, then the institutional administration is out of the process of creation and innovation.

The institutionalism administration, being replaced by technological risks and threats from Internet communities, guides an undertaking related to the legitimation of the State as a knowledge manager. In this sense, the effects of risks and threats on innovative entrepreneurship are reflected in the privacy and identity of talents. As stalkers, trollers, and bullies intensify, institutionalism is minimized to such a degree that smear propaganda, identity theft, or surfer stalkers are the issues that govern the university, its strategic alliance, and prospective of entrepreneurship and innovation.

Conclusion

The contribution of this work to the state of knowledge lies in the specification of a model that includes three explanatory hypotheses of the trajectories of relationships between the determining factors of entrepreneurship in its Trolling, Stalking or Trending modality , but unlike social entrepreneurship that implies the construction of a public agenda based on empathy, commitment, innovation and cooperation, cyber political entrepreneurship assumes that civil initiatives and proposals are generated from mistrust and aggression towards their authorities, in the same way as through monitoring or support to political figures or processes.

However, mass communication studies show two logics that consist of the credibility of state propaganda and the verifiability of its achievements disseminated in the media, aspects that the model does not include, but that must be considered in the face of scenarios of government or government reports. Election contest.

Since the specified model aims to anticipate entrepreneurship as a result of institutional administration and knowledge management, entrepreneurship and innovation, its empirical contrast is recommended.

The specification of the model establishes the differences between teachers, students and administrators with respect to the evaluation, accreditation and certification of the quality of academic processes and products, as well as anticipates knowledge management, entrepreneurship and innovation scenarios.

References

1 Adebayo T (2022) an assessment of reverse logistics responsiveness and customer satisfaction in retailing. Int J Res Bus Soc Sci 11: 93-98.

2 Aranha EA, Correa JBS, Mouallem ACE (2021) Entrepreneurship, Business Model and Design Thinking in Brazilian Small Enterprise. Business Dimension 19.

3 Barroso Tanoira FG, Santos Valencia RA, Lopez Ponce ME (2020) factors that affect the experience of entrepreneurship in university students. A study in a private institution in Merida, Yucatan, Mexico. Nova Scientia 12.

4 Betancourt Chaparro JS, Jundt T (2021) Internationalization of Colombian Start-ups New Research Insights. J Eco Adm 1794-756: 18.

5 Bustos-Aguayo JM, Juarez-Najera M, Garcia Lirios C (2022) Review of entrepreneurship in the COVID-19 era. Wit Magazine 19: 9-15.

6 Carreon-Guillen J, Bustos Aguayo JM, Juarez Najera M, Hernandez-Valdes J, Sanchez-Sanchez A et al. (2020) Coffee entrepreneurship during COVID-19. Publications & Research 14.

7 Dushime E, Muathe S, Kavindah L (2022) new paradigms on performance of SMEs: The reflection on entrepreneurial innovation in Burundi. Int J Res Bus Social Sci 11: 24-32.

8 Garavito Hernandez Y, Calderon Campos JA, Ramirez Torres WE (2020) Entrepreneurship in women and youth: a review of the literature. Lumina 22E0008.

9 Garcia Lirios C (2015) Specification of a Model of Entrepreneurship Social Specifying a Model of Social Entrepreneurship. Reason and Word 18: 715-745.

10 Garcia Lirios C (2017) Entrepreneurial millenial model. Changes and Stays. 8: 379-395.

11 Garcia Lirios C (2022) Modeling talent management and incubation. Interconnecting Knowledge's 59-66.

12 García Lirios C, Carreon Guillen J, Bustos Aguayo JM, Hernandez Valdes J (2020) Perception of coffee entrepreneurship in the

This article is available in: https://www.itmedicalteam.pl/health-science.html

Huasteca region, central Mexico. Assets Magazine 18: 235-266.

13 Garcia Lirios C, Carreon Guillen J, Hernandez Valdes J, Salinas Torres R, Aguilar Fuentes JA (2018) Governance of institutionalized entrepreneurship in the face of climate change based on the establishment of a public agenda. J Acadc Res Border: Div Economic Sci 20.

14 Hatammimi J, Dita Purnama S (2022) factors affecting prospective entrepreneurs to use e -marketplace: A study of business school students in Indonesia. Int J Res Bus and Social Science 11: 1-11.

15 National Institute of Statistics, Geography and Informatics (2022) Statistics the coronavirus SARS CoV-2 and the COVID-19 disease in Mexico.

16 Ndlovu SG, Heeralal S (2022) An investigation into marketing activity's role on the buy of private label brands: A systematic review of trends in literature. Int J Res Bus Soc Sci 11: 33-41.

17 Noronha, MS, Bento, LF, Rufino, JPF, & Rocha, TV (2022) Research Overview about skills of Start-ups. Int J Prof Bus Rev7: e0293.

18 McCombs M, Stroud N (2014) Psychology and Agenda Setting Effects: Mapping Information Processing Pathways. J Commun Res 2: 68-96.

19 Murgueytio-Montenegro JA, Arcentales-Montalvo AJ, Canchingre-Bone LA (2020) Educational entrepreneurship through digital media in the Ecuadorian context. PRA 20 (27).

20 Organization for Economic Cooperation and Development (2022). Statistics of the SARS CoV-2 coronavirus and the OVID-19 disease by member countries. New York: OECD.