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INTRODUCTION

Since the creation of the National System of Researchers (SNI)[1] in 1984, research and technological development recognizes the work of researchers adhering to the SNI, by granting an economic stimulus, gradual and correlated to the level of importance of their productivity and scientific creation, whose purpose is to promote the development of science and technology in Mexico. The Council of Science and Technology (Conacyt), defines the policy line of action in the field of scientific and technological research, in accordance with the priorities that the National Development Plan, establishes as a priority in the search for a better state of economic development and social.[2]

Currently, one of the main problems facing Mexico is the poverty they present in large sectors of the population, both in rural and urban areas. The condition of poverty means that the population that suffers it suffers from economic marginalization and social exclusion, whose objective expression corresponds, among others, to the lack of opportunities for access to employment, health, education and the presence of food deprivation, being these conditions unfavorable This invites us to ask ourselves: how to tackle the fight against poverty and social exclusion, from the perspective of social research, in support of the elaboration of a public policy that social development in Mexico? In this sense, a first note invites us to reflect on the following: how to support, from the field of research and academia, the elaboration of public policy that seeks to direct more precise actions in the fight against multidimensional poverty and social exclusion?

The scientific and social responsibility of the members of the SNI, and in particular, those whose specialty is the study of poverty, is to contribute to promoting, in a knowledge society, the generation of quality scientific articles, but also the generation of proposals for lines of action that allow the State, the design of public policy that seeks a more objective and transparent action in the use of public resources destined to actions to combat multidimensional poverty and social exclusion . In this way, it is important to recognize what is the total number of SNI researchers who study poverty as a specialty line? and what is the level of category that holds in the SNI and which institutions carry out research on poverty ?, in this way to get closer to what is the scheme of the generational change of researchers of the SNI, in the study of poverty in Mexico?

II. NATIONAL SYSTEM OF RESEARCHERS (CONACYT) AND THE FIGHT AGAINST POVERTY IN MEXICO

The fight against poverty is a current concern, its study is addressed from various theoretical and methodological approaches, which have been proposed in various international organizations, and through which seeks to establish a clear definition, measurement, design of public policies and action strategies. The main studies of multidimensional poverty can be cited to Sen (1981) (1982a) (1982b) (1984), Lipton and Ravallion (1993), Anand and Sen (1997), Chakravarty et. to the. (1998), Brandolini and D'Alessio (1998), Sen (2000), Tsui (2002), Ruggeri et al. (2003), Bourguignon and Chakravarty (2003), Atkinson (2003), Alkire-Foster (2007), Kakwani (2008a) (2008b), World Development (2008) (2013) and Granda (2008).

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[1] "The SNI is a program coordinated by the National Council of Science and Technology (CONACYT) that recognizes, as a result of the evaluation, the quality, transcendence and impact of scientific research and technology, as well as the innovation that occurs in the country. "See. National Council for Science and Technology. White Paper: Program of the National System of Researchers (SNI). p. 3

[2] Since 1984, the SNI has demonstrated the following virtues: a) Established the culture of evaluation among the scientific community, professionalizing its work by publicly disclosing what is expected of scientists and technologists to recognize them as national researchers. b) It has stimulated the development of postgraduate programs, since currently to be a member of the SNI it is a requirement that researchers have a PhD and it is a fundamental criterion in the evaluation that they participate in the training of human resources through the thesis management. c) Because neither the membership nor the level are definitive, it has stimulated and promoted scientific productivity and its quality. The number of articles or books per researcher has increased, as well as the number of citations to their jobs and d) The transparency of their process has led to their being named among the best qualified programs in the federal public administration. See National Council for Science and Technology. White Paper: Program of the National System of Researchers (SNI). Op. Cit. p. 5

In Mexico, academic discussion and legal norms are currently pushing towards a multidimensional approach to poverty, such as the contributions of Boltvinik[3] (2007), Gordon (2007), Alkire-Foster (2008), CONEVAL (2010. In the following section presents a brief description of the study of poverty in Mexico in the period from 1984 to 2018.

a. A retrospective: The study of poverty (1984 - 2018)

In Mexico, recent history in the evolution of social policy to fight poverty, observes at least two nodal events.[4] First, the creation of the Technical Committee for the Measurement of Poverty (CTPMP) in July 2001, under the Ministry of Social Development (SEDESOL), and second, in December 2003, the enactment of the General Law of Social Development, with which the National Council for the Evaluation of Social Development Policy (CONEVAL)[5] was created.

a.1 The one-dimensional measurement of poverty, 1984 - 2004.

At the beginning, the CTPMP created in 2001, was integrated by seven national academics experts in the study of poverty and a representative of each of the following agencies: National Population Council (CONAPO), National Institute of Statistics, Geography and Information Technology (INEGI) and the Presidency of the Republic. This committee was assigned the responsibility of providing the Federal Government with a methodology for measuring poverty. In this way, in August 2002, the methodology for the study and measurement of poverty based on a one-dimensional approach was approved, which was adopted by the Federal Government as the official instrument to quantify poverty. At the national level, the Political Constitution of the United Mexican States establishes the basic social rights that the population has and that the Mexican State is obliged to provide.[6] However, it is up to the year 2004 that with the issuance of the General Law of Social Development, the principles and guidelines of social policy are specifically regulated and regulated, in this way, priorities and rules are established in the use of public spending, in its social aspect.

a.2 Decree of the general law on social development and the emergence of the National Council for the Evaluation of Social Development Policy (CONEVAL), 2004 - 2008

With the promulgation of the General Law of Social Development, it is established that the national policy, in matters of social development, must include at least the following aspects[7]: i) overcoming poverty through education, health, food , the generation of employment and income, self-employment and training; ii) social security and assistance programs; iii) regional development; iv) basic social infrastructure and v) promotion of the social sector of the economy.

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[3] Dr. Julio Boltvinik Kalinka is Researcher Level III of the SNI-Conacyt, his line of specialty is Poverty and Social Development in the field of Demography, developing his research at the College of Mexico. SNI-Conacyt 2018.

[4] The paradigm of the concept of poverty, following Kuhn, is updated among the different agents and social institutions that make political decisions and the technocratic elite. The determination of the paradigm indicates how the social problem that it generates should be addressed, points out that theories and methodologies should be used. In the current debate on the concept of poverty, at least three scenarios are recognized: a) At the level of the academic scenario that seeks the hegemony of a theoretical position, b) at the conceptual and theoretical levels in the application of empirical studies, and c) a level of the position of decision makers in matters of public, international and national policy.

[5] With the creation by law of the National Council for the Evaluation of Social Development Policy (CONEVAL), the Mexican state gives a technical recognition and establishes the need to define a methodology to quantify the phenomenon of poverty, as well as to define the lines of action for the fight against poverty, the targeting of the target population, and the establishment for control in the allocation of federal public resources for different social programs, and in particular, of those referred to the determination of areas of priority attention, and the evaluation of the programs implemented to combat multidimensional poverty.

[6] See Articles 2 subsection "A", 3, 4, 25, 26 of the Political Constitution of the United Mexican States. Constitution published in the Official Gazette of the Federation on February 5, 1917. Current text. Last Reform DOF 08-10-2013 Retrieved from: http://www.diputados.gob.mx/LeyesBiblio/pdf/1.pdf

[7] See Article 14 fractions I to V of the General Law of Social Development. New Law published in the Official Gazette of the Federation on January 20, 2004. Current text. Last published reform DOF 01-06-2012. Retrieved from: http://www.diputados.gob.mx/LeyesBiblio/pdf/264.pdf

Since 2004, CONEVAL[8] has the legal responsibility to present the information and studies that support the definition of the social objective of the programs, goals and actions of the Social Development Policy, through two actions: i) regulate and coordinate the evaluation of the National Social Development Policy and the policies, programs and actions executed by public agencies; and ii) establish the guidelines and criteria for defining, identifying and measuring poverty, guaranteeing transparency, objectivity and technical rigor.

In compliance with the indicated aspects, the Ministry of Social Development (SEDESOL) is mandated by law to conduct the social policy in accordance with and in compliance with the strategic guidelines set forth in the National Development Plan and the derived actions in the Social Development Program.[9] In the General Law of Social Development, article 72 establishes that the CONEVAL[10] is responsible for evaluating social policy in the country, while article 36 of the aforementioned law states that it will also be responsible for issuing the guidelines and criteria for the definition, identification and measurement of poverty under a new multidimensional criterion.In Mexico poverty is a subject that has been studied extensively, however, the perspective of poverty from a multidimensional approach is relatively new, as can be seen in the following Figure 1, which shows the evolution of the approach and methodology applied by Mexico for the measurement of poverty, from a one-dimensional to a multidimensional approach.

Figure 1
Multidimensional poverty in Mexico, main theoretical contributions and the
public policy of Social Development. 2001 -2018

Source: Medel Ramírez Carlos et al. (2016). Chapter 14. Multidimensional poverty, indigenous population and social exclusion in Mexico: A look at the national crusade against hunger (No hunger 2013). In: Poverty, inequality and violence in Latin America. A mixed methodological approach. CUES editions. Barranquilla Colombia, 2016, ISBN: 978-958-57441-8-9, pp. 305-332. Retrieved from: https://rev-inv-ope.univ-paris1.fr/fileadmin/rev-inv-ope/rideca/Livres/Pobreza_2016.pdf

[8] Law of Social Development. Chapter VI On the Definition and Measurement of Poverty, in article 36. It is stated that: "The guidelines and criteria established by the National Council for the Evaluation of Social Development Policy for the definition, identification and measurement of poverty are of mandatory application for public entities and agencies that participate in the execution of social development programs, and must use the information generated by the National Institute of Statistics, Geography and Information, independently of other data deemed appropriate, at least on the following indicators: I. Per capita current income; II. Average educational lag in the home; III. Access to health services; IV. Access to social security; V. Housing quality and spaces; SAW. Access to basic services in housing; VII. Access to food, and VIII. Degree of social cohesion. See in: Law of Social Development. Retrieved from: http://www.diputados.gob.mx/LeyesBiblio/pdf/264.pdf
[9] To fulfill the function conferred by law, the Secretariat of Social Development (SEDESOL) must present every six years, at the beginning of the presidential term, the Social Development Program, which establishes the objectives and strategies to be implemented in the state. Mexican social policy, which should be in accordance with the National Development Program.
[10] Social Development Law, in Title Five. From the evaluation of the policy of social development, Chapter I. Of the Evaluation, in the article 72 establishes: "The evaluation of the Policy of Social Development will be in charge of the National Council of Evaluation of the Policy of Social Development that will be able to realize it by itself or through one or several independent bodies of the executor of the program, and aims to periodically review the fulfillment of the social objective of the programs, goals and actions of the Social Development Policy, to correct them, modify them, add them, reorient them or suspend them totally or partially. "

a.3 CONEVAL and the multidimensional measurement of poverty, 2008 - 2018.

In 2007, SEDESOL presented the Sectorial Program for Social Development (PSDS) 2007-2012, document that establishes that this Secretariat will coordinate a set of federal programs, of a social nature, derived from the PSDS 2007-2012, and whose objective will be It aims to satisfy social needs in different sectors of the population. One of the main characteristics in the operation of these federal programs is the use of the targeting criterion of the target population, which is the mechanism to define the allocation of public resources and the determination of their final beneficiaries.

With the application of this allocation criterion, we sought to achieve greater effectiveness, transparency and better use in the application of public resources. Poverty as a social phenomenon, has been addressed throughout history from different approaches, its study and analysis, seeks to define, measure, understand and in time, overcome or combat poverty.[11] It is worth noting that from the year 2008, the CONEVAL establishes the methodology for poverty measurement based on a multidimensional approach in Mexico, with the contributions of Gordon (2007), Boltvinik (2007) and Alkire-Foster (2008). Therefore, in 2010 the "Guidelines for measuring multidimensional poverty CONEVAL (2010)" were published.

In this way, Mexico defines multidimensional poverty in the following terms: "The population in a situation of multidimensional poverty will be one whose income is insufficient to acquire the goods and services required to satisfy their needs and present a lack in at least one of the following six indicators: educational lag, access to health services, access to social security, quality and housing spaces, basic services in housing and access to food."[12]

The multidimensional poverty approach (Gordon, 2007), defines: "A person is considered as multidimensional poor when in the exercise of at least one of their social rights, it is not guaranteed and if it also has an income that is insufficient to buy the goods and services required to fully meet their needs".

This is the sense that the National Council for the Evaluation of Social Development Policy, CONEVAL (2010), assumes the concept of multidimensional poverty proposed by Gordon, and establishes an institutional position for Mexico in the document: "Guidelines and general criteria for the definition, identification and measurement of poverty". This document constitutes the legal technical criterion that defines multidimensional poverty and that falls within the framework of public policy of social spending, in accordance with the Law of Social Development.

a.4 "Plan of strategic restructuring of the Conacyt to adapt to the Alternative Project of Nation "2018-2024", of June 2018.

In June 2018, the document entitled "Strategic restructuring plan of Conacyt to adapt to the Alternative National Project (2018-2024) presented by MORENA" is presented. This document anticipates the orientation that will be applied in science and technology policy and that defines the guiding principles of Science and Technology in the framework of the Alternative Nation Project (2018-2024)[13],

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[11] See Medel Ramírez Carlos et al. (2016). Chapter 14. Multidimensional poverty, indigenous population and social exclusion in Mexico: A look at the national crusade against hunger (Sin hambre 2013). In: Poverty, inequality and violence in Latin America. A mixed methodological approach. CUES editions. Barranquilla Colombia, 2016, ISBN: 978-958-57441-8-9, pp. 305-332. Retrieved from: https://rev-inv-ope.univ-paris1.fr/fileadmin/rev-inv-ope/rideca/Livres/Pobreza_2016.pdf

[12] In Mexico, the definition of multidimensional poverty is foreseen in the "Guidelines and general criteria for the definition, identification and measurement of poverty", published in the Official Gazette of the Federation on June 16, 2010, and that in the Section named Second Title: Of the definition of poverty, in its Sole Chapter, article Eighth. The specific criteria to implement this definition are established in the document "Methodology for the multidimensional measurement of poverty in Mexico," which is added to this Document as a Single Annex. See CONEVAL (2009). Methodology for the multidimensional measurement of poverty in Mexico (pp. 1-129) (Mexico, National Council for the Evaluation of Social Development Policy, Coneval). Mexico DF. Recovered in: http://www.coneval.gob.mx/rw/resource/Metodologia_Medicion_Multidimensional.pdf

[13] It is important that at the time of writing this paper, the National Development Plan 2018-2024 is not yet available, but it is expected to be aligned with the objectives of the UN 2030 Agenda on Sustainable Development, in the Objective 1 End of poverty, goal 1.5, paragraphs 1.a and 1.b; Objective 2 Zero Hunger, goal 2.5, subsection 2.a; Goal 5 Gender Equality, goal

identifying in paragraphs (i) the fight against social backwardness, (ii) the elimination of the gender gap of the guiding principle number 3 related to the planning of long-term national scientific development, guiding the national science, in the framework of action of the research and development policy of Conacyt, in the fight against poverty.

b.1 The National System of Researchers (SNI-Conacyt): A first approach

The National System of Researchers (SNI-Conacyt) is created by Presidential Agreement published in the Official Gazette of the Federation on July 26, 1984, and modified by agreements published in the same official organ on February 6 1986, 24 March 1988, June 4 1993 and September 14 1995, establishing that the objectives sought is to strengthen and stimulate efficiency and quality, through the support of researchers from higher education institutions or centers of higher education. Public and private sector research.

The SNI-Conacyt grants recognition through a national researcher appointment, at the following levels: a) Candidate, b) Level I, c) Level II and d) Level III. This distinction symbolizes the quality and prestige of scientific contributions and governs the amount of economic stimuli whose amount varies with the level assigned to the researcher. The SNI-Conacyt has seven areas of specialization: Physics, Mathematics and Earth Sciences[14], Biology and chemistry[15], Medicine and health sciences[16], Humanities and behavioral sciences[17], Social Sciences[18], Biotechnology and agricultural sciences[19] and Engineering.[20]

b.1 Presence of the SNI-Conacyt at national and state level

The number of Researchers of the SNI-Conacyt, in the year of 2013, registered an annual growth of 6.4% per annum, with respect to the previous year, a growth trend observed in 2014 with 8.1%, 2015 with 9.2% but in the year of 2016 there was a decrease of 7.5% compared to the previous year. In the year of 2017 there was an 8.4% growth, which contrasts with that of 2018, which shows a lower growth of 5.2%, with 2018 being the lowest growth of the period from 2012 to 2018, see below Graph 2.

5.5. To date, we only have as an immediate reference the guidelines that in the field of research are proposed in the document called "Strategic restructuring plan of the Conacyt to adapt to the Alternative Nation Project" 2018-2024

[14] National Council of Sciences and Technology. (2018). Specific Evaluation Criteria. Area I: Physical mathematics and earth sciences. Retrieved from: https://www.conacyt.gob.mx/index.php/sni/otros/marco-legal-sni/criterios-sni/13714-criterios-especificos-ai/file

[15] National Council of Sciences and Technology. (2018). Specific Evaluation Criteria. Area II: Biology and chemistry. Recovered from: https://www.conacyt.gob.mx/index.php/el-conacyt/sistema-nacional-de-investigadores/otros/marco-legal-sni/criterios-sni/13715-criterios-especificos-aii/file

[16] National Council of Sciences and Technology. (2018). Specific Evaluation Criteria. Area III: Medical and health sciences. Recovered from: https://www.conacyt.gob.mx/index.php/el-conacyt/sistema-nacional-de-investigadores/otros/marco-legal-sni/criterios-sni/13716-criterios-especificos-aiii/file

[17] National Council of Sciences and Technology. (2018). Specific Evaluation Criteria. Area IV: Humanities and behavioral sciences. Retrieved from: https://www.conacyt.gob.mx/index.php/el-conacyt/sistema-nacional-de-investigadores/otros/marco-legal-sni/criterios-sni/13717-criterios-especificos-aiv/file

[18] National Council of Sciences and Technology. (2018). Specific Evaluation Criteria. Area V: Social Sciences. Retrieved from: https://www.conacyt.gob.mx/index.php/el-conacyt/sistema-nacional-de-investigadores/otros/marco-legal-sni/criterios-sni/13718-criterios-especificos-av/file

[19] Consejo Nacional de Ciencias y Tecnología. (2018). Criterios Específicos de Evaluación. Área VI: Biotecnología y ciencias agropecuarias. Recuperado de: https://www.conacyt.gob.mx/index.php/el-conacyt/sistema-nacional-de-investigadores/otros/marco-legal-sni/criterios-sni/13719-criterios-especificos-avi/file

[20] Consejo Nacional de Ciencias y Tecnología. (2018). Criterios Específicos de Evaluación. Área VII: Ingenierías. Recuperado de: https://www.conacyt.gob.mx/index.php/el-conacyt/sistema-nacional-de-investigadores/otros/marco-legal-sni/criterios-sni/13720-criterios-especificos-avii/file

Graphic 2
Growth of the members of the SNI between 2012 and 2018

Año	2012	2013	2014	2015	2016	2017	2018
Investigadores	18554	19744	21339	23316	25072	27186	28633
Crecimiento %		6.4	8.1	9.2	7.5	8.4	5.2

Source: SNI-Conacyt 2018

The SNI-Conacyt in the year 2018, has registered 28,633 Researchers, of which 22.87% are Candidates for Researchers, 52.89% Researchers of Level I, 15.97% Researchers of Level II and only 8.27% are Researchers of Level III. According to its distribution at the state level, most of the SNI-Conacyt Researchers are located in: 1) Mexico City (formerly Federal District), 2) State of Mexico, 3) Jalisco, 4) Nuevo León, 5) Morelos, 6) Puebla, 7) Guanajuato, 8) Baja California, 9 Veracruz and 10) Michoacán, where 67.22% of the total number of SNI-Conacyt Researchers is concentrated, see Table 1, below.

Table 1
National System of Researchers (SNI- Conacyt) at a national level, according to the state, specialty [21]area and ascending classification according to number of researchers, 2018

Estado	1	2	3	4	5	6	7	Total general
DISTRITO FEDERAL	1,443	1,483	1,623	1,588	1,635	384	915	9,071
EDO. DE MEXICO	151	192	71	252	349	424	169	1,608
JALISCO	138	157	313	323	325	128	206	1,590
NUEVO LEON	112	148	220	143	222	176	304	1,325
MORELOS	152	281	192	88	87	131	191	1,122
PUEBLA	282	101	68	173	189	78	179	1,070
GUANAJUATO	277	137	60	102	108	114	207	1,005
BAJA CALIFORNIA	262	118	30	85	188	71	166	920
VERACRUZ	54	175	41	157	108	147	91	773
MICHOACAN	162	110	12	166	109	82	123	764
QUERETARO	142	103	48	69	73	98	219	752
SAN LUIS POTOSI	147	104	76	86	56	102	146	717
YUCATAN	88	135	37	116	47	141	95	659
SONORA	120	75	28	94	83	145	83	628
CHIHUAHUA	47	34	30	103	95	91	127	527
COAHUILA	26	33	21	19	51	128	198	476
SINALOA	51	53	33	69	76	135	39	456
HIDALGO	46	54	19	44	77	82	93	415
CHIAPAS	33	41	15	88	97	74	20	368
OAXACA	48	46	17	43	49	70	39	312
TAMAULIPAS	23	14	15	40	53	79	63	287
BAJA CALIFORNIA SUR	49	60	2	9	24	103	7	254
ZACATECAS	46	9	18	58	43	29	50	253
AGUASCALIENTES	29	28	16	43	64	21	44	245
COLIMA	31	32	43	45	45	13	18	227
TABASCO	25	23	14	16	22	62	36	198
DURANGO	2	19	44	16	15	84	15	195
TLAXCALA	12	43	5	28	39	23	18	168
QUINTANA ROO	22	48	3	17	49	6	15	160
CAMPECHE	23	29	10	18	12	29	33	154
GUERRERO	21	11	42	17	23	29	7	150
NAYARIT	7	15	12	10	27	59	9	139
NO DISPONIBLE	341	410	221	138	171	141	223	1,645
Total general	4,412	4,321	3,399	4,263	4,611	3,479	4,148	28,633

Source: SNI-Conacyt 2018

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[21] Specialization lines: 1.- Physical mathematics and earth sciences, 2.- Biology and chemistry, 3.- Medical and health sciences, 4.- Humanities and behavioral sciences, 5.- Social Sciences, 6. - Biotechnology and agricultural sciences and 7.- Engineering

In the State of Veracruz, 773 Researchers of the SNI-Conacyt are located, which present the following distribution:

a) 22.90% have the level of Candidate for Researcher, b) 59.12% Researcher of Level I, c) 13.58% Researcher of Level II and c) Only 4.40% are Researchers Level III.

The Universidad Veracruzana concentrates 460 researchers, the Institute of Ecology A.C. with 122, The College of Postgraduates in Agricultural Sciences with 21, the Technological Institute of Orizaba with 19, the Technological Institute of Veracruz with 18 and the College of Veracruz with 17 researchers, among others. See Table 2 below.

Table 2
National System of Researchers (SNI-Conacyt)
in the State of Veracruz, according to institution of adscription and level, 2018

ESTADO	INSTITUCIÓN DE ADSCRIPCIÓN	CANDIDATO	I	II	III	TOTAL
	UNIVERSIDAD VERACRUZANA	98	293	51	18	460
	INSTITUTO DE ECOLOGIA, A.C.	14	64	34	10	122
	TECNOLOGICO NACIONAL DE MEXICO	10	4			14
	EL COLEGIO DE VERACRUZ	8	7	1	1	17
	UNIVERSIDAD DE XALAPA	6	2			8
	UNIVERSIDAD POLITECNICA DE HUATUSCO	4	6			10
	INSTITUTO TECNOLOGICO SUPERIOR DE TIERRA BLANCA	4	1			5
	INSTITUTO TECNOLOGICO DE VERACRUZ	4	7	5	2	18
	INSTITUTO TECNOLOGICO DE ORIZABA	4	14	1		19
	COLEGIO DE POSTGRADUADOS EN CIENCIAS AGRICOLAS	3	16	2		21
	UNIVERSIDAD CRISTOBAL COLON	2	3	1		6
	SECRETARIA DE MARINA	2				2
	INSTITUTO TECNOLOGICO SUPERIOR DE POZA RICA	2	1			3
	INSTITUTO TECNOLOGICO DE ORSULO GALVAN	2	1			3
	CENTRO DE INVESTIGACION Y ESTUDIOS SUPERIORES EN ANTROPOLOGIA SOCIAL	2	7	3	1	13
VERACRUZ	BENEMERITA ESCUELA NORMAL VERACRUZANA ENRIQUE C. REBSAMEN	2				2
	TUBOS DE ACERO DE MEXICO, S.A.	1				1
	SECRETARIA DE AGRICULTURA, GANADERIA DESARROLLO RURAL PESCA Y ALIMENTACION	1				1
	LABORATORIO NACIONAL DE INFORMATICA AVANZADA	1	2			3
	INSTITUTO TECNOLOGICO SUPERIOR DE ZONGOLICA	1				1
	INSTITUTO TECNOLOGICO SUPERIOR DE HUATUSCO	1	1			2
	INSTITUTO TECNOLOGICO SUPERIOR DE ACAYUCAN	1				1
	INSTITUTO TECNOLOGICO DE BOCA DEL RIO	1	3	1		5
	GOBIERNO DEL ESTADO DE VERACRUZ	1	2			3
	CONSEJO NACIONAL DE CIENCIA Y TECNOLOGIA	1				1
	UNIVERSIDAD NACIONAL AUTONOMA DE MEXICO		3	2	2	7
	UNIVERSIDAD AUTONOMA CHAPINGO		1	1		2
	PETROLEOS MEXICANOS		1			1
	INSTITUTO TECNOLOGICO SUPERIOR DE MISANTLA		1			1
	INSTITUTO TECNOLOGICO DE MINATITLAN		1			1
	INSTITUTO NACIONAL DE INVESTIGACIONES FORESTALES Y AGROPECUARIAS		7	1		8
	INSTITUTO NACIONAL DE ANTROPOLOGIA E HISTORIA		3	1		4
	INSTITUTO MEXICANO DEL SEGURO SOCIAL		3			3
	INSTITUTO MEXICANO DEL PETROLEO		1			1
	ESCUELA SUPERIOR DE INGENIERIA AMBIENTAL Y PROCESOS INDUSTRIALES		1	1		2
		1	1			2
	TOTAL	177	457	105	34	773

Source: SNI-Conacyt 2018

b.2 The SNI-Conacyt and the study of poverty: Current situation

The researchers who are located in the area of specialty "V Social Sciences" represent 16.10% of the total of Researchers of the SNI-Conacyt, figure that corresponds to 4,611 researchers, which are integrated as follows: a) 25.22% have the Candidate Level, ie 1,163 researchers, b) 49.86% have Level I and are 2,299 researchers, c) 16.46% are Level II with 759 researchers and d) Only 8.46% are from the SNI with Level III, and correspond to 390 Researchers.

As an area of high specialization, in 2018, only 44 of the researchers declared the issue of poverty as a specialty of study and research, that is to say that only 0.15% of the total number of Researchers of the SNI-Conacyt address this issue. It should be noted that, in the State of Veracruz, only two Candidates for Researchers, one assigned to the National Technological System of Mexico and another to the Universidad Veracruzana, have the area of specialization in the study of poverty, see Table 3.

Table 3
National System of Researchers (SNI-Conacyt)
according to institution of dscription, level and whose specialty is the study of poverty, 2018

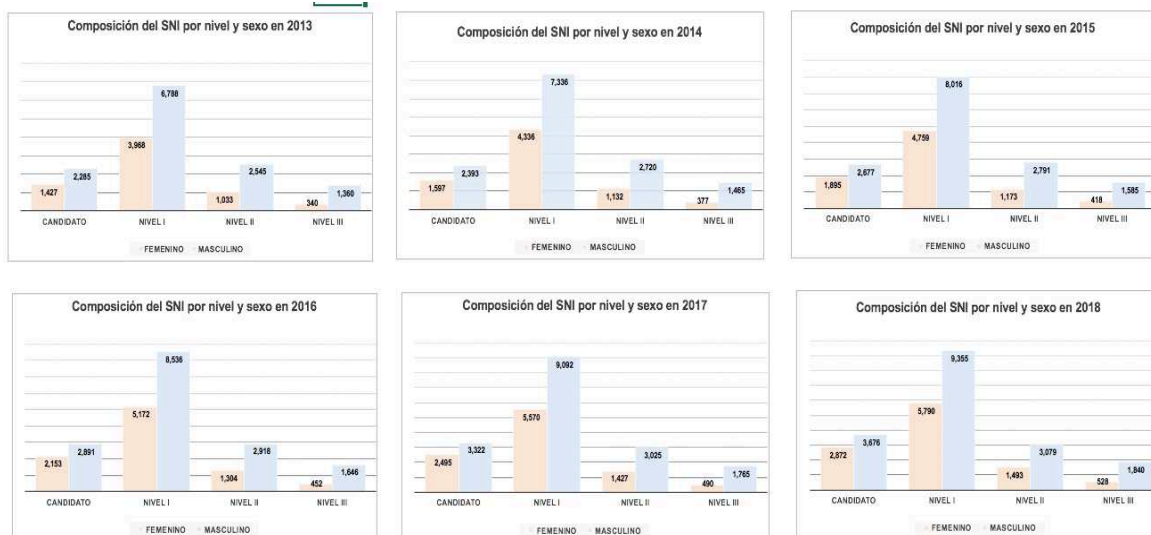| ESTADO	INSTITUCIÓN DE ADSCRIPCIÓN	CAMPO	CANDIDATO	NIVEL			TOTAL
				I	II	III	
BAJA CALIFORNIA	EL COLEGIO DE LA FRONTERA NORTE, A.C.	DEMOGRAFIA		1			1
	UNIVERSIDAD AUTONOMA DE BAJA CALIFORNIA	CIENCIAS ECONOMICAS		1			1
CHIAPAS	UNIVERSIDAD AUTONOMA DE CHIAPAS	CIENCIAS POLITICAS	1				1
		DEMOGRAFIA		1			1
CHIHUAHUA	UNIVERSIDAD AUTONOMA DE CIUDAD JUAREZ	SOCIOLOGIA		1			1
DISTRITO FEDERAL	UNIVERSIDAD NACIONAL AUTONOMA DE MEXICO	CIENCIAS ECONOMICAS	2				2
		SOCIOLOGIA		2	2	1	5
	EL COLEGIO DE MEXICO, A.C.	DEMOGRAFIA				2	2
		SOCIOLOGIA			1	1	2
	FACULTAD LATINOAMERICANA DE CIENCIAS SOCIALES	CIENCIAS ECONOMICAS				1	1
		DEMOGRAFIA		1			1
	INSTITUTO POLITECNICO NACIONAL	CIENCIAS ECONOMICAS		1			1
	INSTITUTO TECNOLOGICO Y DE ESTUDIOS SUPERIORES DE N	DEMOGRAFIA			1		1
	UNIVERSIDAD AUTONOMA METROPOLITANA	CIENCIAS POLITICAS		1			1
	UNIVERSIDAD IBEROAMERICANA	CIENCIAS ECONOMICAS		1		1	2
EDO. DE MEXICO	EL COLEGIO MEXIQUENSE, A.C.	SOCIOLOGIA				1	1
GUANAJUATO	UNIVERSIDAD DE GUANAJUATO	SOCIOLOGIA		1			1
HIDALGO	UNIVERSIDAD AUTONOMA DEL ESTADO DE HIDALGO	CIENCIAS POLITICAS	1				1
JALISCO	INSTITUTO TECNOLOGICO Y DE ESTUDIOS SUPERIORES DE C	ANTROPOLOGIA			1		1
	UNIVERSIDAD DE GUADALAJARA	SOCIOLOGIA				1	1
	UNIVERSIDAD PANAMERICANA	CIENCIAS ECONOMICAS			1		1
MICHOACAN	UNIVERSIDAD NACIONAL AUTONOMA DE MEXICO	GEOGRAFIA		1			1
NUEVO LEON	INSTITUTO TECNOLOGICO Y DE ESTUDIOS SUPERIORES DE N	CIENCIAS ECONOMICAS			2		2
	UNIVERSIDAD AUTONOMA DE NUEVO LEON	SOCIOLOGIA	1	1			2
	UNIVERSIDAD DE MONTERREY	CIENCIAS ECONOMICAS		1			1
		SOCIOLOGIA		1			1
OAXACA	UNIVERSIDAD DEL MAR	SOCIOLOGIA		1			1
PUEBLA	BENEMERITA UNIVERSIDAD AUTONOMA DE PUEBLA	CIENCIAS ECONOMICAS		1			1
	UNIVERSIDAD IBEROAMERICANA-PUEBLA	PEDAGOGIA			1		1
QUINTANA ROO	UNIVERSIDAD DE QUINTANA ROO	CIENCIAS ECONOMICAS	1				1
SONORA	CENTRO DE INVESTIGACION EN ALIMENTACION Y DESARROLL	CIENCIAS ECONOMICAS			1		1
VERACRUZ	UNIVERSIDAD VERACRUZANA	CIENCIAS ECONOMICAS	1				1
	TECNOLOGICO NACIONAL DE MEXICO	SOCIOLOGIA	1				1
NO DISPONIBLE	NO ESPECIFICADO	PSICOLOGIA			1		1
	TOTAL		8	17	11	8	44

Source: SNI-Conacyt 2018

b.2 The SNI-Conacyt and the study of poverty: The generational change

The generational change allows to know if a population, in this case identified with Researchers incorporated in the SNI-Conacyt (Candidate, Level I, Level II, Level III), have the elements that can emerge as a generational change in the research work and development of the next level or ascending category, within the SNI-Conacyt.

In the period from 2013 to 2018, it is observed that the growth rate of the number of researchers incorporated into the SNI-Conacyt in 2018 is only 5.2% with respect to 2017, a figure lower than the average presented for the years 2013 to 2017. On the other hand, we observe that the scarce participation of researchers, for the different levels within the SNI-Conacyt, in the period from 2013 to 2018, this difference being more evident in those corresponding to Level III of the system, see Graph 3.

Graph 3
Composition of Researchers of the National System of Researchers (SNI-Conacyt)
By level and sex, in the years 2013 to 2018

Source: SNI-Conacyt 2018

As indicated, the number of SNI-Conacyt researchers, whose area of expertise is the study of poverty, is only 44, nationwide. And even when at present the policies of operation and administration of SNI-Conacyt have contributed to the natural insertion of young researchers, who once consolidated their research tasks seek to substitute Researchers of Level I, II and / or III, in Table 4 it is observed that the number of Candidates for Researchers is only 8.

Table 4
National System of Researchers (SNI-Conacyt) Researchers whose specialty is the study of poverty according to affiliation institution, SNI Candidate level and field of study, 2018

INSTITUCIÓN DE ADSCRIPCION	NIVEL SNI	CAMPO	ESPECIALIDAD	NOMBRE	APELLIDO	
UNIVERSIDAD NACIONAL AUTONOMA DE MEXICO	C	CIENCIAS ECONOMICAS	DESARROLLO REGIONAL / POBREZA Y RIESGO	ANA BEATRIZ	CARRERA	1
			MIGRACIÓN, DESARROLLO, POBREZA Y CAMPESINADO	JULIETA	MARTINEZ	1
TECNOLOGICO NACIONAL DE MEXICO	C	SOCIOLOGIA	POBREZA MULTIDIMENSIONAL Y EXCLUSIÓN SOCIAL	CARLOS	MEDEL	1
UNIVERSIDAD AUTONOMA DE CHIAPAS	C	CIENCIAS POLITICAS	POLÍTICA SOCIAL Y POBREZA	HILDA MARIA	JIMENEZ	1
UNIVERSIDAD AUTONOMA DE NUEVO LEON	C	SOCIOLOGIA	REDUCCIÓN EN POBREZA E INNOVACIÓN SOCIAL	TUUR	GHYS	1
UNIVERSIDAD AUTONOMA DEL ESTADO DE HIDALGO	C	CIENCIAS POLITICAS	ANÁLISIS DE POLÍTICAS SOCIALES (POBREZA Y EDUCACIÓN)	CARLOS	MARTINEZ	1
UNIVERSIDAD DE QUINTANA ROO	C	CIENCIAS ECONOMICAS	POBREZA Y DESIGUALDAD	MIGUEL ANGEL	BARRERA	1
UNIVERSIDAD VERACRUZANA	C	CIENCIAS ECONOMICAS	LA POBREZA Y REDUCCIÓN EN MEXICO Y AMERICA LATINA	OSCAR	GONZALEZ	1
NUMERO TOTAL DE INVESTIGADORES						8

Source: SNI-Conacyt 2018

In the group of 8 Researcher Candidates who study poverty, there are at least three aspects of analysis: a) Analysis of public policy, b) Regional development and c) Multidimensional poverty and social exclusion.[22] It is estimated that the number of Candidates for Researchers is significantly lower

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[22] Even when at least three aspects of analysis are identified in the study of poverty by the Candidates for Researchers of the SNI-Conacyt, in fields of interest related to: Political Sciences, Economic Sciences and Sociology, and with specialty topics such as The following are described: a) In relation to the analysis of public policy, we have: Analysis of social policies (poverty and education) and Social policy and poverty. b) In relation to Regional Development, we have: Regional development, poverty and risk, Poverty and reduction in Mexico and Latin America and Migration, development, poverty and peasantry, and c) In relation to the analysis of multidimensional poverty and social exclusion, has: Multidimensional poverty and social exclusion, Poverty and inequality and Poverty reduction and social innovation.

than the number of Researchers to replace in Level I, which is 17 [23], in a first stage in the process of generational change, see Table 5, below.

Table 5
National System of Researchers (SNI-Conacyt) Researchers whose specialty is the study of poverty according to affiliation institution, level I of the SNI and field of study, 2018

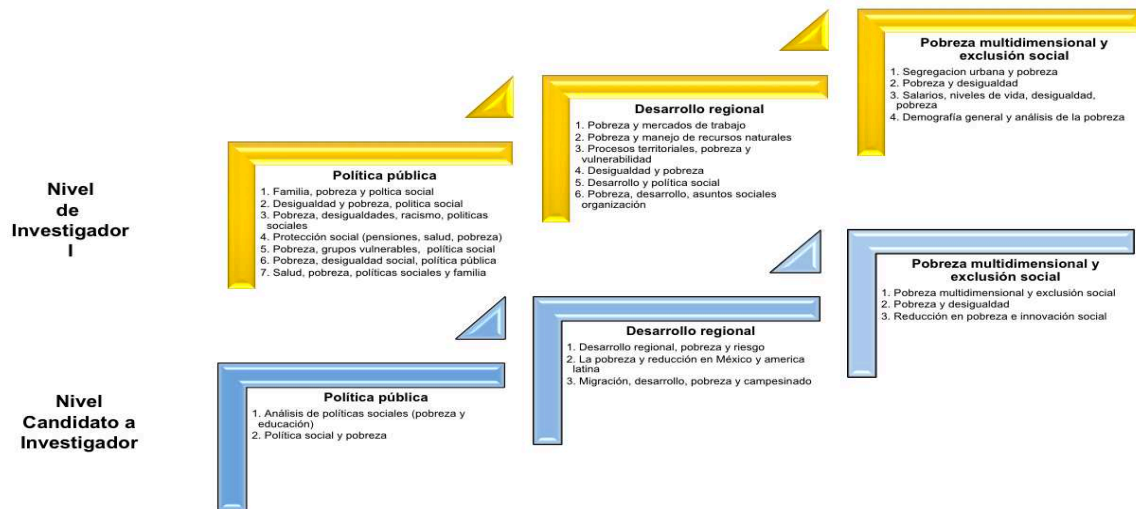| INSTITUCIÓN DE ADSCRIPCION	NIVEL SNI	CAMPO	ESPECIALIDAD	NOMBRE	APELLIDO	
UNIVERSIDAD NACIONAL AUTONOMA DE MEXICO	I	GEOGRAFIA	PROCESOS TERRITORIALES, POBREZA Y VULNERABILIDAD	YADIRA MIREYA	MENDEZ	1
		SOCIOLOGIA	DESIGUALDAD; POBREZA; DESARROLLO Y POLITICA SOCIAL	ILIANA	YASCHINE	1
			POBREZA, DESIGUALDAD SOCIAL, POLÍTICA PÚBLICA	ISRAEL MANUEL	BANEGAS	1
BENEMERITA UNIVERSIDAD AUTONOMA DE PUEBLA	I	CIENCIAS ECONOMICAS	PROTECCIÓN SOCIAL (PENSIONES, SALUD, POBREZA)	MARTHA	MIRANDA	1
EL COLEGIO DE LA FRONTERA NORTE, A.C.	I	DEMOGRAFIA	FAMILIA, POBREZA Y POLÍTICA SOCIAL	FELIX	ACOSTA	1
FACULTAD LATINOAMERICANA DE CIENCIAS SOCIALES	I	DEMOGRAFIA	POBREZA, DESIGUALDADES, RACISMO, POLITICAS SOCIALES	MARIA CRISTINA	GOMES	1
INSTITUTO POLITECNICO NACIONAL	I	CIENCIAS ECONOMICAS	DESIGUALDAD Y POBREZA, POLITICA SOCIAL	GENARO	AGUILAR	1
UNIVERSIDAD AUTONOMA DE BAJA CALIFORNIA	I	CIENCIAS ECONOMICAS	SEGREGACION URBANA Y POBREZA	EMILIO	HERNANDEZ	1
UNIVERSIDAD AUTONOMA DE CHIAPAS	I	DEMOGRAFIA	DEMOGRAFÍA GENERAL Y ANALISIS DE LA POBREZA	GERARDO	NUÑEZ	1
UNIVERSIDAD AUTONOMA DE CIUDAD JUAREZ	I	SOCIOLOGIA	POBREZA Y POLÍTICA SOCIAL	RICARDO	LOPEZ	1
UNIVERSIDAD AUTONOMA DE NUEVO LEON	I	SOCIOLOGIA	SALUD, POBREZA, POLÍTICAS SOCIALES Y FAMILIA	JOSE MANUEL	RANGEL	1
UNIVERSIDAD AUTONOMA METROPOLITANA	I	CIENCIAS POLITICAS	POBREZA Y MERCADOS DE TRABAJO	JOSE MANUEL	HERNANDEZ	1
UNIVERSIDAD DE GUANAJUATO	I	SOCIOLOGIA	POBREZA, GRUPOS VULNERABLES, POLÍTICA SOCIAL	KATYA	RODRIGUEZ	1
UNIVERSIDAD DE MONTERREY	I	CIENCIAS ECONOMICAS	POBREZA Y DESIGUALDAD	JORGE	GARZA	1
		SOCIOLOGIA	POBREZA, DESARROLLO, ASUNTOS SOCIALES ORGANIZACION	LUIS ENRIQUE	PORTALES	1
UNIVERSIDAD DEL MAR	I	SOCIOLOGIA	POBREZA Y MANEJO DE RECURSOS NATURALES	EDGAR	ROBLES	1
UNIVERSIDAD IBEROAMERICANA	I	CIENCIAS ECONOMICAS	SALARIOS, NIVELES DE VIDA, DESIGUALDAD, POBREZA	MIGUEL SANTIAGO	REYES	1
NUMERO TOTAL DE INVESTIGADORES						17

Source: SNI-Conacyt 2018

Considering that one of the criteria for joining the SNI-Conacyt is to develop a line of research and seek its consolidation, which allows the development of relevant research, quality and generate knowledge for the solution of priority social problems , then it is important to point out that, in the first place, the generational replacement of the Level III research lines will be supported by the generational replacement of researchers who currently have Level II or Level I.

According to the specialty areas of the Level I Researchers of the SNI-Conacyt that study poverty, the following aspects of analysis are identified: a) Analysis of public policy, corresponding to studies on: Family, poverty and social policy; Inequality and poverty, social policy; Poverty, inequalities, racism, social policies; Social protection (pensions, health, poverty); Poverty, vulnerable groups, social policy; Poverty, social inequality, public policy; Health, poverty, social policies and family, b) Regional development, with studies on Poverty and labor markets; Poverty and natural resource management; Territorial processes, poverty and vulnerability; Inequality; poverty; development and social policy; and Poverty, development, social affairs organization, and c) Multidimensional poverty and social exclusion, with studies on urban segregation and poverty; Poverty and inequality; Salaries, living standards, inequality, poverty; and General demography and poverty analysis.

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[23] In Level I of Researchers of the SNI-Conacyt, five fields of interest are identified: Political Sciences, Economic Sciences, Sociology, whose aspect is also identified in Candidates for Researchers, but areas such as Geography and Demography, are not has identified, at the level of Candidate to Researcher, for the relay when he assumes the Level.

Graph 4
National System of Researchers (SNI-Conacyt) Researchers whose specialty is the study of poverty according to institution of affiliation, level of Candidate and Level I of the SNI and field of study, 2018

Pobreza multidimensional y exclusión social
1. Segregacion urbana y pobreza
2. Pobreza y desigualdad
3. Salarios, niveles de vida, desigualdad, pobreza
4. Demografía general y análisis de la pobreza

Desarrollo regional
1. Pobreza y mercados de trabajo
2. Pobreza y manejo de recursos naturales
3. Procesos territoriales, pobreza y vulnerabilidad
4. Desigualdad y pobreza
5. Desarrollo y política social
6. Pobreza, desarrollo, asuntos sociales organización

Política pública
1. Familia, pobreza y poltica social
2. Desigualdad y pobreza, política social
3. Pobreza, desigualdades, racismo, políticas sociales
4. Protección social (pensiones, salud, pobreza)
5. Pobreza, grupos vulnerables, política social
6. Pobreza, desigualdad social, política pública
7. Salud, pobreza, políticas sociales y familia

Nivel de Investigador I

Pobreza multidimensional y exclusión social
1. Pobreza multidimensional y exclusión social
2. Pobreza y desigualdad
3. Reducción en pobreza e innovación social

Desarrollo regional
1. Desarrollo regional, pobreza y riesgo
2. La pobreza y reducción en México y america latina
3. Migración, desarrollo, pobreza y campesinado

Política pública
1. Análisis de políticas sociales (pobreza y educación)
2. Política social y pobreza

Nivel Candidato a Investigador

Source: Own elaboration with information from the Conacyt. SNI. 2018

Figure 4 shows three aspects for the analysis of poverty:

I. a) Public policy, b) Regional development and c) Multidimensional poverty and social exclusion.
II. In terms of public policy, the number of level I researchers is 7, greater than the 2 Candidates for Researchers, the same situation is presented in the Regional Development study, with 6 Level I researchers and only 3 Researcher Candidates, and finally, regarding the study of multidimensional poverty and social exclusion, only one Candidate for Researcher has this field as a specialty.

III. It is emphasized that the field of general demography and poverty analysis, which is currently carried out by a Level I researcher, does not have a probable relay to continue as a consolidated line of research on this subject.

As a natural generational relay process, relative to Level I, the researchers who are currently Candidates for Researchers are the direct generational change of Level I Researchers, attending those who managed to go up to Level II or III. Considering that poverty, as a social problem in Mexico[24] to solve, it is possible to ask: Is it possible to attend with the current number of 8 Candidates to Researchers of the SNI who study poverty to attend the generational change of the 17 Researchers with level I?

To get closer to the answer, it is necessary, in the first place, to determine the lines of research that show affinity in Candidates for Researchers, from the perspective of three aspects of analysis: a) Analysis of public policy, b) Regional development and c) Multidimensional poverty and social exclusion. See Figure 5 below.

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[24] Véase. Medel-Ramírez, Carlos and Medel-Lopez, Hilario, Modern Public Finances as a Proposal for an Emerging Country: The Social Approach in the Fight Against Poverty in Mexico (April 24, 2018). Available at SSRN: https://ssrn.com/abstract=3167699 or http://dx.doi.org/10.2139/ssrn.3167699

Graphic 5
National System of Researchers (SNI - Conacyt) with specialization the study of poverty, level of Candidate for Researcher, according to field of study and line of specialty, 2018

Source: Own elaboration with information from the Conacyt. SNI. 2018

In Figure 5 are shown in the area of specialty relative to the study of multidimensional poverty and social exclusion, there are two Researcher Candidates share research that is considered frontier, where new contributions are presented in terms of social innovation and social exclusion[25]; while in the groups of researchers, both in Regional Development and in the area of Public Policy Analysis, they bring together most of the researchers in this group.

In order to identify an area of opportunity, among investigations that show affinity, in Figure 6 shows the institution of adscription, according to area of specialty and field of interest in the study of poverty. As it is observed, the researchers who carry out border research on multidimensional poverty and social exclusion are located in the Autonomous University of Nuevo Leon and another in the National Technological Institute of Mexico.[26]

The study of poverty, from a multidimensional perspective, is based on the studies on the theory of capabilities of Amartya Sen and is supported by the conceptual methodological design of Sabina Alkire[27] of the Oxford Poverty & Human Development Initiative dependent on the Oxford Department of International Development of the Queen Elizabeth House, of the University of Oxford, a research institution that is the vanguard in the study of multidimensional poverty.

The study of poverty is a subject that has been studied extensively. However, the incorporation into its analysis of concepts such as: i) social exclusion, ii) multidimensional poverty, and iii) empowerment of women[28], in the methodological design and allocation of public resources, as well

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[25] Véase. Medel-Ramírez, Carlos and Medel-Lopez, Hilario, Proposed Methodology for Estimating the Index of Social Exclusion: The Case of Indigenous Population in the State of Veracruz Mexico (December 12, 2017). RINOE Journal - Spain, Journal Mathematical and Quantitave Methods. 2017. Vol.1 No.1 1-15 ISSN-On line:2531-2979. Available at SSRN: https://ssrn.com/abstract=3148846 or http://dx.doi.org/10.2139/ssrn.3148846

[26] As of February 2019, this researcher joins the Institute of Research and Higher Economic and Social Studies of the Universidad Veracruzana, with the line of research: His current line of research is: Empowerment of the indigenous population, social exclusion, public finances and fight against multidimensional poverty. See https://www.uv.mx/personal/cmedel/

[27] See Alkire Sabina and Foster James (2007). Counting and Multidimensional Measurement of Poverty. OPHI working document No.7. University of Oxford and Vanderbilt University. December 2007. Retrieved from: http://www.ophi.org.uk/wpcontent/uploads/ophi-wp7-en.pdf

[28] Véase. Medel-Ramírez, Carlos and Ruiz-Ramirez, Juan and Medel-Lopez, Hilario, Empowerment of Indigenous Women and Social Exclusion in Combating Poverty in the State of Veracruz Mexico. (February 1, 2017). International Journal of Advanced Research, Vol. 5(2), p. 2091-2106, 2017 DOI:10.21474/IJAR01/3382. Available at SSRN: https://ssrn.com/abstract=3062423

as in the application of the public policy of social spending directed at combating multidimensional poverty in municipalities with a high indigenous presence[29], is relatively new.

For this reason, the relevance of the development of the specialty of the study of poverty, from a multidimensional perspective and of social exclusion, is seen as necessary, in order to respond to the social problem that it generates in the population that suffers from these conditions. Thus, from the perspective of social justice and human development, in the fight against multidimensional poverty, the condition of marginalization and the degree of social exclusion presented by the population that is placed under this condition are recognized as lacerating; but still more, the one that is observed in the indigenous women, to whom it is conferred, by this single fact, a level of greater gravity to surpass its condition of poverty.

In this sense, it is important to point out that the generational change of researchers within the SNI of Conacyt must not only cover with the simple natural substitution, as a progress process of level and / or category, but of the importance of socially pertinent and necessary research to give a timely response to solve this problem, and with that, support the design of public policy in the fight against multidimensional poverty and social exclusion.
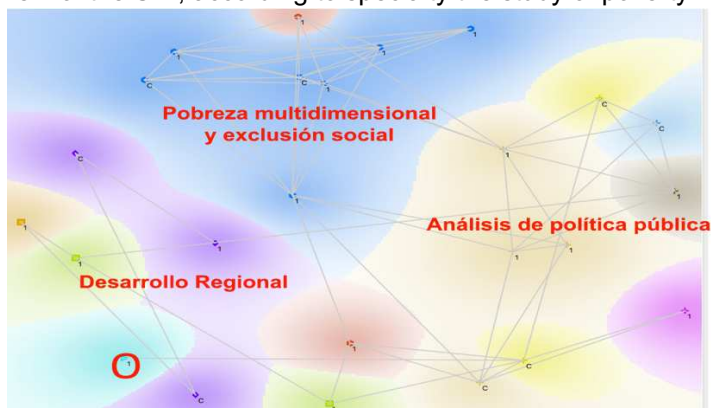
In the following Graph 7 a probable route of the generational change in the SNI-Conacyt is presented, identifying the affinity of the research line, specialization field and institution of ascription, which defines a route of action and area of opportunity, to be considered by the researchers with current level of Candidate to Researcher with respect to those of thematic affinity to cover as aspirants to Level I of the SNI, according to specialty the study of poverty.

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[29] Véase. Medel-Ramírez, Carlos and Medel-Lopez, Hilario, Modern Public Finances as a Proposal for an Emerging Country: The Social Approach in the Fight Against Poverty in Mexico. Op. cit.
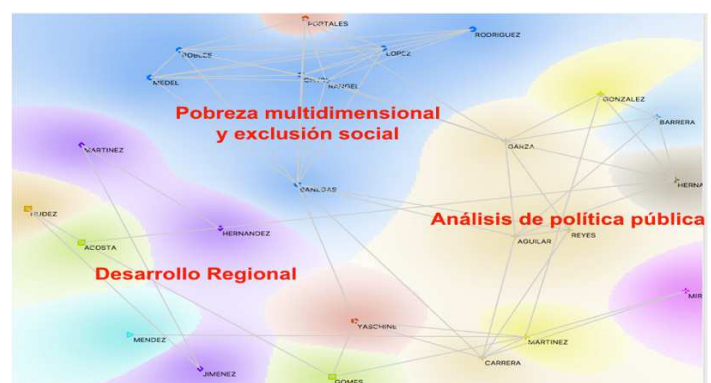
Graph 7

Estimation of the generational change in the National System of Researchers (SNI-Conacyt) 2020 of Candidate for Researcher at Level I of the SNI, according to specialty the study of poverty

a. According to Category of identification: Candidate for Researcher / Researcher Level I

b. According to individual identification: Candidate for Researcher / Researcher Level I

c. According to Affiliation Institution: Candidate for Researcher / Researcher Level I

Source: Own elaboration with information from the Conacyt. SNI. 2018

The specialty areas, which do not achieve coverage, as in the case of Level I from Candidate to Researcher level, can only come from new researchers graduated from Doctorate programs belonging to the National Register of Quality Postgraduate Programs (PNPC), with lines of research similar to the lines of specialty that are currently in development and operation.

b.3 The Conacyt and the study of poverty: The training of human resources

In 2018, 2,346 programs have been registered in the National Register of Quality Postgraduate Programs (PNPC) under the coordination of Conacyt, of which 674 are Doctorate programs, 1,263 are Master's programs and 409 specialty programs.

The focus of the PNCP Doctorate programs has two orientations: 1) Research and 2) Professionalization. Of the PNPC Doctoral programs, 98.81% are research-oriented programs, that is, 666 programs, while only 1.19% of their programs are oriented towards professionalization. It is important to point out that only 0.59% of the total number of PNPC Doctorate programs are oriented to the study of poverty, that is, only 4 PNCP Doctorate programs are directed to the study of this subject and whose characteristics are described below:

a) In terms of research, there are three PNPC Doctorate programs that study poverty. 1) Doctorate in Philosophy with a focus on Social Work and Policies compared to Social Welfare, with a consolidated degree taught by the Autonomous University of Nuevo León with the general line of application of knowledge: Poverty and Social Development. 2) Doctorate in Social Sciences, with a degree of international competence taught by the University of Guadalajara, with the general line of application of knowledge: Social Policy, Economic Policy, Social Welfare and Poverty and 3) Doctorate in Social Sciences and Policies, with a degree consolidated by the Universidad Iberoamericana AC, with a general line of application of knowledge: Social Development, Public Policies and Poverty.

b) In terms of professionalization, only the International Doctorate in Tourism, with a recently created degree, awarded in the State of Mexico in Research and Higher Studies SC, with professional orientation, with a general line of application of knowledge: Tourism, development and poverty.

While academic discussion and legal norms are currently pushing for a multidimensional measurement of poverty, this has not been an easy task. There are several conceptual challenges that must be solved; for example, the definition of the relevant dimensions in the study of multidimensional poverty, and particularly, in the area they integrate, among others, the indigenous population.

Assuming the social commitment that the Universidad Veracruzana[30] has to propose alternative solutions in the fight against multidimensional poverty and generate conditions for human development and empowerment of communities with indigenous presence[31], it is essential to propose the lines of action to eliminate social inequality and economic[32], that impact our society, and particularly for the State of Veracruz.

With this, it is expected to contribute in the following:
— Critically review the methodology and interpretation of social exclusion and social vulnerability in the study of multidimensional poverty in the municipalities with high participation of the indigenous language speaking population in the State of Veracruz.
— Contribute to the orientation of the design of the public policy of social spending, and in particular, to the process of allocation of public resources for social development programs to combat multidimensional poverty, at the federal, state and municipal levels.
— Design the methodological structure for the focalization of the priority attention area to guide the policy of social spending, based on the analysis of social exclusion, as a condition for the degree of multidimensional poverty in the municipalities with an indigenous language speaker population in the State of Veracruz
— Evaluate the degree of the distributive impact of social spending, identifying scope and results in the application of social programs at the federal, state and municipal levels.

[30] The proposed line of research is relevant to the Strategic Plan 2017 - 2021 (Belonging and Pertinence) of the Universidad Veracruzana, based on what is described in Axis I. Academic leadership: Objective 4. Research, innovation and technological development; Line of action 36. Axis II. Visibility and social impact: Objective 5. University social responsibility and liaison; Lines of action: 8, 11. Objective 7. Humanistic culture and sustainable development; Line of action 14.
[31] The proposed line of research is relevant and legally binding, since it aims to improve the quality of life of rural women, promote and guarantee their economic, social, political and cultural rights, as well as consecrate specific measures aimed at accelerating equity between women and men. rural man and woman, based on what is described in articles 1 fractions I to VI, article 3, fraction IX and article 22 of Law 699 for the development, equity and empowerment of rural women in Veracruz.
[32] The proposed line of research is relevant Belonging to the objectives of the UN 2030 Agenda on Sustainable Development, regarding Objective 1, End of poverty, goal 1.5, paragraphs1.a and 1.b; Objective 2 Zero Hunger, goal 2.5, subsection 2.a; Goal 5 Gender Equality, goal 5.5.

PROPOSAL

The problem of the generational change of researchers in Mexico is a crucial point. There is a need for strategies that link researchers in the Researcher, Level I, Level II and Level III Candidates of the SNI of Conacyt with young researchers who are finishing their degrees, especially in foreigners. This generational change should be done in a planned and gradual manner. The policies implemented so far have contributed to the natural insertion of young researchers; however, the available places are not enough to integrate them. Some universities have provided an alternative to them, but not all are doing so. Therefore, the following framework of action for the Universidad Veracruzana and the Government of the State of Veracruz is proposed, in terms of the scientific and technological development of the social sciences, and in particular in the fight against multidimensional poverty.[33]

For the development of the line of research on multidimensional poverty, the following strategies are considered in the medium term:

1. Create the Center for Research and Studies on Multidimensional Poverty[34], with the following lines of research:
    a. Indigenous population, empowerment and human development.
    b. The fight against multidimensional poverty.
2. Consolidate the participation of the Universidad Veracruzana in the revision of the methodology for the measurement of the multidimensional poverty index (IPM version 2.0), and in the integration of the Mexico Chapter.
3. Establish an academic cooperation agreement with the University of Tuebingen. Department of Economics, in order to contribute to the analysis of historical census information in Latin America, in the line: Human Capital Development, Mexico Chapter.
4. Participate in the dissemination forums of the Human Development and Capability Association (HDCA)[35] to present advances in the area of empowerment and human development of the indigenous population.

a) Expected benefits for the Universidad Veracruzana:

1. Design the theoretical and conceptual framework for the interpretation of the factors that condition social exclusion as a condition of the degree of multidimensional poverty suffered by the indigenous language-speaking population in the State of Veracruz.
2. Establish a link for permanent academic and research exchange with the University of Oxford, through (OPHI) Oxford Poverty & Human Development Initiative[36] under the Oxford Department of International Development for the study of multidimensional poverty, empowerment and human development.
3. Constitute a multidisciplinary academic space for the study, analysis and proposals of action in matters of public policy that provide alternatives to solve the problem of multidimensional poverty, at the state, regional or municipal level.

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[33] The proposed research line is part of the "Strategic restructuring plan of CONACYT (2018-2024)", published in June 2018, which is the 12 guiding principles, whose objective is the planning of national scientific development in the long term and in the framework of the guidelines for the Prize for interdisciplinary research on the strategic restructuring plan of CONACYT (2018-2024), which is convened by the Universidad Veracruzana.

[34] The proposed line of research is relevant in the research line of the Academic Body Public Finance and Regional Development (CA in formation UV-GC-267), in the Institute of Research and Higher Economic and Social Studies (IIESES) of the Universidad Veracruzana, and of the proposed line of research L2-1: Management of sustainable productive organizations and empowerment of indigenous women. See Medel Ramírez Carlos (2019) "Empowerment of indigenous women: The management of sustainable productive organizations and the fight against multidimensional poverty and social exclusion". Research project presented at the IIESES-UV, on December 5, 2018.

[35] The Association of Capacities and Human Development (HDCA) is a global community of academics and professionals that seeks to build an intellectual community around the ideas of human development and the capacity approach, and relate these ideas to the policy environment. See. The Human Development and Capability Association (HDCA). https://hd-ca.org/

[36] The Oxford Human Development and Poverty Initiative (OPHI) is an economic research and policy center within the Oxford Department of International Development at the University of Oxford. See Oxford Poverty and Human Development Initiative (OPHI). https://ophi.org.uk/

b) Benefits expected by the Government of the State of Veracruz

1. Contribute to the orientation of the design of public policy for the allocation of public spending, and in particular, to the process of allocating public resources for social development programs to combat multidimensional poverty, at the federal, state and municipal.
2. Design the methodological structure for the focalization of the priority attention area to guide the policy of social spending, based on the analysis of social marginalization and social exclusion, as a condition of the degree of multidimensional poverty in the municipalities with high participation of the population speaking indigenous language in the State of Veracruz.
3. Evaluate the degree of the distributive impact of social spending, identifying scope and results in the application of social programs at the federal, state and municipal levels
4. To be a permanent information link to support public policy decisions regarding the fight against multidimensional poverty, aimed at achieving empowerment and achieving a better level of human development in the State of Veracruz.

CONCLUSIONS

The definition of the policy of the development of science and technology of June 2018 proposes the proposed framework of action that seeks to respond to priority problems at the national level, standing out in the area of social sciences, the fight against social backwardness and the gender gap, being identified in broader terms, as the guideline for combating multidimensional poverty and social exclusion. At present, the operation and administration policies of the SNI-Conacyt have contributed to the natural insertion of the young Researchers, who once consolidated their research tasks seek to replace the Researchers of Level I, II and / or III. However, it is observed that the number of Researcher Candidates is less than the number of Researchers to be substituted in Level I, as a first stage in the generational changeover process. For what is considered necessary, among other actions, the dissemination of the area of research and development in Social Sciences, which seeks to provide an answer to the social problem of poverty, from a multidimensional perspective, as well as social exclusion in Mexico.

Assuming the social commitment that the Universidad Veracruzana has to propose alternative solutions in the fight against multidimensional poverty and generate conditions for human development and empowerment of communities with indigenous presence, it is essential to propose the lines of action to eliminate social inequality and economic that impact our society, and particularly for the State of Veracruz.

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