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Career Management in the Brazilian Productive Chain:An Analysis of Input-Product Matrix from the Economist Profession

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Abstract:
The objective of this article was to analyze how the increase in final demand by R $ 10 million (ten million reais) affects the generation of jobs (direct and indirect) for economists in the sectors of the Brazilian production chain. To that end, the importance of the economist in the historical context was addressed in the first moment. Then it the paper explains how is the teaching of economic sciences in Brazil and the activities that the professional economist is able to perform. The input-product matrix was based on data from the Brazilian Institute of Geography and Statistics and the Annual Social Information Report, released by the Brazilian government, was used to carry out the analysis to calculate the generators. Based on the methodology, it was possible to estimate for each sector of the economy how much employment is generated directly and indirectly for each monetary unit produced for the final demand. As a result, the data indicate that the financial economist, considering the increase in final demand from the sectors, will be the one who will find the largest number of jobs. The analysis also shows that, in general, the sectors of art, culture, sports and recreation and that of administrative activities and complementary services are more relevant in terms of generating direct and indirect jobs, in turn, the agriculture, livestock sector , forestry, fisheries and aquaculture had the least potential to increase in view of the estimated final demand.
Key Word: Economist; Productive chain; Input-product matrix

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I. INTRODUCTION

The profession of economist was established by Law nº 1,411 of August 13, 1951. However, in his book, on the history of the profession, Nivalde José de Castro clarifies that the teaching of economics in the country originates from the subjects of Political Economy taught in the Trade Academies created in the 19th century (CASTRO, 2001), being that the first certificates of higher education in Brazil are authorized by decree of 1905.

Another interesting aspect about the economist profession is its importance. As highlighted by DelfimNeto in an interview with the portal O Economista (2013): "For me, what justifies the profession of economists is that it can really help to create the conditions for development". For the editor of the portal, the economist Celso Ricardo Salazar Valentim (who points out that the profession is dynamic): "Economics provides ample knowledge, allowing an understanding of market movements and the development of appropriate strategies for improving the quality of society , in any scope ". Finally, according to the report, the economist is "a versatile professional who is current in industry, in governments, in agriculture, in the service sector", thus highlighting the breadth of the profession's areas of activity.

Observing these three characteristics of the economist profession (Longevity, Importance and Range of Performance) this work presents the following research problem: What is the impact, from the R $ 10 million increase in final demand in the sectors of the Brazilian production chain, in generation of economist jobs? To answer this problem, this paper intends to: 1) Survey the historical aspects of the profession in the national context; 2) To present the methodology to measure the impact on economists' job creation; 3) Evaluate the jobs created in the 19 sectors of the Brazilian economy and highlight the most relevant specialty.

From the perspective of the methodology, the text is based on the analysis of the input-product matrix, having as reference the matrix of Brazil for the year 2015 with 19 sectors. For the specific analysis on the employment of economist, the database of the Annual Report of Social Information (RAIS) was used according to the Brazilian Classification of Occupations (CBO) for the same year. It is noteworthy that CBO follows "the

dynamism of the occupations (...) [and] its philosophy is to constantly update in order to expose, with the greatest possible fidelity, the various professional activities existing throughout the country" (MTe, 2019).

Therefore, according to the specific objectives, this article is divided into 4 sections in addition to this introduction. The first is intended to survey the evolution of the training of economists, which mixes with the evolution of the national and international economy. The methodological question, related to the matrix and the economic indicator (generator) is presented in the second section. The third part is the presentation and analysis of the results, highlighting the role of the specialty in finance. Finally, the last section fits the conclusions and some reflections regarding the results and about the profession itself.

II. THE ECONOMIST PROFESSION

As mentioned, the profession of economist was established by Law No. 1411, of August 13, 1951. However, in his book, on the history of the profession, Nivalde José de Castro clarifies that the teaching of economics in the country originates in the disciplines of Political Economy taught in the Academies of Commerce created in the 19th century (CASTRO, 2001), however the first certificates of higher education in Brazil are authorized only by the decree of 1905, which approves the diplomas conferred by the São Paulo Academy of Commerce. Rio de Janeiro. As a curiosity, it is worth mentioning that the Rio de Janeiro Academy of Commerce, founded in 1902, becomes seventeen years later, therefore, in 1919, at the Faculty of Political and Economic Sciences of Rio de Janeiro, giving rise to the current Candido Mendes University (RANGEL, 2002).

It is no coincidence that the profession of economist was regulated in the late 1950s. It is worth remembering that after the Second World War, the Marshall Plan was established (for the reconstruction of allied countries in Europe), in addition to policies for the use of of approximately US $ 16 billion derived from the Truman Doctrine for the recovery of Japan. Such measures have greatly influenced the planning vision of national economies.

That is why, in the period of second Vargas government (1951 - 1954), the Economic Advisory of the Presidency of the Republic (AEPR) was created, the first permanent body with technical attributes aimed at the planning and formulation of priority projects linked to the country's economy. It is the seminal phase of the profession of economists in Brazil, and Nivalde de Castro affirms that the "job offer to economics professionals, maintained throughout the period 1950-1980, a favorable trend, particularly in the decades of 50 to 70" (CASTRO, 2001, p. 43).

In the 1970s, the massification of the profession and its first inflection occurred simultaneously, when planner economists began to be gradually replaced by those who accepted the primacy of the market as an element capable of transforming not only corporate businesses, but also conditioning government policies, bringing, according to these thinkers, the improvement of society's living standards as a result.

The reduction in the relevance of economic planning and programming occurred for several reasons outside the economy as a science, for example, due to the serious oil crises (1973 and 1979), which were the consequence of political problems and not of economic modeling and that had their origin , respectively, in the Yom Kippur war and in the deposition of Reza Pahlevi in Iran. It is evident that there were also problems in carrying out the elaborated planning. In the Brazilian case, for example, there was the idea that an important formation of infrastructural capital, accompanied by a broad nationalization program, would be sufficient conditions to put the country on the list of developed countries.

It turns out that alongside the economic miracle, with its expressive GDP growth rates until 1973, the country was unable to resolve issues related to social aspects and, mainly, was not able to reduce the degree of poverty experienced by a large portion of the population. On the topic, Eduardo Giannetti considers that:

"Despite decades of developmental obsession, it never went beyond a quarter or a fifth of that seen in the" rich world "; our indicators in critical areas of civilized coexistence, such as education, health, sanitation, housing, public transport and security, testify to a nation that enters the 21st century without satisfactorily facing the 19th century social agenda "(Giannetti, 2016, p. 152. translated by the authors).

As seen in the 1970s, it marks the split in the body of economic science in its general spectrum, which creates new economic currents that propagate in the main Latin American universities, including Brazilian ones. Strongly influenced by the book by Paul Baran (1985), "The Political Economy of Development", originally published in 1957, a good part of the Schools and Institutes of Economics of the continent created a certain common identity allowing the exchange of ideas to deal with issues related to underdevelopment which were perceived as similar in several countries.

If, in Latin America, the national-developmentalist vision and Economic Commission for Latin America - CEPAL principlesfueled debates in institutions that educate economists, in the United States the profession was designed with another identity, more focused on inferences about the market. It turns out that the North American perspective on science becomes hegemonic, as the Argentine professor Alejandro Jacobo warned, in the throes of the 1990s:

"The American academic market is huge, full of universities and large enough to successfully define its own criteria, driven by its strong internal dynamics. Given the size of the message, it necessarily becomes impersonal, resulting in publications and the number of times the author is cited as the predominant quality indicator"(JACOBO, 1999, p. 108, translated by the authors).

It should be noted that the end of the 1980s, beginning of the 90s, is marked by the expansion of political conservatism, with names like Reagan in the United States, Thatcher in the United Kingdom, Helmut Kohl in Germany, were in the global leadership in a period when, for example, the fall of the Berlin Wall occurs and with it the end of the cold war, as well as the formulation of the terms of the Washington Consensus that imposed rules of deregulation, privatization of state-owned companies, reduction of public spending, etc., erecting in Brazil the phenomenon of president Fernando Collor which brings with it the establishment of a new economic order for the country, that is, a neoliberal economy that resembles the *ex nihilo* metaphysical principle (VILLIERS, 2019), or as explained by the professor at the University State of Campinas Fernando Nogueira da Costa:

"Alchemists promised to make gold out of lead; economists said they could do it *ex nihilo*, that is, from nothing to create something just through better policy making!"(NOGUEIRA DA COSTA, 2019, translated by the authors)

It is a period in which the profession in Brazil begins to lose its direction and in which it starts to suffer competition from other professions, mainly administration and engineering. Indeed, several important Brazilian 'economists' are not graduate in economics. Just to name a few, ex-minister Pedro Malan, for example, is an engineer, while ex-director of the Central Bank and currently an economic analyst Alexandre Schwartsman has a degree in management. It is true that the two mentioned are doctors in economics, both from the University of California (Berkeley), but they are not bachelors and, in theory, take the job market of the professionals listed in the mentioned Law nº 1,411 that regulates the exercise of the profession.

Reinforcing the argument, there is an interesting text by the professor at the Federal University of Rio de Janeiro - UFRJ, Luiz Carlos Prado in partnership with Luiz Antônio Elias, entitled 'The Economist: Your Strength and Your Weakness' (2000) in which the authors point to the inexorable loss of professional space of economists, warning that their formation, although holistic and well taught, is not based on the needs of the business environment, for which other formation would be much more suitable.

In addition, Pedro Afonso Gomes, president of the Union of Economists of São Paulo, attests that "according to official data, in São Paulo, about 19 thousand professionals are formally registered workers who exercise functions legally provided for by the Economist (...) only less than 4,000 of those 19,000 are actually registered with CORECON - the profession's inspection body in SP"(GOMES, 2019).

When transporting the situation from the State of São Paulo to the country, non-formal estimates by the members of the economists' professional inspection autarchies (CORECONs) indicate the existence of about 80 thousand graduates in economics belonging to the PEA (Economically Active Population), of which half of them, about 40 thousand, registered or not on their professional councils, have activities declared in the RAIS (Annual Social Information Report) resulting from typical or similar functions as economists.

III. PROCEDURE METHODOLOGY

Database (RAIS) and CBO occupation 2002 (Economist)

To estimate the job generators of self-declared professional economists, the input-product matrix of Brazil, year 2015, made available by the Brazilian Institute of Geography and Statistics - IBGE was used, as well as the data from the Annual Social Information Report, which contains statistics based on in the Brazilian Classification of Occupations (CBO), which defines and classifies the types of economy professionals.

The RAIS or Annual Social Information Report, based on Campos (2016) was determined by Decree No. 76,900, of 12/23/75. Also according to the author, RAIS has become the best vehicle for obtaining information on formal employment in Brazil. The establishments are obliged to make statements, which serve to supply the database of the MTE, Ministry of Labor and Employment. With the available data, it is possible to carry out a survey of information on hiring, types of occupations, dismissals, etc.

In addition to information, according to RAIS controllers (RAIS, 2018), the collection of these data is an important tool for the management of labor activity, production of statistics and provision of information on the labor market to the government, which serve as input for the control of the Guarantee Fund for Working Time - FGTS (indirect salary compulsorily paid by organizations), employee identification systems entitled to the Social Integration Program - PIS (a mandatory social charge and paid by companies). For this study, we used RAIS data for 2015.

Table 1. Number of professionals present at RAIS as economists according to the CBO classification for 2015.

Sectors	CBO ClassificationOccupation								Total
	ECONOMIST	AGROINDUSTRIAL ECONOMIST	FINANCIAL ECONOMIST	INDUSTRIAL ECONOMIST	PUBLIC SECTOR ECONOMIST	ENVIRONMENTAL ECONOMIST	REGIONAL AND URBAN ECONOMIST	DOMESTIC ECONOMIST	
Agriculture, livestock, forest production and aquaculture	30	54	131	21	50	11	-	10	**307**
Extractive industries	80	-	737	37	151	42	24	-	**1.071**
Manufacturing industries	1.181	104	4.293	1.484	2.157	153	13	15	**9.400**
Electricityandgas	422	-	454	7	125	60	-	-	**1.068**
Water, sewage, waste management activities	249	-	183	3	34	12	-	-	**481**
Construction	176	5	964	112	319	25	-	3	**1.604**
Trade; repairof motor vehiclesandmotorcycles	445	53	3.128	162	1.538	26	6	7	**5.365**
Transport, storageand mail	353	13	831	44	343	26	2	1	**1.613**
Accommodationand food	13	1	171	17	44	1	-	13	**260**
Informationand communication	505	-	2.077	65	239	9	2	-	**2.897**
Financial, insuranceandrelatedservices	918	20	2.062	23	287	18	46	-	**3.374**
Real estateactivities	32	-	165	5	34	-	-	-	**236**
Scientific, professional andtechnicalactivities	842	19	1.356	138	1.481	59	33	222	**4.150**
Administrativeactivitiesandcomplementaryservices	308	43	2.078	144	807	36	2	5	**3.423**
Publicadministration, defenseand social security	2.092	125	525	7	2.568	57	227	87	**5.688**
Education	546	19	582	99	94	-	1	34	**1.375**
Humanhealthand social services	113	2	575	6	51	8	1	26	**782**
Arts, culture, sportandrecreation	409	17	397	83	130	39	11	24	**1.110**
Otherserviceactivities	11	-	18	1	5	-	-	-	**35**
Total	**8.725**	**475**	**20.727**	**2.458**	**10.457**	**582**	**368**	**447**	**44.239**

Prepared by the authors based on Rais of 2015.

Finally, the OBC, according to Faria (2005), is a document that recognizes, codifies and describes occupations in the Brazilian labor market. The Ministry of Labor of Brazil updated the classification in 2002, replacing that of 1994, in order to meet the changes and new requirements of the market, where it began to describe the professions more broadly. According to the Ministry of Labor (2017), professional economists are codified in CBO (2002) under number 2512 and form a group composed of: Economist; Agricultural economist; financial economist; industrial economist; public sector economist; environmental economist; regional and urban economist; and domestic economist.

Construction of the Input-product Matrix

As presented by Leontief (1988, p. 10), the simplest way to describe the national matrix of inputs and products, "without going into technical details", is to say that it shows the flows of goods and services between the different sectors of the economy of a country over a given period of time, in monetary terms. In other words, the matrix presents all the interrelations of purchases and sales (intermediate goods, final goods, added value, etc.) of a given economy. The basic relationship can be seen in Table 2, if only three sectors are considered (agricultural, industrial and services).

Table 2 - Input-output relationships in a national system (economy with three sectors)

Production Destination (Acquisition) / Origin of Production (Sale)	Intermediate Demands (or Intersectoral)			Demand generated	Gross Production Value
	Agriculture (Sector 1)	**Industry (Sector 2)**	**Services (Sector 3)**		
Agriculture (Sector 1) **Industry (Sector 2)** **Services (Sector 3)**	z_{11} z_{21} z_{31}	z_{12} z_{22} z_{32}	z_{13} z_{23} z_{33}	y_1 y_2 y_3	x_1 x_2 x_3
Imports (M)	m_1	m_2	m_3		
Net Indirect Tax	iil_1	iil_2	iil_3		
Added Value	va_1	va_2	va_3		
Gross Production Value	x_1	x_2	x_3		
ECONOMIST AGROINDUSTRIAL ECONOMIST FINANCIAL ECONOMIST INDUSTRIAL ECONOMIST PUBLIC SECTOR ECONOMIST ENVIRONMENTAL ECONOMIST REGIONAL AND URBAN ECONOMIST DOMESTIC ECONOMIST TOTAL ECONOMISTS	E_1	E_2	E_3		

Adapted from Vasconcellos and Garcia (2014, p. 54).

More specifically, it must be remembered that "the product input method is an adaptation of the neoclassical general equilibrium theory for the empirical study of quantitative interdependence between interrelated economic activities" (Leontief, 1988, p. 73).

In relation to the more technical conceptual, it is possible to observe three fundamental factors of the analysis of Leontief's product input (1988, p. 75-80): the technical or input coefficients a_{ij} (1), the matrix of technical coefficients $A=[a_{ij}]$ (2) and the inverse matrix (7) named after him $L = (I - A)^{-1}$.As presented by Chiang and Wainwright (2006, p. 110), the static version, which this work is based on, of Leontief's model has the following research problem: "What level of product should each of the n industries of an economy have produce, so that it is exactly enough to satisfy the total demand for that product? " In this sense, still according to the authors - given some premises (presented later), to produce each unit of the j-th merchandise, the amount of input for the i-th merchandise has to be fixed, according to the coefficient (1).

$$a_{ij} = \frac{z_{ij}}{x_j} \Rightarrow z_{ij} = a_{ij} x_j \quad (j = 1, 2, 3, ..., n \; ; i = 1, 2, 3, ..., n) \qquad (1)$$

Thus, for the n industries to sufficiently meet the demands for inputs generated by themselves and others, as well as the final demand for an open economy, their product level x_j must satisfy the following equations (CHIANG and WAINWRIGHT, 2006, p. 111-114):

$$x_1 = a_{11}x_1 + a_{12}x_2 + \ldots + a_{1n}x_n + y_1$$

$$x_2 = a_{21}x_1 + a_{22}x_2 + \ldots + a_{2n}x_n + y_2$$

$$\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots$$

$$x_n = a_{n1}x_1 + a_{n2}x_2 + \ldots + a_{nn}x_n + y_n \qquad (2)$$

where, as shown in Table 1, y_i represents the final demand for sector i, x_i the gross production value of the same sector and $a_{ij} * x_j$ the demand for input from sector *i*by sector *j*. Rearranging the equations, putting y_i in evidence, we observe the following system of n linear equations:

$$(1-a_{11})x_1 - a_{12}x_2 - \ldots - a_{1n}x_n = y_1$$
$$-a_{21}x_1 + (1-a_{22})x_2 - \ldots - a_{2n}x_n = y_2$$
$$\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots$$
$$-a_{n1}x_1 - a_{n2}x_2 - \ldots + (1-a_{nn})x_n = y_n \quad (3)$$

Written in a matrix form we have:

$$\begin{bmatrix} (1-a_{11}) & -a_{12} & \ldots & -a_{1n} \\ -a_{21} & (1-a_{22}) & \ldots & -a_{23} \\ \ldots & \ldots & \ldots & \ldots \\ -a_{31} & -a_{32} & \ldots & (1-a_{33}) \end{bmatrix} * \begin{bmatrix} x_1 \\ x_2 \\ \ldots \\ x_n \end{bmatrix} = \begin{bmatrix} y_1 \\ y_2 \\ \ldots \\ y_n \end{bmatrix} \quad (4)$$

which can be rewritten as follows

$$\left\{ \begin{bmatrix} 1 & 0 & \ldots & 0 \\ 0 & 1 & \ldots & 0 \\ \ldots & \ldots & \ldots & \ldots \\ 0 & 0 & \ldots & 1 \end{bmatrix} - \begin{bmatrix} -a_{11} & -a_{12} & \ldots & -a_{1n} \\ -a_{21} & -a_{22} & \ldots & -a_{23} \\ \ldots & \ldots & \ldots & \ldots \\ -a_{31} & -a_{32} & \ldots & -a_{33} \end{bmatrix} \right\} * \begin{bmatrix} x_1 \\ x_2 \\ \ldots \\ x_n \end{bmatrix} = \begin{bmatrix} y_1 \\ y_2 \\ \ldots \\ y_n \end{bmatrix} \quad (5)$$

Based on the relationship (5) we have:

$$(I-A) * X = Y \quad (6)$$

And thus it is possible to "(...) obtain the unique solution of the system from the equation (...)" (CHIANG and WAINWRIGHT, 2006, p. 112):

$$X = (I-A)^{-1} * Y \quad (7)$$

The relationship presented in (7) summarizes the explanatory capacity of the input-output analysis with respect to the behavior of national economies. In other words, it is observed how an impact on final demand (Y) affects the value of production (X) and this, in turn, other variables such as employment, wages, imports, taxes and so on. Thus, it is possible to observe the importance of this method for the countries, being no different for Brazil.

Job Generator

From the direct coefficients and Leontief's inverse matrix, it is possible to estimate, for each sector of the economy, how many jobs are generated for economists (directly and indirectly) for each monetary unit produced for the final demand (Miller and Blair, 2009), that is:

$$GV_j = \sum_{i=1}^{n} b_{ij} v_i \quad (8)$$

Where:

GV_j it is the total impact, direct and indirect, on the variable in question;

b_{ij} is the element of the Leontief inverse matrix and

v_i is the direct coefficient of the variable in question

As the effect of the generator is restricted only to the demand for intermediate inputs (case of this study)

IV. DATA ANALYSIS

The following tables express the results obtained after the construction of the Input-Productmatrix and the estimate of its coefficients. The data show the jobs of economists, according to the CBO classification, which may arise in the various sectors of the economy with the increase in final demand. Direct employment represents the number of jobs generated from an increase in final demand in the highlighted sector, in other words, they are the economists most needed to meet the increase in demand.

In turn, indirect employment corresponds to jobs generated to meet the increased demand for intermediate goods. An increase in the demand for a final good encourages a greater production of intermediate goods, consequently influencing the increase in contracted professionals.

Table 3 - Employment generator (total) for each R $ 10 million increase in final demand

Sectors	Direct	Indirect	Total
Agriculture, livestock, forest production and aquaculture	7	29	35
Extractive industries	43	38	81
Manufacturing industries	34	48	82
Electricityandgas	42	51	92
Water, sewage, waste management activities	75	28	103
Construction	25	33	58
Trade; repairof motor vehiclesandmotorcycles	52	27	79
Transport, storageand mail	32	38	70
Accommodationand food	10	32	43
Informationand communication	83	44	127
Financial, insuranceandrelatedservices	60	32	92
Real estateactivities	4	6	10
Scientific, professional andtechnicalactivities	97	38	135
Administrativeactivitiesandcomplementaryservices	117	20	137
Publicadministration, defenseand social security	85	25	110
Education	34	17	51
Humanhealthand social services	20	24	44
Arts, culture, sportandrecreation	328	36	364
Otherserviceactivities	2	34	36
Total	**1.147**	**601**	**1.749**

By the authors (2020).

The Table 3 shows the total jobs generated for all types of classified economists, directly and indirectly, with an increase in final demand of R $ 10 million. There are a total of 1,749 vacancies for economists in the Brazilian production chain, 1,147 of which are generated through direct employment and 601 indirectly.

The arts, culture, sports and leisure sector is the most prominent in the generation of direct jobs (328). This can be explained in two directions. The first is due to the fact that it is a sector with many contracted economists, however with a small aggregate production value, implying that the stimulus to final demand has a greater proportional effect in terms of job creation in the sector than in other more robust ones. in terms of product generation.

Then, the subsection Arte e Esporte not only covers the management of spaces for performing arts, shows and other artistic activities, but also the operation of facilities for the practice of sports, including stadiums, sports arenas etc. that relate to projects that need economic feasibility analysis. Thus, it is worth remembering that Brazil, since the 2007 Pan American Games, hosted several sporting mega-events, such as the 2014 FIFA Cup and the 2016 Rio Olympics, in addition to smaller events, but with complex planning and organization, requiring qualified technical teams.

In addition, there is the false image that cultural productions are carried out by small companies, involving little articulation of professionals outside the stage. It turns out that big events like Rock in Rio, Lollapalooza (music shows), film festivals, fairs of different natures, cultural tours or technological congresses, etc., are not small productions that can be carried out by small and low qualified teams. On the contrary, they

are planned by large event-producing companies, which in turn hire large service companies, which require specialized teams.

In addition, it is important to know that structures such as those of System S entities (organizations linked to unions and financed by mandatory contributions), in addition to education and training, are organizers of sports and recreational activities for their members. Is one of the largest Brazilian investors in culture programs for the general public. The country's IRS, collected and transferred, in 2019, R$ 17.7 billion to the 9 entities of the System. Sistema S has approximately 3.5 thousand units in the country, employs over 150 thousand people and the amount received from compulsory contributions in 2019 exceeds the Union's budgetary resources for culture, sports and leisure, which together add up to just under R$ 2,5 billion.

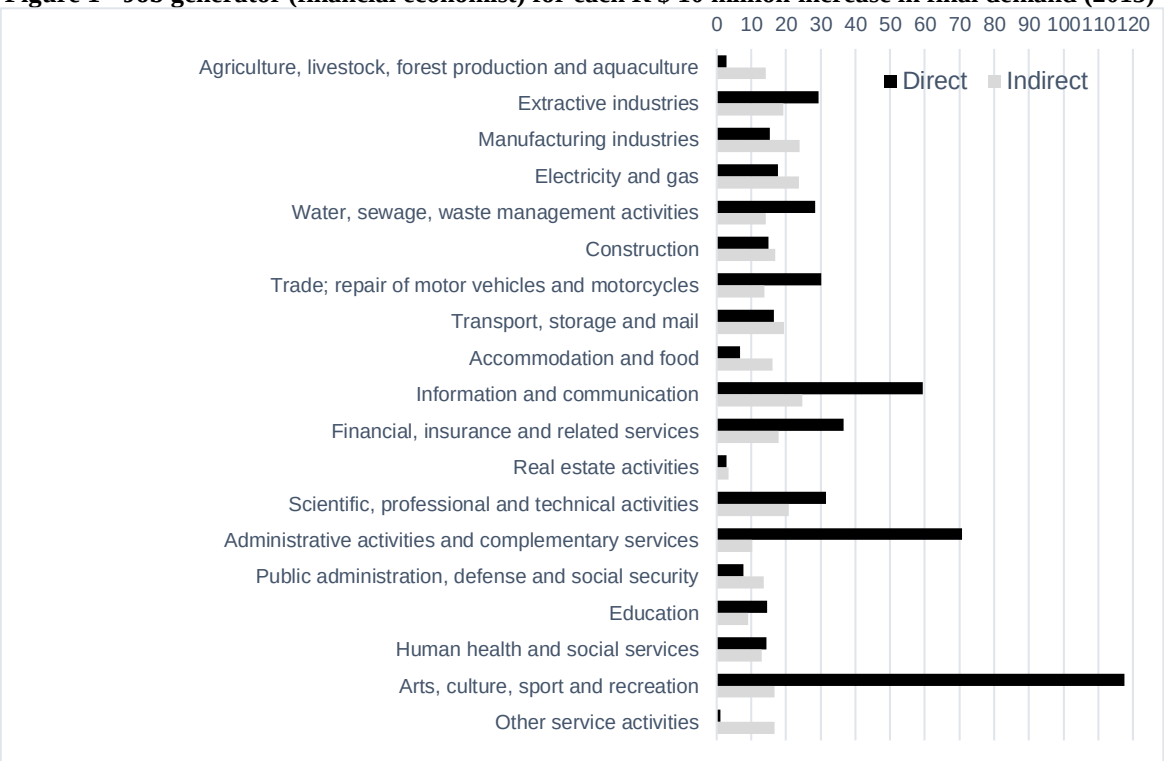
The second sector of greatest relevance analyzed is that of administrative activities and complementary services (137 jobs, 117 directly and 20 indirectly), an amount that is justified by the very essence of the profession. According to CONCLA, the National Classification Commission (2019), the activities comprised by this sector can be summarized in support of the functioning of organizations and companies.

With the lowest number of jobs directly generated, other services and activities, with only 2 unit of job with an increase of R $ 10 million in its final demand, which is intuitively explained, because based on CONCLA (2019), this branch it is characterized by several personal services, such as equipment maintenance and repair.

Still based on Table 3, the jobs generated indirectly, that is, when the increase in the final demand of a sector, influences the others that are related to it, causing the emergence of new jobs, there is the electricity sector and gas as the main highlight (51 jobs). This section, based on CONCLA (2019), is characterized by activities related to the transmission and distribution of energy and electricity, in addition to gas supply. For the case at hand, it is worth emphasizing that the country's growth necessarily implies an expansion of the energy supply and related activities, such as those of the so-called free energy market, which, in addition to selling energy on demand, operates in the future market just like financial markets.

As a less relevant sector, considering the generation of indirect jobs, there are real estate activities, with 6 jobs. According to CONCLA (2019), this area comprises services related to the management of real estate properties, such as the purchase, sale and rental of real estate.The General data can be opened by professional specialty. Figure 1, for example, explores the movement of jobs of economists with financial specialization, according to the nomenclature attributed by CBO.

Figure 1 - Job generator (financial economist) for each R $ 10 million increase in final demand (2015)



By the authors (2020).

Based on the data, the financial economist is the one who most finds job possibilities when there is an increase in final demand by R $ 10 million, as both in direct and indirect jobs, have a higher total employment compared to the others types of economists. This may explain why only the sectors: agriculture, livestock, forestry, fishing and aquaculture; accommodation and food; real estate activities; public administration, defense and social security; and other activities, are below 10 when considering the creation of direct jobs. The remaining sectors exceed the value of 100 jobs generated. When the indirect employment column is analyzed, the number of sectors that generate less than 10 jobs is even smaller, only real estate and education activities do not reach this number.

Still according to Figure 1, now starting for an individual analysis by sectors, the ones that stand out the most in direct employment are, as in the general analysis: arts, culture, sport and recreation; administrative activities and complementary services, to which the information and communication sector is added, all exceeding 50 jobs created.

Taking into account the sector that has the most influence on others when its demand increases, that is, the sector that has the greatest impact on job creation, the information and communication sector is highlighted with 25 jobs indirectly.

The financial economist has the largest number of direct and indirect jobs generated, and has the largest number of jobs created in 15 of the 19 sectors analyzed. Only the sectors of: water, sewage, waste management and decontamination activities; scientific, professional and technical activities; and public administration, defense and social security, create more jobs for another type of professional economist, which can be seen in the graph above that compares the total number of jobs (direct and indirect) generated with the creation of jobs for specializations: financial, environmental and regional & urban.

V. CONCLUSION

The Areas Synthesis Report for economic sciences courses, prepared by the government agency Anísio Teixeira National Institute of Educational Studies and Research (Inep) published in 2019, reports that there are 195 courses in economics in the country, practically all on-site (95.9% of total). The Report also highlights a certain preponderance of Public Institutions, which "concentrated 100 of the 195 courses in Economic Sciences, a number corresponding to 51.3% of the courses evaluated (INEP, 2019, p.23) and that" these institutions concentrated 63.8% of Economic Sciences students from all over the country enrolled in course evaluation system, Enade-2018 (6,133 students in public HEIs and 3,480 in private HEIs)"(Ibdem, p.28).

The information above shows the low demand for training as an economist in private educational institutions, and the number of potential graduates in public economics education is almost double that recorded in private education. This situation can be explained by several reasons.

The first of them stems from other information in the aforementioned Inep report which states that "most (18.5%) of the graduates of face-to-face economics courses evaluated by Enade have a family income of 1.5 to 3 minimum wages (R$1,431.01 to R$ 2,862.00) "(Ibdem, p.40). Going further, the Report indicates that 36.9% of economics students declare higher incomes (above 6 minimum wages or R$ 5,724.01), while 15.1% of them claim to have a family income of up to 1.5 minimum wage, that is, R$ 1,431.00 (INEP, 2019).

Thus, the modal condition of the monthly family income of economic science students points to the impossibility, or at least a great difficulty, for those interested in the course to be able to afford their tuition in private education, whether they are paid at present, or they in form of future payments through, for example, federal government financing programs.

It is exactly about the income of the economist, especially of recent graduates, that deals with the second question about the low demand for the course of economics in schools and private institutes, that is, the ability of the graduate to generate income as a result of his work as a professional of the area. Report from a specialized company (SALÁRIO, 2020) that carried out research using data from the General Register of Employed and Unemployed (CAGED) and published in January 2020, indicates that although the monthly salary of the economy professional is on average R$ 6,860, 96, the remuneration obtained in the first quartile of the sample is only R$ 2,082.13, indicating a relatively small mobility (in terms of average monthly income), upon completion of the course. Note that the same survey indicates, for example, that the average remuneration of a production engineer (worth remembering for a professional space dispute with the economist) is R $ 8,538.98, with an average salary higher than R$ 5,000 being paid to recent graduates

It can be speculated that the profession of economist has restricted demand in the labor market. However, the projections developed show that the professional activity of an economist reacts very well when the country's economy is stimulated and grows.

From the projected data, it can also be assumed that the economist profession, although still very focused on financial activities, found new sectorial fields of activity, which is confirmed by the number of posts generated in the arts, culture, sports and leisure sector when stimulating final demand in the Brazilian input-product matrix.

Thus, the economics professional seems to start to occupy space in sectors that require creativity, the ability to perceive the dynamics of social interaction and, mainly, to understand how to reconcile mechanisms of social choices. In the opposite direction, it is still curious that professional activity today has low employability in public administration, a sector that traditionally was the base on which the profession was built. Even so, professionals with specialization in the environmental, regional & urban areas remain with some penetration of work in the public sector.

In any case, the study carried out, based on projections of the input-product matrix, points to the genesis of demand in the labor market for a professional economist who, even with less aptitude for theoretical analysis or mastery of statistics and calculations applied, has greater interest and understanding of the so-called current affairs and more capacity to understand the collective cultural experiences of the society in which it operates. A professional who uses his peculiar and holistic training to interpret phenomena that involve economic aspects in themselves, but that also encompass political and cultural dimensions, thus supporting increasingly complex business decisions and taken in environments of less certainty and greater ambiguity.

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