

Topic:

Political participation of business organizations in the construction of the technical vocational education and training system in Costa Rica between 1980 and 2021

Dissertation

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Prologue

In 2015, Costa Rica signed a cooperation agreement with the German government in different areas, including consultancy in dual apprenticeships. This proved a long-awaited update for Costa Rican business sectors, because, since the 1990s, it had not been possible to pass a dual apprenticeships law due to conflicts between unions and state employees. In 2017, I received from my master's degree in economic planning with a study on the feasibility of dual apprenticeships in Costa Rica. The study included a chapter on costs and benefits conducted with the support of the Federal Institute for Vocational Education and Training (BIBB in German) in Germany. However, the research results left gaps and open questions that extended beyond the discussion of dual apprenticeships. I felt certain that in Costa Rica, the discussion on the development of the TVET system was reduced to the discussion about dual apprenticeships. What kind of system did Costa Rican employers want to build? Why and under what interests and motivations do they want to modernize the TVET system? These questions have not been central to Costa Rican political actors nor to its scientific community in the last 40 years.

Then, thanks to a cooperation established with the University of Osnabrück, in 2018, I completed a three-month internship in the department of “Berufs- und Wirtschaftspädagogik” at the University of Osnabrück, under the supervision of Professor Frommberger. During this time, I familiarized myself with the main debates in the field of TVET. In the seminar “Structures and functions of TVET”, I learned about the different ways of organizing TVET systems, each of which depend on historical developments, political conjunctures, and economic models in which actors play different roles. These discussions about the organization of TVET did not occur in Costa Rica.

A further objective of the internship was to outline (albeit in a rudimentary way) my doctoral research proposal. This internship allowed me to build a foundation on which I could define the object of my study as well as some theoretical and methodological lines to address the research problem.

When I returned to Costa Rica in August 2018, with a research exposé in hand, I conducted 16 interviews with different TVET actors, institutions, unions, employers, and politicians, as important institutional and legal changes – mainly driven by business actors – were taking place: the dual apprenticeships law, the creation of a National Qualifications Framework, discussions on the reform of the National Apprenticeship Institute, the development of a national TVET policy, and the creation of a National TVET System.

After having collected some important data, I decided to publish some reflections on this ongoing process in Costa Rica. From that first stage, five articles were published: the first was on the characteristics of the TVET system in general (Láscarez & Baumann 2020); the second was a discourse analysis on employer participation in the national tripartite dialogue table on dual apprenticeships (Láscarez & Schmees, 2021); the third was on TVET policies to address the problem of demographic change in Costa Rica (Láscarez; Vargas & Baumann, 2021); the fourth was an article analyzing the transfer process of the dual apprenticeships policy from the perspective of trade unions (Láscarez & Schmees, 2023)¹ and the fifth was an epistemological reflection on different approaches to the study of corporations and employers from the social sciences (Hernández & Láscarez, 2023)². This fifth article is part of the Latin American treatise on the sociology of work.

Since the publication of the reflections on entrepreneurial participation in the debate on dual apprenticeships, my PhD's object of study has expanded – and at the same time, became more precise – focusing on the participation of entrepreneurs in TVET modernization process, in particular against the backdrop of context of the transformation of the economic development model in Costa Rica, which has existed since 1980. It was clear that this PhD project was no longer strictly about the participation of entrepreneurs in dual apprenticeships debates. My desire was to deepen the discussion on the development of TVET structures from a historical point of view, addressing an entrepreneurial vision within the framework of the great processes of social and economic transformation that Costa Rica had experienced, with an emphasis on the actions and social subjectivities of its actors.

Having obtained a DAAD scholarship, I arrived in Germany in 2019 and spent three and a half years again at the University of Osnabrück to execute my research proposal, in spite of the COVID-19 pandemic. Further deepening theoretical and empirical discussions, in 2020, the project “Costa Rican Vocational Education and Training” (CORIVET), funded by the German Federal Ministry of Research and Education, was approved. Thanks to this project – as well as participation in seminars, conferences, symposia, doctoral colloquia, and the advice and recommendations of my supervisor – I was able to develop a research proposal that was relevant in the context of Costa Rican discussion.

This project represents seven years of continuous theoretical and methodological problematization, a long road of constant rethinking beyond the apparent forces that define

¹ In process of publication

² In process of publication

reality. This process of scientific discovery has just begun, and this research represents a new professional stage in which scientific questions and concerns abound. What the reader will find in the following pages is the synthesis of a broad and enriching training process with which I hope to contribute to the knowledge about TVET in Costa Rica.

Index

Prologue	3
Index	6
1 Introduction.....	13
1.1 Lead story	13
1.2 Research relevance.....	15
1.3 Problematization	17
1.3.1 Historical framework: productive transformations and development of TVET.....	17
1.3.2 Business participation in the TVET system: the supply-demand adjustment debate...	19
1.3.3 Economic paradox: jobless growth	21
1.4 Research question	24
1.5 Outline.....	25
2 Literature Review	28
2.1 Approach	28
2.2 Institutionalization of TVET research in Costa Rica	29
2.3 Results of literature review	32
3 Historical context: the genesis of the TVET system in Costa Rica	41
3.1 The postcolonial era and the construction of the nation-state 1821 to 1949	41
3.1.1 The Incipient Forms of TVET and Business Organization in Costa Rica.....	44
3.2 The Entrepreneurial State, Industrialization, and the Emergence of TVET Institutions (1949 to 1980)	46
3.2.1 The Emergence of TVET Structures	48
3.2.2 Crisis of the import substitution model and the beginning of the formation of the transnational entrepreneur.....	49
4 Characteristics of the current TVET system in Costa Rica	54
4.1 The TVET concept in Costa Rica.....	54
4.2 The Costa Rican educational system	56
4.2.1 Preschool education	58
4.2.2 General Basic Education (I, II, and III cycle).....	59
4.2.3 Diversified education: The beginnings of technical education in the formal system ...	61
4.2.4 Technical Education.....	62
4.2.5 Vocational Training in non-formal education.....	64
4.2.6 Higher Technical Education	66
5 Organization of the Costa Rican business sector	68
5.1 Business associations and chambers in Costa Rica	68

5.2	Composition of the business sector in Costa Rica.....	69
6	Theoretical Framework	75
6.1	Latin American configurationism as a theoretical alternative: the struggle against determinisms and the loss of the subject	75
6.2	Concept of configuration.....	80
6.2.1	Subjectivity	82
6.2.2	Structure and action.....	84
6.2.3	Entrepreneurial action and organized entrepreneurial action	86
7	Methodology	89
7.1	Research method and approach	89
7.2	Operationalization of the research object	91
7.3	Selection of Chambers and business associations	96
7.4	Research techniques	99
7.4.1	Document review	99
7.4.2	Semi-structured interviews	99
7.4.3	Observation	101
7.5	Data analysis.....	102
7.6	Research limitations	104
8	Results	106
8.1	Historical-structural configuration	106
8.1.1	Economic liberalization, new business groups, and the new role of TVET institutions	106
8.1.2	Structural Adjustment Programs (SAPs) and state reforms	107
8.1.3	The emergence of new business groups and the beginning of discourse surrounding TVET modernization.	110
8.1.4	Business culture in Costa Rica	113
8.1.5	Synthesis of the structural configuration	116
8.2	Configuration of the organized political action of the business sector.....	117
8.2.1	A new institutional framework: human capital and attraction of foreign investment.....	118
8.2.2	Beginning the curricular and institutional transformation of TVET: the influence of INTEL	122
8.2.3	Linking TVET institutions and business organizations: the curricular philosophy of “Less width, more depth”	126
8.2.4	Dual apprenticeships: the flagship policy of TVET modernization.....	127
8.2.5	Implementation of dual apprenticeships 1992 to 2010: pilot plans and business commitment in training processes.....	130
8.2.6	Political conflict around dual apprenticeship.....	131
8.2.7	First dual apprenticeships agreement under the new Dual Apprenticeships Law	132
8.2.8	Creation of a national technical education system: a failure and a new opportunity	134

8.3	Configuration of business subjectivity	136
8.3.1	Between old and new business subjectivity: the social status of TVET since 1980	136
8.3.2	Political power and a new ethical perspective: business as a driver of social change	141
8.3.3	The idea of “investment attraction climate” and the development of national TVET policy	146
8.3.4	Business subjectivity and social conflict: anti-union and anti-state discourses.....	147
8.3.5	Youth, entrepreneurial culture, and institutional change: between Costa Rica and Germany	149
8.3.6	Vocational orientation and economic productivity.....	151
8.3.7	Summary: entrepreneurs as social subjects.....	152
9	Conclusion and Outlook	156
9.1	Main findings	156
9.2	Theoretical and methodological developments.....	161
9.3	Desiderata	163
	References.....	165
	Annexes	188
	Annex 1. Chambers and business associations that are members of UCCAEP	188
	Annex 2 Bachelor's and Master's theses identified on TVET in Costa Rica	191
	Bachelor’s degree research	191
	Master’s degree research.....	194

List of Figures

FIGURE 1 EDUCATIONAL LEVELS STRUCTURE IN COSTA RICA	57
FIGURE 2 STUDENT ENROLLMENT IN COSTA RICA'S FORMAL EDUCATION SYSTEM 1996 TO 2020	58
FIGURE 3 PRE-SCHOOL ANNUAL ENROLLMENT IN COSTA RICA*	59
FIGURE 4 ENROLLMENT IN CYCLE I AND II OF GENERAL BASIC EDUCATION IN COSTA RICA 1996 TO 2020	60
FIGURE 5 ENROLLMENT IN III CYCLE IN COSTA RICA 1996 TO 2020.....	61
FIGURE 6 PERCENTAGE OF ENROLLMENT IN TVET IN SECONDARY WITH RESPECT TO TOTAL SECONDARY ENROLLMENT IN COSTA RICA 2000 TO 2014	64
FIGURE 7 ORGANIZATION OF THE COSTA RICAN EDUCATIONAL SYSTEM. FORMAL AND NON-FORMAL STRUCTURE	67
FIGURE 8 STRUCTURE IN THE CONFIGURATIONIST METHOD	79
FIGURE 9 HISTORICAL CONTEXT AND SPECIFIC RESEARCH PERIOD	91
FIGURE 10 CONFIGURATIONS, DEFINITIONS, DIMENSIONS, AND DESCRIPTIONS OF THE OBJECT RESEARCH	95

List of tables

TABLE 1 ORGANIZATIONS CONSULTED RELATED TO TVET RESEARCH IN COSTA RICA	29
TABLE 2 MAIN DEVELOPMENTS IN THE STRUCTURE OF THE TVET SYSTEM IN COSTA RICA BETWEEN 1953 TO 1978	48
TABLE 3. ENROLLMENT RATES IN I, II, III AND IV CYCLES.....	61
TABLE 4. ENROLLMENT IN TECHNICAL EDUCATION, DAY, AND NIGHT MODALITY IN THE PERIOD 1988-2020	63
TABLE 5. ENROLLMENT IN INA BY PRODUCTIVE SECTORS, AGRICULTURE, COMMERCE, SERVICE, AND INDUSTRY 1965 TO 2020	65
TABLE 6 COSTA RICAN BUSINESS PARK IN THE PERIOD 2012 TO 2020.....	70
TABLE 7 NUMBER OF FORMAL EMPLOYEES BY SIZE OF COMPANY BETWEEN 2015 TO 2019	71
TABLE 8 GDP BY ECONOMIC ACTIVITY COSTA RICA 2012 TO 2021	71
TABLE 9 EPISTEMOLOGICAL CONSTRUCTIONS OF THE MAIN THEORETICAL APPROACHES	80
TABLE 10 OPERATIONALIZATION OF THE STRUCTURAL DIMENSION	92
TABLE 11 OPERATIONALIZATION OF THE LEVEL OF ACTION.....	93
TABLE 12 METHODOLOGICAL OPERATIONALIZATION OF THE SUBJECTIVE DIMENSIONS/FIELDS.....	94
TABLE 13 ACTORS UNDER STUDY	98
TABLE 14 OBSERVER ROLES.....	101
TABLE 15 SYNTHESIS OF THE METHODOLOGICAL PROPOSAL.....	104
TABLE 16 LIBERAL REFORMS IMPLEMENTED IN COSTA RICA BETWEEN 1980 AND 1999.....	108
TABLE 17 MAIN CHANGES IN THE TVET SYSTEM IN THE ERA OF ECONOMIC LIBERALIZATION IN COSTA RICA BETWEEN 1983 TO 2021	111
TABLE 18 SUMMARY OF THE SOCIO-HISTORICAL AND CULTURAL CONFIGURATION OF ENTREPRENEURIAL PARTICIPATION IN THE TVET SYSTEM	116
TABLE 19 DISCOURSES, ORGANIZED BUSINESS ACTION, EFFECTS, AND CHALLENGES IN COSTA RICA 1980 TO 2021	154

List of abbreviations

Abbreviation	Spanish	English translation
AID	Agencia Internacional de Desarrollo	International Development Agency
ANDE	Asociación Nacional de Educadores	National Association of Educators
APSE	Asociación de Profesores de Segunda Enseñanza	Association of Secondary School Teachers
BCCR	Banco Central de Costa Rica	Central Bank of Costa Rica
BCIE	Banco Centroamericano de Integración Económica	Central American Bank for Economic Integration
BID	Banco Interamericano de Desarrollo	Inter-American Development Bank
BM	Banco Mundial	World Bank
CAPROSOFT	Cámara de Productores de Software	Chamber of Software Producers
CEPAL	Comisión Económica para América Latina y el Caribe	Economic Commission for Latin America and the Caribbean
CICR	Cámara de Industrias de Costa Rica	Costa Rican Chamber of Industries
CINDE	Coalición Costarricense de Iniciativas de Desarrollo	Costa Rican Coalition of Development Initiatives
CIPET	Centro de Investigación para el Perfeccionamiento de la Educación Técnica	Research Center for the Improvement of Technical Education
CNP	Consejo Nacional de la Producción	National Production Council
CONARE	Consejo Nacional de Rectores	National Council of Rectors
COMEX	Ministerio de Comercio Exterior	Ministry of Foreign Trade
COVAO	Colegio Vocacional de Artes y Oficios de Cartago	Cartago Vocational School of Arts and Trades
CSE	Consejo Superior de Educación	Superior Council of Education
CTP	Colegio Técnico Profesional	Technical Vocational School
CORVEC	Consejos Regionales de Vinculación con la Empresa y la Comunidad	Regional Councils for Business and Community Networking
DETCE	Dirección de Educación Técnica y Capacidades Emprendedoras	Technical Education and Entrepreneurship Directorate
FMI	Fondo Monetario Internacional	International Monetary Fund
FOD	Fundación Omar Dengo	Omar Dengo Foundation
INA	Instituto Nacional de Aprendizaje	National Apprenticeship Institute
ITCR	Instituto Tecnológico de Costa Rica	Technological Institute of Costa Rica

MCCA	Mercado Común Centroamericano	Central American Common Market
MEP	Ministerio de Educación Pública	Ministry of Public Education
MICITT	Ministerio de Ciencia, Innovación, Tecnología y Telecomunicaciones	Ministry of Science, Innovation, Technology and Telecommunications
MIDEPLAN	Ministerio de Planificación Nacional y Política Económica	Ministry of National Planning and Economic Policy
MTSS	Ministerio de Trabajo y Seguridad Social	Ministry of Labor and Social Security
OCDE	Organización de Cooperación para el Desarrollo Económico	Organization for Economic Cooperation and Development
OEA	Organización de Estados Americanos	Organization of American States
OIT	Organización Internacional del Trabajo	International Labor Organization
OMC	Organización Mundial del Comercio	World Trade Organization
ONU	Organización de las Naciones Unidas	United Nations Organization
PAE	Programa de Ajuste Estructural	Structural Adjustment Program
PAECA	Plan de Acción Económica Centroamericano	Central American Economic Action Plan
PLN	Partido Liberación Nacional	National Liberation Party
PND	Plan Nacional de Desarrollo	National Development Plan
PROCOMER	Promotora de Comercio Exterior de Costa Rica	Foreign Trade Promoter of Costa Rica
PUSC	Partido Unidad Social Cristiana	Social Christian Unity Party
PYME	Pequeñas y Medianas Empresas	Small and Medium Enterprises
SINAFOTEP	Sistema Nacional de Formación y Educación Técnica Profesional	National vocational education and training system
SINETEC	Sistema Nacional de Educación Técnica	Integrated National Technical Education for Competitiveness
TLC	Tratado de Libre Comercio entre Estados Unidos, Centroamérica y República Dominicana	The Central America - Dominican Republic - United States Free Trade Agreement
UCCAEP	Unión Costarricense de Cámaras y Asociaciones del Sector Empresarial Privado	Costa Rican Union of Chambers and Associations of the Private Entrepreneurial Sector
UCR	Universidad de Costa Rica	University of Costa Rica
UNA	Universidad Nacional	National University

UNESCO	Organización de las Naciones Unidas para la Educación, la Ciencia y la Cultura	United Nations Educational, Scientific and Cultural Organization
UNICEF	Fondo de las Naciones Unidas para la Infancia	United Nations Children's Fund
UTN	Universidad Técnica Nacional	National Technical University
EBNC	Modelo de Educación Basada en Normas de Competencias	Competency Standards-Based Education Model

1 Introduction

This chapter presents in Section 1.1 the introduction to the general framework of the research topic. In Section 1.2, the scientific and social relevance of the research is presented; in Section 1.3, the research topic is problematized in empirical and theoretical terms; in Section 1.4, the research question with its different analytical components is formulated; and, finally, in Section 1.5, the formal outline of the dissertation is described.

1.1 Lead story

Businesses, employers, and Technical Vocational Education and Training (TVET) systems constitute a very attractive scientific triad for professional educators, especially when employers are interested in participating at different levels, such as in the field of TVET policy or in the apprenticeship process. The participation of stakeholders in TVET offers many opportunities for scientific study, especially in a country in which the modern structures, functions, and goals have been defined for the last 40 years.

TVET systems have an educational dimension and a work dimension. This means that the concept of training and work acquire a special and different meaning whenever there are changes in productive processes, in economic development, and when new theoretical-pedagogical problems arise around the teaching-learning process. Employers and business organizations usually have an important incidence in the definition of labor and educational characteristics. The interests and motivations of employer groups may vary according to the productive sector to which they belong, political or economic incentives, the size of the company, or subjective and cultural criteria. Even disinterest can be subject to scientific research, to the extent that societies establish different mechanisms in which the participation of actors is at different levels possible or impossible. Education, by virtue of its social and transformative character, is linked to cultural and ideological meanings, and will always be the object of political disputes between different social actors (Muñoz, 2017).

Vocational education and training structures reflect social, cultural, political, and economic constructs in which a variety of processes – such as conflict, consensus, acceptance, opposition, resistance, and ideologies – converge. In other words, TVET policies and systems are shaped by a wide range of social relations as an expression of the political, economic, and philosophical foundations of a society. This means that studies of TVET systems must consider the history of the development of the anthropological and sociological characteristics of society. In this sense, Costa Rica has socially constructed its TVET system, reflecting the complexity of social structures and pressure from social actors to design a system in accordance with their world view.

Following the above reasoning, in the Latin American context, the process of institutional and organizational TVET design is related to a) the political, cultural, economic, and social relations that have emerged during 300 years of colonial history; b) the processes of social formation and organization around the strategies of insertion into global capitalism after the colonial regime; and c) the more contemporary processes of reorganization of forms of production under capitalism, institutional changes and subjectivities that give meaning to both education and the world of work (Molina, 2007).

In this sense, Clement (2017) has accurately described the relationship between the organization and functioning of TVET with the history of socioeconomic development in Latin American countries. In a text titled “Berufsbildung in Lateinamerika zwischen Hegemonie und Nationaler Selbstbehauptung”, Clement points out that the weak transfer of technical knowledge from the Spanish colony to indigenous peoples did not allow for the development of more advanced forms of work, which prevented better forms of productive development based on skilled labor after independence. In contrast, Latin American countries developed educational systems that were preponderantly academic (requiring general knowledge) and not vocational or professional (Clement 2017, p. 16). This historical context is central in initiating a scientific discussion of how TVET systems began to develop in Costa Rica, and how different social actors in interaction with social structures have assigned certain functions and forms to TVET.

The role and level of participation each social actor has had in the development of TVET can be weighted based on different criteria, which can in turn give clues about how a type of TVET system has been organized, for example, through funding and responsibilities, as well as the inclusion of school learning places, social legitimacy, normative frameworks, representativeness, and interests (Deißinger & Frommberger, 2010, pp. 343-348). The question is how to explain the participation of firms and entrepreneurs in designing TVET structures and policies in the historical relations of production and the subjective meanings entrepreneurs have attached to their own participation in the TVET system. This is particularly relevant when one of the stated objectives of the first TVET policies since 1980 was that TVET institutions be managed in accordance with the needs of the labor market and the requirements of an economic development model based on the policies of privatization, liberalization, and reduction of state functions (i.e., a neoliberal model). The research interest of this research is not how TVET institutions attracted and promoted business participation, but rather how business organizations participated in the construction of the TVET system, and under what political and ideological orientations they did so.

For this reason, in this research, the critique of theories omitting the value of subjectivity in relation to structural outcomes is a central point. It is necessary to try to improve institutionalist, functionalist, and positivist approaches that reduce entrepreneurial participation to the economic incentives of the market without considering that the decision-making process goes beyond institutional determinations – indeed, the social action of subjects requires a historically situated, subjective understanding. At the same time, this thesis posits an empirical critique in the sense that it forces the creation of data that integrates both the structural and the subjective in its the social action of business organizations.

So, the present study analyzes the specific role of business organizations within the framework of their own subjective configurations, in the context of the historical conditions in which they have developed their actions around TVET. The historical conditions discussed here are those of the transformation of economic and political structures after the crisis of the welfare state, up to the historical conditions that pressured the change of the development model. This research also examines, from the entrepreneurs' perspective, the different functions of the TVET system in relation to the new objectives of Costa Rica's economic development since 1980: attracting foreign direct investment (FDI) and focusing on strengthening the service sector.

It also relates the role that entrepreneurs have given to TVET in relation to social and economic challenges such as low productivity, high unemployment, and the increase in poverty and inequality. In other words, through the political participation of entrepreneurs, it is possible to better understand how the social, political, cultural, and economic functions of Costa Rican TVET have been defined, and under which parameters they have been established.

1.2 Research relevance

The relevance of the present research has at least two major dimensions: social and scientific. The first, the social dimension, is related to the growing social importance that TVET has had for the past 40 years among social, union, business, and political actors, and the contribution that this study's findings could make to discussions about improving the TVET system in Costa Rica (Sevilla & Dutra, 2016). The second dimension, namely the scientific one, is thus related to the theoretical and methodological components of the study of entrepreneurship in the social and cultural context of vocational training. At the same time, the scientific dimension of this study consolidates a new line of scientific research: the participation of actors and the historical construction of the TVET system. Costa Rican actors (mainly entrepreneurs) have sought to instrumentalize TVET by making it coincide with the socio-productive transformation that has occurred since 1980, preparing the country for a development strategy based on attracting

foreign direct investment. Since then, concrete initiatives have arisen that affect the functioning of the system: These include the financing of institutions, legal reforms, creation of TVET institutions at different levels of qualification, creation of normative and legal frameworks (such as the national qualifications framework), the law of dual apprenticeships, among others (Guzmán, 1992).

In the last four decades, the challenges and debates around TVET have deepened, and, consequently, the sense of urgency around the question of how to improve the TVET system based on more specific technical and scientific criteria has gained prominence. Above all, the absence not only of data and information, but also of reflective, philosophical, and scientific processes have generated an urgent need for research on TVET focusing on the specific history, foundations, and trajectories that the TVET system has had in Costa Rica.

In this sense, this research is constituted as a response to this need for knowledge about the constitution of the TVET system from its actors' perspective, such as the companies and their historical interests. At the political level, business participation has been a central factor in generating these debates and in provoking concrete changes in the discourse and in the forms and contents within TVET institutions. The discursive ideas of "modernization" and "reform" established by political and business organizations is important not only as a discourse, but also as a meaningful social practice.

The second dimension of relevance of this research is scientific. The Costa Rican social sciences have had serious difficulties in relating TVET, the entrepreneur, and the company as objects of study. The fact that there is no scientific discipline of TVET in Costa Rica is due to historical, economic, and cultural reasons – as it is in most countries. Given this fact, this research constitutes an opportunity to situate the need to understand the TVET system for its own concepts, theories, methods, and problematizations.

The role of entrepreneurs in society has been relevant since classical studies of Cantillon (1680 to 1734), Smith (1723 to 1790), Quesnay (1694 to 1774), Thünen (1783 to 1850), Mangoldt (1824 to 1868), and Marx (1818 to 1883). Later, neoclassical currents, which responded to rapid processes of European and American industrialization, first situated the entrepreneur as a factor of production and then as an economic subject capable of generating value either as a rational, opportunistic subject, or an administrative subject of capital (Knigh, 1921; Sombart 1928; Schumpeter 1987). These positions have been the target of numerous and extensive theoretical and empirical debates between different critical perspectives, such as Marxist positions and theories of social action, which fundamentally question the rational character of entrepreneurs in society, as if they only think in economic terms, determined by cognitive schemes and actions

previously established by the market or institutions. Methodological monism and deductive hypothetical approaches lack a theory of action not determined by the supposed rationality of the subjects, or by their culture (Granovetter, 2000; Fayolle, 2014; Schumpeter, 1954; Hernández, 2006; De la Garza, 2000).

Notwithstanding the theoretical richness with which it would be possible to discuss scientific issues in TVET (such as those mentioned by the previous authors), in Costa Rica, the majority of scientists who study TVET ask questions such as: What could be the role of companies in the implementation of a dual apprenticeship system? How to encourage the participation of companies in training? How to create curricula that respond to market needs? How to develop methodological strategies to diagnose training needs? How to create a more permeable system? These are valid questions, and they respond to political-economic urgencies. However, they do not try to understand the logic that underlies the participation of certain business groups in the constitution of the TVET system. In this sense, this research is scientifically relevant because it situates business organizations as a social subject of TVET, proposing new concepts, theories, and methods in the Costa Rican and Latin American context.

This research is part of the first scientific venture in the critical and comprehensive understanding of the TVET system. It also initiates a new line of research in the study of entrepreneurial participation in the development of TVET structures in the Costa Rican context.

1.3 Problematization

This research defined three elements to problematize. The first is a socio-historical view of the problem (1.3.1), which problematizes the historical origins of TVET structures and the configuration of entrepreneurial actors. The second is an educational and sociological view of the relationship between TVET and entrepreneurial organizations (1.3.2), i.e., how the two worlds are usually linked. Finally, the third is the social action taken by entrepreneurs to respond to social and economic problems in the last four decades, with particular attention to the problem of unemployment and the growth of the economy (1.3.3).

1.3.1 Historical framework: productive transformations and development of TVET

For Clement (2017), the difficulty of constructing solid and stable social and institutional systems during early insertion into world capitalism instigated the fundamental problem of Latin American economies: namely, low productivity and little productive diversification. For Clement (2017, p.17), faced with low productivity and little productive diversification, Latin American countries developed two contradictory strategies that influenced the development of technical and vocational training systems:

- (1) Latin American countries developed state structures that promoted their own strengths, for example, through the nationalization of strategic sectors of the economy. In other words, the state played a fundamental role in developing national industries and training human resources to respond to the industrialization process.
- (2) Latin American countries opened up to global capitalist competition, focused on attracting capital, signed free trade agreements, and privatized educational services.

Accordingly, to industrialize and modernize Latin American economies, countries opted for two economic and political paths that shaped the structures of educational development: either strong intervening state in market relations or trade liberalization³. It is essential not to lose sight of the fact that the Latin American region has lived through several decades of convulsive democratic instability which has weakened institutions. The Cold War period, from 1945 to 1990, was characterized by profound social ruptures (such as dictatorships, social movements, and military movements) that have impacted entire institutional and social systems in Latin America.

In the case of Costa Rica, I will explain the social ruptures that occurred in different periods (including Costa Rican independence from the Spanish colony, the liberal era, the civil war, the economic crisis, and the neoliberal era), since they generated significant ruptures among actors and in the TVET system.

Thus, industrialization processes and various strategies implemented to this end were marked by profound social events, signaling political-institutional ruptures in which different social actors played decisive roles. A decisive actor was the new entrepreneurs, the transnational entrepreneurs, which led the reform of the Costa Rican state, where the TVET system was critical for the purposes established by the new power groups, productive transformation, liberalization and privatization of public services, qualification of workers and foreign investment.

The decade preceding the period under study (which begins in 1980) was characterized by the exhaustion of one model of development – namely, the welfare state – and the incipient emergence of another, one which was entirely based on the attraction of foreign capital and the abandonment of robust social policies. This fact is fundamental to this research because, as will be seen in the theoretical section, it is precisely these historical configurations and transitions,

³ It must be recognized that these two possibilities are not mutually exclusive, but are related to each other to different degrees, levels and times. For example, Costa Rica liberalized the financial sector but protected and created monopolies such as the rice sector.

produced by specific social groups, that generate certain forms and expressions of economic subjectivities.

In the late 1970s, the foundations were laid for the emergence of a new entrepreneurial culture in Costa Rica, one which sought to bring new functions and roles to the TVET system which are the object of this research. Before the 1970s, the structure and organization of TVET played only a peripheral, secondary role in the education system. Furthermore, between 1950 and 1970, the legal and financial foundations of the system were just being created; the objectives and functions of each TVET institution were just beginning to be defined.

As will be expanded on in later chapters, the main vocational education institution was founded in 1965, with the agricultural technical schools launching from 1950 (Láscarez, 2017; Alvarado & Mora, 2020). Both institutions were conceived as part of the agricultural development boom, but two decades after their founding, an era of uncertainty began, as well as a debate between politics and business regarding the roles of these two institutions in the country against the backdrop of new development strategies. This was a time of state crisis, and with this crisis came a reformulation of the TVET system.

1.3.2 Business participation in the TVET system: the supply-demand adjustment debate

As mentioned above, the development and evolution of TVET systems have a twofold dimension of analysis: a labor dimension and an educational dimension. This twofold dimension poses a challenge for a country looking to establish mechanisms for reforming the system that might respond to educational and labor market objectives. From this perspective, there could be close communication between the labor system and developers, for example, or between technical teachers and business roundtables on future innovations in the educational sector (Olazaran & Albizu, 2015).

However, to understand the relationship between companies and educational structures, one variable is missing: the organized political action of the business actors. Organized political action as an analytical concept makes it possible to understand how certain business groups define action, discourses and from which ideological and philosophical bases they define the objectives of transformation. The fact that there is an *organized* political action means that previous agreements had to have been made between the different business groups. Defining a common political route on a specific aspect of TVET is by no means a “clean” process, but rather a turbulent and conflictive one, because not only do other actors come into play, but historical and cultural variables are also important to investigate.

The problem is not only a problem of communication between educational actors (teachers, unions, institutions, students) and business actors (companies, chambers, organizations,

ministries), but also an ideological and political problem, as expectations and development goals are constructed in a specific way. This problem should be analyzed in depth, especially if one considers that the objectives and goals of business groups are constructed with objectives of institutional actors, as political actions have limits (Estado de la Educación, 2011; Álvarez-Galván, 2017). Thus, for example, the classical debate between supply and demand should be studied from the social, economic, and political conditions in which supply and demand are produced, and not from whether communication between actors is good or not.

Cost-benefit studies in countries with more advanced dual apprenticeships systems provide certainty and, among other things, a basis for employers to determine whether participating in dual apprenticeships would be “worthwhile” for them. Explaining business participation in the vocational training system only from a cost-benefit relationship turns out to be of limited value, however, since such an analysis ignores power relations, culture, labor structures, industry level, future expectations, and incentives. One of the incentives for businesses to participate in a dual apprenticeship program may be the assurance that the state and educational institutions consider certain company demands. Here, the important thing is to analyze and understand the cultural characteristics, labor structures, and expectations that companies have in different contexts.

In Costa Rica, empirical evidence shows how TVET reforms have been generated thanks to processes of participation of diverse actors. Clearly, business participation has played a central role. However, it is also clear that the companies that have played a central role do not comprise all businesses, but instead represent specific business groups. Such hegemonic local and transnational business groups have guided the social transformations since 1980. In this sense, it is not accurate to speak of “business organizations” as if they were a homogeneous unit. On the contrary, business organizations are composed of very diverse groups, with different constitutions and forms, and often pursuing different objectives.

The construction of the business culture (Hernández 2004a, p. 49)⁴ in Costa Rica before 1978 is very particular, because the entrepreneurial culture was characterized by the national agro-exporting entrepreneur and small traders. The TVET system was thus oriented to respond to the needs of certain industrial and agricultural sectors. But from 1980 onwards, Costa Rica began

⁴ Culture is defined as a process of accumulation of socially understood meanings. The process is carried out by cultural codes (religious, moral, ethical, aesthetic, et cetera). Business culture refers to how different actors configure a subjective process (meaning-making process) in their daily activities. For this, they mobilize these codes by creating meanings and legitimizing collective life in the business world and at work.

to transform its productive apparatus, while entering a new productive era, resulting in new power relations, new institutions, emergent groups, and an overall new business culture.

The major restructuring of the world of work under the banner of privatization and economic liberalization has had an impact on the concepts, objectives, and functions of the TVET system, which is reflected in the attempt by representatives of the new transnationalist business culture to capitalize on educational and economic interests through the National Apprenticeship Institute (INA), the Ministry of Public Education (MEP), and public and private universities.

1.3.3 Economic paradox: jobless growth

The 1980s coincide with both the growing interest in TVET and profound economic and social changes in Costa Rica. One of these economic and social changes, which constitutes a paradox, is that since the beginning of the trade liberalization model in Costa Rica, the economy has grown, but employment has not (Flores-Estrada, 2021). As a result, academic and political actors have shown concern about the general employment problems and their social consequences on social insecurity and poverty: for example, the increase in informal employment, which in 2022 represented 46% of the labor force in Costa Rica, as well as the high percentage of unemployment among women and among young people between the ages of 15 and 24, which was 34,2% in 2022 (INEC, 2022).

To illustrate it better: The number of employed people in 2010 was 1,881,514, and in 2019, the number of employed people was 2,182,818. In other words, between 2010 and 2019, 300,000 new jobs were created, indicating a growth of 16%. However, 86% of the jobs created were informal jobs (Mora Guerrero, 2020, p. 5).

Since 1990, employment policies have been implemented without good results, and various political and business groups have pressured immediate action (Weller, Jürgen 2009; Meneses, Karla, 2022). Of course, currently, the focus is on the causes of the problem, and there is not always consensus among the social partners on this point. It is important to mention that Costa Rica is currently facing a fiscal deficit: The main topics on the political agenda are associated with new fiscal packages, but the proposals for the reactivation of competitiveness and employment are not clear. However, dual vocational education, a national qualifications framework, labor flexibilization, and reforms of the National Apprenticeship Institute (INA) and the Ministry of Education (MEP) are recurring issues in debates also driven by businesses.

For some researchers like Mora Jiménez (2020), the unemployment problem is caused by multiple factors, including the type of development strategy followed by the country, which may have had detrimental effects for the least qualified workers. One of the challenges in this context is that proposals for economic growth and attracting global capital are part of a political

agenda that has provoked polemic reactions in the fiscal, educational, and social spheres. In this sense, there seems to be a mismatch between development strategy and employability education policies.

Faced with this problem, a senior executive of the Union of Chambers and Associations of the Private Sector of Costa Rica said in an interview:

Costa Rica's economy is, like all countries in America, like an airplane that has two engines: the engine of the external economy and the engine of the internal economy. The engine of the external economy are all those companies that are linked to exports, to international markets, to provide Back-office work, et cetera. This sector, fortunately, is the one that has made us grow, to some extent, because eight out of every ten formal jobs that have been created in the last years have been in this sector, the one oriented towards the external economy, which requires more and more specialized human talent, at a technical level, not necessarily at a professional level. But when we look at the other engine, the internal economy, it is an engine that unfortunately is not working so well, why? Because there are many small companies, whose operations do not last more than five years. The small companies that already exist and that exceeded five years, soon die because of the low levels of innovation (II-UCCAEP, 2021)⁵

A study by the University of Costa Rica indicates that the Costa Rican economy has been undergoing a major transformation in the production system. The tertiary sector of the economy, the service sector, is becoming increasingly important in relative terms. And although it generates greater added value, the high-tech service sector is not capable of absorbing the country's unemployed population (68% of the unemployed have not completed high school). The transformation of the country's productive structure has led to a sectoral shift in the demand for labor towards activities that require specialized skills and generate few direct jobs. In addition, a more skilled economy requires a medium level of labor qualification, but most of the unemployed do not have sufficient skills to access new jobs; in fact, some sectors could develop further, but are limited by not having the labor they require (Robalino; Trejos & Paredes, 2018).

Since 1990, a year which included the first forum on dual apprenticeships between entrepreneurs and politicians, some social actors have focused their interest on strengthening the social, economic, political, and educational functions of TVET. Subsequently, with the realization of the first pilot plan for dual apprenticeships in the automotive sector, a new era of

⁵ Author's translation

implementing pilot plans in different institutions began. The results are dissimilar and widely questioned by the country's stakeholders.

In 1998, the Presidential Decree for the creation of the Integrated System of Technical Education for Competitiveness (SINETEC) – Sistema Integrado de Educación Técnica para la Competitividad – was signed. The purpose of this decree was to harmoniously integrate different levels of technical education, from the basic level to the higher technical level, with a criterion of efficiency and effectiveness, through concerted actions between the training institutions and the demands of the productive sector. Thus, the decree favored human development in harmony with socioeconomic development (SINETEC, 1998, p. 2).

The SINETEC system represents a first attempt at institutional governance of TVET *with* the private sector, following the logic of a system whose inputs should integrate information on the labor market and its products. SINETEC functioned very irregularly and did not achieve the proposed objectives (Alpízar, 2021). Although there are no official data or documents, it has been possible to talk to people who promoted this entity in Costa Rica, and the reasons for SINETEC's failure are diverse and should be investigated.

Years later, in 2008, the first technical university in the country (UTN) was created, with the aim of responding to market needs and articulating technical education with other educational levels (Law No. 8638). The creation of the National Technical University (UTN) reflects the interest and importance of successive Costa Rican government in strengthening the level of qualification of workers.

Between 2010 and 2019, several business associations, led by UCCAEP and right-wing liberal political parties (Libertarian Movement and National Liberation), proposed bills to reform some elements of the TVET system by implementing dual apprenticeships. Specifically, they tried to eliminate the labor character of the relationship between the student and the company (salary, labor rights) (Láscarez & Schmees, 2021). These bills generated strong reactions and national strikes by education unions. The high potential for social conflict prevented the approval of a dual apprenticeships law for a decade.

In 2016, in a rapprochement with the German government, a pilot plan in automotive mechanics was launched, promoted by UTN, INA and MEP. This also provoked a reaction from trade unions and business chambers, who asked to be included in these initiatives. In 2017, the Minister of Education requested the ILO to create a national dialogue roundtable on dual apprenticeship system, due to the high social conflict surrounding this issue (marked by long strikes, public debates, student demonstrations against the dual apprenticeships project, and

more). In parallel, a multi-stakeholder commission is currently developing the draft national qualifications framework for TVET in Costa Rica (Láscarez and Baumann, 2020).

In September 2019, after more than 30 years of debate in Costa Rica, the dual apprenticeships law was approved in the Legislative Assembly. In 2020, the reform of the National Apprenticeship Institute (INA), the largest and most important vocational training institution, was approved (Cornick, 2022). All of these projects are part of a long history of legal, political, and social debate from 1980 to the present.

The panorama described above is the product of action by different business chambers and other institutions representing business interests. Although they did not always obtain what they wanted (such as a more profound reform of the INA and the MEP, or a deregulated and dual apprenticeship system under bipartite governance), these business chambers continue to show a great interest in modernizing the initial training structures in Costa Rica.

Therefore, this research focuses on the configuration of the organized political participation of business in the process of reforming, modernizing, or building the TVET system from 1980 onwards in Costa Rica.

1.4 Research question

The research question is: How has the organized political action of business groups been configured around the TVET system within the framework of the social, economic, and political transformations in Costa Rica from 1980 to 2021?

Business groups' political action can be categorized in two types: organized or unorganized action. When political action is organized, it implies a certain level of group organization, of formality of its action structures, with certain objectives, strategies, and resources. Like Santos (2014, p. 137) says, organized action is configured by actors who respond to diverse logics of action, so that their actions are not totally rational, but subjective and the product of a local power structure.

In this research, the subjects under investigation are those who act through entrepreneurs' political organizations, which have clearly defined objectives and functions. Naturally, entrepreneurs have economic interests, but they are not exclusively driven by economic interests, as there are also political and ideological ones which come into play. Even when the objectives are economic, political action is required, and most of the time, it must be organized. For example, entrepreneurs require organized action to influence certain political spheres, the state, trade unions, civil society, and other business chambers.

Following the general definition of organized political action, it follows that this study is limited to the study of formally organized groups of entrepreneurs, with objectives, strategies, and resources to achieve objectives. From this point of view, there are two types of business organizations that meet these characteristics: business chambers and business associations. Business chambers are legal entities that represent companies in a single economic sector of society. Business organizations, moreover, can be formed by a group of business chambers or companies from different sectors of the economy. It should be mentioned that business organizations also include public organizations assigned to defend the interests of the private sector with public funds, such as the Costa Rican Coalition of Development Initiatives (CINDE), the Costa Rican Foreign Trade Promoter (Procomer), and the Ministry of Foreign Trade (COMEX) (Vázquez, 2009).

In Costa Rica, the official employers' organization representative is the UCCAEP, but there are other business chambers – such as the Chamber of Industries, the Chamber of Commerce, the Costa Rican-German Chamber of Commerce, the Chamber of Tourism, and the Chamber of Free Trade Zones – which have played a role in the configuration of power relations and, specifically, in the construction of the TVET system.

“Configuration” refers to an intellectual exercise that integrates political action, the subjectivities that guide those actions, and the social structures that intervene in some way in both actions and subjectivities. Thus, the configuration of this organized action at the political level, of associations and business chambers, around Costa Rican TVET is what guides this research.

The following auxiliary questions help answer the main research question:

- Which specific business groups have expressed organized political action around TVET in Costa Rica since 1980?
- What goals, objectives, and meanings do these groups believe the TVET system in Costa Rica to have?
- What concrete actions have these business groups undertaken to try to achieve their goals and objectives around TVET?

1.5 Outline

The thesis consists of nine chapters, which have the following structure:

The first chapter presents the problem and the research question in detail, as well as the background and scientific justification of the research. This study’s problematization process is understood as the theorization of the empirical elements surrounding its object of study

(Zemelman, 2021). This chapter also explains why the study of entrepreneurs and the formal organization of enterprises is socially and scientifically relevant for the development of TVET structures.

The second chapter presents the results of the literature review. Its introduction describes how TVET research in Costa Rica is organized. In its second part, the reader will learn about the research conducted in relation to the research topic thus far, specifically about how the topic of enterprises and entrepreneurs has been addressed in the literature in Costa Rica.

The third chapter presents the historical background of the research. This part consists of a description of the social, economic, political, and educational structures that characterize the historical development of the TVET system from 1821 to 1980. This chapter is important because it allows the reader to understand the economic, educational, and political ruptures that occurred before and after 1980 in Costa Rica.

The fourth chapter describes the organization of the TVET system in Costa Rica. The reader will learn, in general terms, how TVET is organized in Costa Rica, including its levels of trainings and main institutions and foundations.

The fifth chapter deals with the organization of Costa Rica's business park. It describes the enterprises, their sizes, and their contribution to overall employment in Costa Rica. It also describes how enterprises are organized at the political level.

The sixth chapter presents epistemological bases of the study's research. It describes and explains the theoretical foundations of configurationism through the conceptual development of categories such as structure, organized political action, and subjectivity (De la Garza, 2018). The central objective of this theoretical chapter is to provide the foundations to explain how business groups have endowed their organized political actions with meaning in order to influence the modernization or reform of the Costa Rican TVET system.

The seventh chapter presents the research's methodology. Here, the fundamentals of qualitative research within the analytical framework of configurationism are detailed. This chapter describes the study subjects, as well as the semi-structured interviews that were applied to these subjects.

The eighth chapter presents the results of the research. The presentation of the results is organized in three parts, following the configurationist logic. First, the results of the socio-productive configuration that explains the historical framework of the political participation of businessmen are presented; then, the configuration of the political action of business

organizations for the modernization of TVET is presented; and finally, the results of the subjective configuration of business organizations around TVET since 1980 are presented.

The ninth chapter presents the research's main conclusions. This chapter is composed of three sections: The first presents the most important conclusions, the second presents the theoretical and methodological developments, and the third presents future research projects.

2 Literature Review

Chapter 2 is organized in 3 sections. Section 2.1 describes the approach for conducting the literature review. Section 2.2 describes, in a very general way, how TVET research is organized in Costa Rica. Finally, Section 2.3 presents the results of the literature review on the research topic.

2.1 Approach

In order to elaborate the bibliographic review, in my study, I relied on online scientific databases for different university libraries, as well as international institutional databases of organizations such as the International Labour Organization (ILO), the United Nations Educational, Scientific and Cultural Organization (UNESCO), BIBB, the German Office for International Cooperation in Vocational Education and Training (GOVET), the Organization for Economic Cooperation and Development (OECD), and the Organization of Ibero-American States (OEI). In addition, databases of specialized journals in the field of sociology of work, sociology of education and research on TVET were reviewed. I visited the libraries of the five public universities in Costa Rica (UCR, UNA, UNED, TEC and UTN) and their available virtual repositories. I also consulted the databases of the NGOs involved in TVET in Costa Rica, the Konrad Adenauer Stiftung and the Friedrich Ebert Stiftung. A total of 70 publications (articles, books) related to TVET and entrepreneurial studies in Costa Rica were reviewed (see Annex 1).

It is important to mention that the search codes for these studies were in Spanish, English, and German. Most of the literature on TVET in Costa Rica and Latin America is in Spanish and, to a lesser extent, in English. The literature on empirical cases and theoretical reflections is abundant in English. In German, there is also abundant literature focusing on European studies or the German-speaking region.

Two results are important to mention: First, there is no research that relates business organizations in the field of TVET in Costa Rica from the point of view of their political participation; and second, scientific approaches to the study of business organizations are limited to contributions from the sociology of work, business anthropology, history, and economics, and that discussion is dominated by functionalist, structuralist, and positivist approaches to the role of the firm in society and in TVET.

For example, much of the latest research conceives of the business-TVET relationship with a logic of supply and demand or cost and benefit. According to these approaches, the TVET system must adapt to the needs of the labor market, so the role of companies is to be able to

communicate and facilitate information that institutions require to improve educational offerings.

Research from the sociology of work and anthropology situates employers in the development of the educational system in a peripheral way, indicating a dissociation between economic and educational systems. Historically, most research has focused on the family relationships of political and economic power groups. In this case, entrepreneurs are studied in isolation from other social relationships (Vázquez, 2009), and there has not yet been an approach that critically situates entrepreneurs as active subjects in the development of the TVET system in Costa Rica.

2.2 Institutionalization of TVET research in Costa Rica

This section describes the state and development of research on TVET in Costa Rica with the objective of finding out where scientific production is located and what lines of research have been developed in the last four decades. First, the study identifies national and international organizations and institutions in charge of or linked to TVET in the country, then identifying the scientific and academic institutions – national or international – that study TVET in Costa Rica are (see Table 1). The international organizations OECD, ILO, OEI, and UNESCO have played a central role in studying the TVET system of Costa Rica. On the other hand, scientific articles on Costa Rican TVET were found in various education and social and economic science journals. Subsequently, the different lines of research, theoretical and methodological positions, as well as the main discussions in the field of technical education and vocational training in Costa Rica are presented.

Specifically, I reviewed the databases of the following TVET institutions.

Table 1 Organizations consulted related to TVET research in Costa Rica

Institution	Type	Relationship to TVET research
Ministry of Public Education	Public institution	Databases. Directorate of technical education
National Institute of Apprenticeship	Public institution	Databases. Business diagnostics
University of Costa Rica	Public university	Educational journal and institute for research in education
National University of Costa Rica	Public university	Educational journal and education faculty
State Distance University of Costa Rica	Public university	Educational journal

Institution	Type	Relationship to TVET research
National Technical University	Public university	Scientific journal, pedagogical training center
National Council of Rectors	Public university	Educational reports and national databases
International Labor Organization/ Inter-American Center for the Development of Knowledge in Vocational Education and Training}	UN Specialized Agency	TVET magazine, educational reports, labor studies, experts, and tripartite political actor
Organization for Economic Cooperation and Development	International organization	Educational reports, labor studies
United Nations Educational, Scientific and Cultural Organization	International organization	TVET reports in Costa Rica
Organization of Ibero-American States for Education, Science and Culture	International organization	TVET reports in Costa Rica
Friedrich Ebert Stiftung	Nongovernmental organization	TVET reports in Costa Rica
Konrad Adenauer Stiftung	Nongovernmental organization	TVET Reports in Costa Rica
Academia Centroamerica	Private research center	TVET Reports in Costa Rica

Source: Author's elaboration

One of the most relevant results obtained is that, with the exception of TEC, public universities (UNED, UCR, UNA and UTN) have faculties of education with important and recognized scientific trajectories, but have not ventured into research in the specific field of TVET. Most research thus far has been carried out within the framework of graduation projects (mostly at the bachelor's and master's level), and few respond to research projects, programs, or chairs. Only from 2016 onwards have the UTN and the UCR begun to be interested in the possibility of “institutionalizing” TVET research.

Another result obtained is that the institutions belonging to nonformal education (INA) and the upper secondary technical level (MEP) have research departments dedicated to TVET, but these are reduced to research on the enterprises' qualification needs. Institutional statistics departments sometimes conduct studies on enrollment, graduates, and other quantitative variables.

In Costa Rica, the sources of information on TVET research are scattered, and there is no specialized entity at the national level that investigates systematizes and publishes research on TVET. In fact, the interviews revealed that this is one of the major problems hindering political decision-making on TVET in Costa Rica. The director of the Department of Technical Education, the Minister of Labor, the general manager of INA, the director of the academic unit of CONARE, and the rector of UTN all firmly believe that TVET research in Costa Rica should be institutionalized. Despite this shared opinion, there are no proposals for the creation of a national institute for TVET research, and efforts to this end remain scattered.

Although an attempt was made in 1998 to create a national TVET⁶ system with scientific research as one of its main objectives, there is currently no national research center or institute responsible for national studies, such as BIBB in Germany. This does not allow for the establishment of a national vision of the problems of TVET.

CONARE, through its State of the Nation Program, makes annual reports on the status of the country in different areas like economic, social, environmental, educational, and the quality of democracy, but in the educational field, it does not always describe the advances or problems in the field of TVET. Moreover, they do not provide specialized reports, but rather very general ones.

It was also impossible to identify the existence of a specialized scientific journal in the field of TVET, though specialized articles on TVET were found in journals of education or social sciences in general.

Currently, the single organization for TVET of national and integrative character is the National Qualifications Framework (NQF), which creates national qualification standards so that all institutions and companies can have a common minimum guide of qualifications in certain economic sectors. However, the commissions that are part of the NQF do not carry out scientific research, but only conduct studies on qualification needs with companies and experts.

Moreover, after the adoption of the dual vocational training law in 2019, the mechanisms for formal and institutionalized investigation were not established either.

After presenting this general overview of the organization of TVET in Costa Rica, it must be said that the literature analyzed was very scattered and in small quantities. In general terms, there is no research linking TVET and entrepreneurs, but rather research focusing on entrepreneurial studies and different approaches to TVET.

⁶ “National Integrated System of Technical Education for Competitiveness” (SINETEC)

2.3 Results of literature review

The literature review was done by identifying three main lines of research. The first question posed was: What are the main lines of research or scientific reflection that has been done in Costa Rica in the field of TVET? The second is: How has the study of the entrepreneur and enterprises been approached in the scientific literature in Costa Rica? The third question, always a central question, was: What role of enterprises and entrepreneurs in TVET studies has been discussed?

First, the results of the approach to companies in the scientific literature will be described. Research on firms and entrepreneurs in Costa Rica has been approached from at least two points of view: on the family constitution of economic elites (Fernández & Liuch, 2015) and the political grouping of firms in economic policy. In Costa Rica, contributions from the sociology of labor, history, and economics have predominated in describing these two perspectives. Much of the research carried out focuses mainly on the study of the relationship between companies and the state in the process of productive transformation in the neoliberal era in Costa Rica.

As can be seen in Table 2, research on companies and entrepreneurs has been present in a variety of forms and theoretical perspectives. Of the 25 publications found on the subject, ten were written from the discipline of history, and at the beginning of the twentieth century, much emphasis was placed on the relations and inheritance of political and economic power with the Spanish colony. After the civil war of 1948, historians and economists trained in foreign universities and the first generations of graduates of the UCR (as in Costa Rica there was no university until 1940) began to study the period of rearrangement of political and business forces since the liberal era. Subsequently, sociology began to pose research problems with Marxist inspiration, especially Gramscian, interpreting the role of the state and business from the need for expansion of capitalism and social conflict for the control of land and the state. At least five investigations were found using this perspective.

It could be said that after 1980, political scientists, economists, and sociologists became concerned with different topics on entrepreneurship, assigning it new social roles from new perspectives. Political science entered discussions on democracy, institutional change, and party politics after the entry into crisis of the welfare state. Economists studied the main trends focused on the path of the economic model (trade liberalization) and the type of entrepreneurs leading this change in certain sectors. Sociologists focused on understanding dynamics of inequality, conflict, and political power provoked after the reorganization of political parties, business groups, and the new context of capitalist expansion, which was led by entrepreneurs. These would be the main lines of research that were found, which are presented below:

Table 2 Objects, disciplines, and research approaches identified

Objects of study	Disciplines	Theories/approaches
Colonial heritage and political and economic power	History, anthropology	Functionalists, critical theory
Family relations and economic and political power	History	Functionalists, critical theory
Political power and economic power	Sociology	Functionalists, critical theory
Business discourses and development models	Sociology, economics, political science	Discourse theories, social narratives, hermeneutics
Business, industrial and employment policies	Economics and sociology	Functionalists, legal institutionalisms
Power blocs and social conflict	Sociology and history	Critical theory
Social actors and educational development	Anthropology, sociology, educational sciences	Functionalists, institutionalisms, and critical theory
State reform and business groups	Sociology, economics, political science and history	Critical theory, hermeneutics, institutionalisms, and functionalists
Institutional change and Business organizations	Sociology, economics, political science, and history	Hermeneutics, institutionalisms, and functionalists

Source: Author

These studies are quite divergent in terms of the results obtained, but they are useful for this research in understanding the concepts and methods used to study this relationship. Of note are the works of Arias-Sanchez (1987) with the book “Grupos de presión en Costa Rica”⁷. In this book, the author analyzes the historical conformation of new pressure groups in the political

⁷ Author’s translation : Pressure groups in Costa Rica

and economic life of Costa Rica as a result of social reorganization since the postcolonial era: one of the pressure groups identified are the “professional groups” as a product of a growing process of labor specialization (workers, professionals etc.). It is interesting how the professional groups and the changes in the world of work in Costa Rica in the 1960s become part of this new group that pressures the political actors in search of their own interests. Stone (1976), with the book “La dinastía de los conquistadores”⁸, focuses on the parental relationships between actors who dominate the sphere of political power from its colonial roots.

Blanco (2011) makes a study of business articulation in liberal politics; Arias (2019) and Robles & Cárdenas (2021) study how business interests have penetrated national politics. Álvarez-Garro (2014) focuses on the idea of human welfare and neoliberalism in Costa Rica; Esquivel (2013) focuses on the “social question” and is concerned with the impact on poverty and inequality; Raventós Vorst (1995) studies transitions and the role of the state in the era of structural adjustment. An essential concept for the present research is provided by Blanco (2011) and Vázquez Rodríguez (2009), when they speak of “business corporatization of public policies” in Costa Rica through the influence of business chambers on the boards of directors. These studies show an articulation between business chambers and the elaboration of public policies (economic, social, cultural, et cetera.).

As mentioned above, scientific production in the field of TVET has not been prolific in Costa Rica; however, there are some texts that have been useful in framing the historical development of TVET. However, the book titled *El Aprendizaje de los Oficios en Costa Rica, Visión Histórica* (Apprenticeships in Costa Rica, Historical Overview⁹) by Carlos Luís Fallas Monge (1986), is central to the research because it fundamentally describes the development of vocational training and the role those small enterprises played in this process since the postcolonial era. The author describes how the first groups of artisan workers were established in Costa Rica as forms of protecting the profession (Fallas, 1986, p. 86). The author states that in January 1874, the first Society of Artisans was organized in the city of San José, a mutualist association directed by the priest Dr. Francisco Calvo. In 1889, the Society of Arts and Crafts of San José was established. In 1890, the Society of Craftsmen of Cartago, the Guild of Painters, the Guild of Tailors, and the Guild of Carpenters were founded. The mutual society¹⁰ of the last quarter of the nineteenth century did not arise by official provision of the state, as in the case

⁸ Author’s translation : The dynasty of the conquistadors

⁹ Author’s translation

¹⁰ On mutual societies I recommend the article by Keith Branding (1986). Mutual societies and the concept of mutuality: past, present and future.

of the guild corporation, but by the will of the workers, with the idea of finding protection and help among their fellow workers' trade or profession. (Fallas, 1986, p. 87).

The Crafts and Trades Workshop was fundamental in developing and improving different trades as well as in creating the possibility of learning new occupations. It also aimed to train new generations of artisans, generally made up of children and relatives of associates who had learned the trade practiced by their parents or by immigrants who settled in Costa Rica (Fallas, 1986, p. 88). The objective of business participation was to consolidate a guild of workers with the capacity to perpetuate the profession over time. The transfer and teaching of skills to new apprentices was essential to achieve that goal. This research is important because it shows how employers acted in the workplace to transfer professional skills to new professional staff between 1821 and 1950. The work skills were based on non-institutionalized processes but responded to the needs of the time. Moreover, as Molina (2011, pp. 136-140¹¹) points out, apprenticeships also helped increase literacy processes, since school attendance among children at that time was not high. The impact of apprenticeships went beyond helping to perpetuate the profession but was a very important form of social integration.

Alvarado and Mora (2020) give a historical account of the development of technical education in Costa Rica between 1950 and 2014, focusing on the development of public policies associated with Technical Education and managing to make clear the institutional behavior since the founding of the first technical schools in Costa Rica. They describe the milestones that have marked the structure and functions of technical education in Costa Rica. Their research does not delve into the company-educational institution relationship, however, and therefore leaves out a good part of the process of shaping technical education in Costa Rica, such as the participation of the business sector.

Alvarado and Mora's research presents two elements that, from my perspective, do not correspond to Costa Rican reality. In the first place, the authors start from Luhmann's systemic conception, according to which systems are related to other systems in a logical and orderly manner, that is, the conception of reality they present is that of an organized totality, formed by elements that mutually support each other. Each element of the system determines another subsystem (Alvarado and Mora 2022, pp. 4-9). From a critical stance, social structures do not always "have to" function in an orderly or communicative way. Constant social conflicts such as those that have occurred since the 1970s create structural ruptures that do not rely on the idea of autopoiesis. Secondly, changes in the structures of the TVET system as well as curricular

¹¹ Some data show that on average, less than half of the population knew how to sign between 1770-1850. The author acknowledges several problems in collecting data to establish who could read and write.

and pedagogical transformations cannot be explained without considering the contexts and structures to which these changes respond. In this sense, businesses' motives, actions, and logics play an important role which is not present in the research. It is thus necessary to understand the processes, ruptures, and the ways in which labor and technological relations interact with institutions, in a conflictive, distant, and sometimes close-knit manner.

In 2011, the first national report on the State of Technical Vocational Education and Training in Costa Rica was published (Guzmán, 2011). In terms of content, the report focused on the progress and challenges of TVET, including the increase in TVET enrollment in practically all TVET institutions, as well as challenges that emerged due to the lack of coordination between educational offers and the needs of the market. The report left aside the role or participation of the different actors in TVET, including entrepreneurs. The results presented a problem of supply and demand, that is, a problem between what "the labor market" requires and what the institutions offer. However, the description and characterization of "that labor market" is also left aside and through what criteria what the labor market requires is identified.

In this sense, this type of report continued to reproduce the binary logic between supply and demand without specifying the business groups that constitute what is imprecisely called the "labor market" and the criteria that indicate the gap between supply and demand. The term "labor market" is imprecise insofar as the constitution of the Costa Rican labor market is heterogeneous, diverse, and very complex. It responds to very diverse productive dynamics in sectors such as tourism, services, industry, agriculture, and more, and the report did not adequately consider the global economic dynamics that impact the creation of new jobs as well as the ways in which the offer of technical careers is designed.

In 2006, the Ministry of Education approved changing the competency-based curriculum model.

In 2006, Technical Education undergoes a change at the level of the curricular model, namely: The Higher Education Council approved the Competency Standards Based Education Model (EBNC) proposed by the MEP, with the objective not only to meet the comprehensive training requirements of students, but also the needs for their subsequent participation in the productive sectors. (MEP, 2014, p. 259).

There is a decent amount of research that takes up this important event, analyzing some particularities of the curricular change based on competencies and its implications for the productive sectors. In this sense, Villalta (2015, pp. 8-10) indicates that because of the change towards the Educational Model Based on Competency Standards (EBNC), the relationship between the DETCE and the productive sectors has been reconceptualized. Now, the

Department of Business and Community Relation is responsible for making a “strong” relationship between the productive sector and the MEP to develop competency-based curricula and thus improve the problems of labor market insertion of young people and improve the provision of new workers. This point is essential because a new educational policy would reconfigure the relationship with the productive sectors, generating different communication and dialogue processes.

A book by Frank Mittmann titled *Educación dual en Costa Rica 1996-1999* (2001), which systematized the process and results of the first dual apprenticeships pilot project implemented in Costa Rica between 1993 and 1997, stands out. This book is important because it offers the first reflective effort on the development of dual TVET in the automotive sector in Costa Rica as a product of a series of political and business agreements in the early 1990s. Moreover, it describes in detail the involvement of the automotive business sector in the training of students in technical secondary education (MEP) and non-formal vocational education (INA).

A few years after Mittmann published the results and reflections of the pilot plan, a text by Araya titled *La formación dual y su fundamentación curricular*¹² (2008) appeared, which analyzed the curricular foundations of dual apprenticeships in Costa Rica. Araya establishes the work/learning relationship as the guiding principle of the curricular transformation, but is uncritical in terms of understanding the historical and cultural factors and conditions (business-institutional-legal), and the structure (economic and productive) that would precede the implementation of a dual apprenticeships system in Costa Rica.

Works of Carvajal (2015); Westenberger (2016); Láscarez (2017); Grein (2018), and Venegas (2019) focus on the study regarding the possibilities of implementing dual apprenticeships in Costa Rica. Both Westenberger and Grein analyze the conditions for implementing dual apprenticeships from the perspective of the main TVET stakeholders. These two papers are important because they analyze the Costa Rican situation in the context of the German experience, shedding light on the discursive perspectives of these actors. Láscarez (2017) analyzes the viability of education from a historical framework and from the structural conditions of TVET. In addition, the author conducted a hypothetical study of the cost/benefit ratio for companies that could participate in a dual apprenticeships model suited to some Costa Rican characteristics. This study was supported by the Federal Institute for Vocational Education and Training and the German Costa Rican Chamber of Commerce (AHK). One of the conclusions from this study by Láscarez (2017) is that business groups expressed different

¹² “Dual apprenticeships and its curricular foundations” Translated by author.

motivations for participating (or not participating) in a dual apprenticeships system, such as business competitiveness, decreasing unemployment, and corporate social responsibility. However, the question of financing the training system caused the most concerns among the business groups, due to the legal framework that made costs more expensive for companies (Láscarez 2017, pp. 30-88).

Venegas (2019) and Carvajal (2015) analyze, from a legal perspective, the possible consequences of dual apprenticeships in Costa Rica. Especially relevant is the work of Carvajal (2015, p. 16), because it focuses on the tax benefits for companies participating in dual apprenticeships in Costa Rica. The legal-economic perspective (cost-benefit ratio) seems to be one most considered when talking about the participation of business groups in TVET, but, as will be evidenced below, “rationalist” approaches are not sufficient to explain the participation of business groups in TVET in Costa Rica.

The Institute for Research in Education (INIE) of the University of Costa Rica (UCR) has ventured into the topic of TVET with the project “Linking Education and Labor Markets: Under what conditions can Technical Vocational Education and Training improve the income of youth?”, a product of cooperation with The Swiss Federal Institute of Technology Zurich (ETH), Switzerland. Within the framework of this project, a research report stands out, one in which different formal and non-formal programs are analyzed as well as different TVET institutions in Costa Rica (Camacho; García; Kemper; Maldonado & Vargas, 2019). The project also generated important analyses regarding the participation of companies in the construction and design of dual apprenticeship curricula, for example:

Overall, TVET programs in Costa Rica often lack the active involvement of the business sector in training- from the design of curricula to the application of knowledge. Currently, in-company training is partly prevented through regulations that make training unprofitable to the firm, such as high minimum wages companies have to pay if they employ students as workers (see for example the “Finance” section of chapter 4.2.5). The responsible ministries also realized that integrating the business sector is important for successful TVET programs. As a result, actors from the Ministry of Public Education, Ministry of Labor, the INA, and the National Insurance Institute (the “Alliance for Employment and Productive Development”) elaborated a draft for a “dual apprenticeships decree”, which was approved after an extensive process of negotiation on August 5, 2019¹⁸. This is a promising step towards a better integration of the business sector in TVET in Costa Rica (Camacho; García; Kemper; Maldonado & Vargas 2019, p. 37)

As indicated in the above quote, the issue of “integration” between the TVET system and the employment system is a constant concern in projects and research. The question remains: Namely, what “integration” means in the context of the political participation of enterprises in TVET?

It is important to mention that since May 2021, Costa Rica has been part of the OECD, which involves a series of important processes in different social, economic, and educational fields. Several evaluations were conducted on the state of Costa Rican education, allowing for different analyses on the state and development of the TVET system in Costa Rica. These reports have been highly useful in understanding the institutional policy framework (OECD standards) for implementing certain reforms of state and education systems.

Costa Rica began the application process in 2012 and was officially invited to start its accession process to become a full member of the OECD in 2015. Thereafter, the country entered a complex and rigorous evaluation process in which Costa Rica's willingness and ability to comply with the standards and best practices promoted by the OECD is examined. (Loría & Martínez, 2018).

The main results on the TVET study can be found in OECD (2017):

Costa Rica lacks the kind of dedicated vocational upper secondary colleges that are found in many OECD and other countries colleges which can become a focus for technical specialism and excellence, employer engagement and work-based learning opportunities – while also postponing the choice of target career until the upper secondary level. Instead, in Costa Rica, most technical schools are largely academic institutions since they include grades 6-9 as well as the upper secondary grades where all students pursue the Bachillerato. Second, Costa Rica has failed to develop and bring to scale the shorter post-secondary professional programmes of between six months and two years that provide a large portion of required professional training in many OECD, and indeed Latin American countries (OECD 2017, p. 28)

In turn, a study by Álvarez-Galván (2015) makes a series of recommendations and concrete actions, summarized in the following table:

Table 3 Summary of the recommendations made by the OECD to improve the TVET system in Costa Rica, 2015

Recommendations	Actions
Improve the labor market responsiveness of the system	<ul style="list-style-type: none"> • Make workplace learning mandatory and quality assured for both MEP and INA provision • Allow MEP technical and vocational schools and INA training units more flexibility to adapt programs to local needs • Ensure a mix of provisions that reflects the needs of the labor market and is also balanced with student preferences
Develop an apprenticeship system	<ul style="list-style-type: none"> • Costa Rica should use new legislation to pilot and develop an apprenticeship system, developing it carefully to take account of international experience and the need to fully involve and engage social partners
Enhance the quality and effectiveness of VET teaching	<ul style="list-style-type: none"> • Improve the professional development of TVET teachers, with attention to the updating of industry knowledge and experience as well as pedagogical training • Harmonize MEP and INA teacher qualification requirements to facilitate interchange and tackle supply constraints • Develop partnerships for teachers to spend time in industry and for industry practitioners to teach in VET
Improve coordination in the system	<ul style="list-style-type: none"> • Engage social partners more fully and improve coordination through a national body with overall responsibility for the vocational system • Explore the creation of a National Qualifications Framework to clarify study paths and qualification levels • Through these two measures, and in other ways, substantially improve articulation between vocational programs and tertiary education

Source: Author's elaboration based on information from Álvarez-Galván (2015).

The perspectives indicated by the OECD are more related to the distance between TVET institutions and the employer sectors. At the same time, they highlight the problem of coordination and logic between the INA and the MEP in terms of objectives and functions.

3 Historical context: the genesis of the TVET system in Costa Rica

This chapter analyzes the social conditions that influenced the development of Costa Rican TVET structures. In particular, this analysis is oriented toward understanding the emergence of Costa Rican TVET institutions and entrepreneurial culture from a historical point of view. This is an analytical approach to the historical constitution of the object of study.

This historical contextualization is divided into two historical stages based on the works of Pérez Brignoli (1983), Vargas (2005), Villasuso (2000) and Díaz (2005). The first part addresses the postcolonial period between 1821 and 1948, when Costa Rica was founded and built as a nation, and why this stage constitutes the prelude to the emergence of TVET institutions. The second period goes from 1949 to 1980, and is called the period of the welfare state, the entrepreneurial state because of the economic strategy implemented based on the import substitution industrialization model. This period precludes the political-educational processes that define the objectives, functions, organization, and form of the main TVET institutions today, as well as the participation of business groups around TVET after 1980.

It is important to note that this contextualization is essential in understanding what happens with the structural conditions defining the subjectivity and actions of businesses after 1980, because after the crisis of the welfare state, new business and political groups emerged with a new project for TVET in Costa Rica.

3.1 The postcolonial era and the construction of the nation-state 1821 to 1949

Costa Rica's educational history is intimately associated with colonial and postcolonial history, for example, the structure of Costa Rica's educational system is the product of the political transformations that have occurred fundamentally since the Bourbon Reforms in the 18th century.

Under Philip and his son and successor Ferdinand VI (1746 to 1759), Spanish reformers attempted to curb smuggling, curtail the power of the Church, modernize state finances, establish firmer political control within the empire, end the sale of bureaucratic appointments, and fill the depleted royal coffers. Behind many of these crown initiatives was the drive to reverse the damaging effect of trade concessions awarded to Great Britain at Utrecht and to limit both contraband and the influence of foreign merchants supplying goods for the legal trade through Seville and, later, Cádiz. (Kuethe and Andrien 2014, p. 3).

It could be said that the first educational expansion occurred through the Cadiz Constitution of 1812 (as part of the Bourbon Reforms), which established the economic, political, and social

principles outlined by the Spanish Bourbon kings in the 18th century (Jackson, 2022). Then, from the time of emancipation from Spain, the Costa Rican state began an important process of consolidation as a nation-state through the construction of national identity and the urgent sense of a need to develop means of production to enter the world economy. One of the most important features of the Cadiz Constitution was the establishment of primary schools in the national territory, as well as the philosophical basis for the establishment of “arts and crafts schools” that from 1960, would shape the modern TVET system in Costa Rica (Molina 2009, p. 125).

The liberalization of education formed part of this process of construction of identities and social structures, beginning in the 19th century until 1950. This phase consisted of a political, ideological, and social process that reduced the power of religious influence in educational processes, which remained heavily influenced by the Spanish bases and groups inherited from the old colonial regime (Molina, 2013).

The development of Costa Rican productive forces can be explained and understood from the processes of insertion of the (incipient-rudimentary) local economy into the global capitalist economy, starting in 1821, when the first coffee exports to Europe began (Lindo-Fuentes 1993; Hall 1978; Casey 1979; Bulmer-Thomas 2003). From that moment on, Costa Rica gradually established specific economic, social, and political priorities, such as national credit reserves to finance the national bourgeoisie, the legitimacy of the state to represent economic groups and traditional colonial elites, especially coffee and agricultural elites (Parada, Arias & Vargas, 2019), the development of a peasant and valley-centric culture, and the creation of entrepreneurial organizational forms based on small, subsistence agricultural production for the majority of the population.

Molina (2014, p. 3) interestingly describes the peasantry and the technology that dominated the era: Indeed, the peasantry was not economically homogeneous. The base of the social pyramid was made up of impoverished peasants, with reduced and precarious access to land. The situation of the middle peasant was not so difficult: Although he was not rich, he owned more land, better agricultural implements, and had animals at his disposal. The top of the hierarchy was occupied by the wealthy farmers, who possessed extensive areas of land and enough cattle, combining subsistence farming and commercial agriculture.

The period between 1821 to 1850 corresponded to the beginning of the transition to the new economic and social system, which was consolidated between 1850 and 1890 and began to diversify between 1890 to 1914 (Molina 2014, p. 13). The expansion of coffee, which formed

the basis of early agro-export capitalism, at the same time entailed a global transformation of the economic and social structure that had been initiated by the colony.

The country experienced significant social and economic impacts (especially due to the impact on exports to Europe) due to the First World War and the Great Depression of 1929. Subsequently, the Second World War dealt a severe blow to world economies, including the Central American and Costa Rican regional economies. The economic crisis worsened, the cost of living increased, international price fluctuations continued, and Costa Rica experienced shortages of basic commodities.

These international events – and the effects felt since 1910 to 1930 – had the political and economic consequence of initiating the process of import substitution in national production with a manufacturing base, to avoid dependence on trade relations with the United States and Europe. During the 1930s, popular worker-artisan movements developed and strengthened, such as the dock workers, agricultural workers, and the Communist Party in Congress. Faced with the progressive impoverishment of large masses of peasants and workers, the government of 1940 to 1944 proposed implementing a reformist program aimed at alleviating the dire situation of the workers and peasants. However, it is precisely the process of political reforms that would produce a strong social conflict, with an alliance of intellectual sectors and communist groups positioned against the traditional elites, who saw a threat to their class interests in these social and economic reforms.

The instability of the government created the need to form alliances between sectors, and the government sought the support of the Catholic Church¹³, the Communist Party, and organized labor sectors. The alliance produced changes in state actions related to social reforms, controlling the reproduction of the labor force and the enactment of laws to protect workers.

Finally, this period was characterized by colonial elites' attempt to insert themselves into the dynamics of world capitalism, especially in the United States and Europe (in the United Kingdom and Germany in particular). Until they were displaced by new bourgeois groups with industrial interests, medium or highly skilled labor was not a priority for the oligarchic elites of colonial lineage. This displacement occurred during the civil war of 1948, when tensions between liberals¹⁴ and traditional agro-exporting elites defined a path in which the Costa Rican

¹³ In Costa Rica, the Catholic Church inspired and supported the reformism of the forties; once the project was consecrated, its presence became secondary (Pérez Brignoli, 1983, p. 12).

¹⁴ The impact of the Costa Rican liberal movement was based on a broad vision of society, not just an economic one. On the contrary, the impact of the liberal struggles at the beginning of the 20th century defined much of the educational foundations and critical thinking in society.

economy would begin to diversify export products, albeit ones always based on the extraction of natural resources, such as coffee, bananas, and pineapple, among other products (Parada; Arias & Benavides 2019, pp. 1-5)¹⁵.

3.1.1 The Incipient Forms of TVET and Business Organization in Costa Rica

The beginning of agrarian capitalism in Costa Rica constituted a complex economic life with serious repercussions on business organization: Business associations began to form, but the figure of the individual merchant, who traded wholesale and retail, remained the predominant entrepreneurial figure. The formation of economic agricultural, livestock, and mining companies augured a deepening in the division and specialization of labor and the emergence of a new type of wealth: social capital (Molina 2014, p. 20). What was the profile of the worker at that time? In the beginning, it was a peasant worker with subsistence production, who was gradually dispossessed of his land. While the coffee exporting agroindustry grew, the peasant – who was already landless and vulnerable to unfavorable trade-offs – had to sell his labor to become an agricultural laborer, that is, the role of the wage laborer grew as coffee agriculture became increasingly specialized.

As Molina (2014, p. 14) recounts, immigration of South American, Mexican, Italian, German, and English traders began to play an important role in the creation of trade networks and informal formation processes.

As a parallel phenomenon, Quesada (2005, pp. 13-15) mentions that by 1870, under an economic development model based on coffee and banana production, the educational system did not fully coincide with the needs of the agro-export model. In 1877, the School of Arts and Crafts had to be created to prepare students for employment in carpentry and metallurgy. Quesada writes that the aim was to imbue a practical perspective to certain educational processes, following the model of the United States.

The actions carried out in the field of technical education in this historical period, according to López, Viquez & Ávila (2001, pp. 59-60) are:

¹⁵ Albarracín & Brignoli (1977) present a very detailed descriptive study on Costa Rica's foreign trade statistics 1907-1946.

Table 2 Main developments in the structure of the TVET system in Costa Rica between 1821 to 1949

Year	Action
1883	Proposal to create a school of agriculture, mechanical arts and trades
1887	The Liceo de Costa Rica is opened, with two years of preparatory courses, four years of high school, and three years of special courses, such as agriculture and Master of Works.
1889	Construction of the Central American Agricultural School begins
1908	The Salesian School of Arts and Crafts of Cartago begins its first formal attempt to provide Vocational Education
1912	Agricultural education is now provided in all schools in the country, with the collaboration of the Secretaría de Fomento
1915	Agricultural and Industrial Education is taught as part of teacher training at the Costa Rican Normal School.
1916	Approval of the curricula of the School of Agriculture
1918	Graduation of Costa Rica's first agricultural experts
1926	Agreement to create the National School of Agriculture
1940	Systematic start of vocational education in Costa Rica (but until 1957, the legal framework is developed through the Fundamental Education Law N: 2160).
1941	Creation of the School of Arts and Crafts in Alajuela – however, this does not become operational
1944	The media begins to discuss the need and urgency of technically preparing workers
1948	Creation of the Industrial Training School, sponsored by the Chamber of Industries. Its study programs are based on company needs
1949	Establishment of a school-workshop for bootblacks, an idea of Monsignor Sanabria because he was interested in the development of Vocational Education

Source: López, Víquez & Ávila (2001, pp. 59-60).

Costa Rica was characterized by an important agricultural sector that served as the main engine of economic and social development. The agricultural sector absorbed most of the labor force, reaching 55% of the economically active population. The production of the main products, such as coffee and bananas, contributed more than 40% of the GDP and accounted for almost 90% of exports. In addition, the agricultural sector generated most fiscal revenues. However, the almost exclusive dependence on these two primary products (coffee and bananas) made the national economy increasingly vulnerable to external fluctuations. Academic institutions did not exist until 1900, and the constitution of the labor force was rudimentary, consisting of low-level technological advancement, as workers sought qualifications through informal training processes. Here, the entrepreneur is poorly organized in professional guilds and a subsistence economy.

To summarize this historical stage, the following can be concluded:

The colonial inheritance (1821 to 1870) left a weak technological structure of the labor force at the beginning of the postcolonial period, when Costa Rica first began its insertion in global capitalism. This process of capitalist insertion was dominated by the agro-exporting bourgeoisie, who converted the old dynamics of economic subsistence into wage-earning forms of agricultural labor. At the same time, merchants were increasingly associated with foreign trade. After 1870, with the agro-export development of coffee and bananas, there was an increased concern regarding the training of the labor force. In an incipient and rudimentary form, professional education ideas and projects were promoted by the state, guided by the agro-exporting bourgeoisie. However, institutional advances were practically nonexistent. Workers continued to acquire skills through informal (community) learning.

3.2 The Entrepreneurial State, Industrialization, and the Emergence of TVET Institutions (1949 to 1980)

After the civil war of 1948, the political forces were completely reconfigured, and new political parties were created (the Communist Party was prohibited until 1972). A new era in the history of Costa Rica's social and economic development began, as a strong industrialization process emerged under the import substitution model. During this period, many important institutions in the provision of basic services for the population were created, and an important advance in the legal and regulatory development of general education, technical education, and vocational training institutions such as the MEP, the INA and the TEC took place.

The economic policy of import substitution was designed to prevent the import of goods that the country itself could produce for local consumption. The main problem to be solved was the dependence on imports of intermediate consumption and technology, which, logically,

worsened the terms of trade for Costa Rica. This type of industrialization based on import substitution required the control of financial capital, which is why one of the most important actions for consolidating the state-entrepreneur was nationalizing banks (Brenes, 1990, p. 19). This bank nationalization was part of the programs for economic transformation as a whole and began during the 18 months of the government junta under the Figueres Ferrer administration in 1953. Brenes (1990) provides a masterful analysis of the political and social context of bank nationalization and its impact on Costa Rican history.

In contrast to the previous period (1821 to 1949), marked by very rudimentary attempts at insertion into global capitalism, this period of development, based on the state-entrepreneur and the attempts at economic consolidation, featured strong state intervention in the development of a national-industrial base that would allow Costa Rica to achieve high average levels of development, at least in comparison with other Central and Latin American countries.

The subjects carrying this project forward were so-called “entrepreneurs-politicians” (Alvarado 1981). They composed the group of entrepreneurs who sought to adapt local conditions for a more efficient form of capitalist insertion and accumulation. In other words, they were entrepreneurs who played the role of politicians in the sense of the common good, of social welfare inspired by the principles of a welfare state. Now, as politicians, they sought to generate conditions of welfare and development based on the subjective perspectives of agro-export and regional, market-oriented small- and medium-sized corporations. As this study indicates, business-politicians controlled the state apparatus to maintain the population’s general conditions of reproduction and social control (Alvarado 1981, p. 103).

Because of this process of industrialization, banking nationalization, and state modernization described above, the vision, goals, and objectives for Costa Rican TVET began to be institutionalized, since “entrepreneurs-politicians” noticed an urgent need to form a well-qualified labor force, with access to credit and the creation of companies with government capital. Thus, most of the labor force was left in the hands of the state, as well as spatial and urban planning, water and electricity supply, transportation, and industrial waste management, among many other strategic issues for the country's development.

The central goals of this new state model were greater state involvement in national savings and national financial capital, and the creation of state functions through new institutions (health, education, the construction of public works, and the provision of public services, such as electricity and water). The business sector promoted its mode of capital accumulation using the national banking system, which allowed the rise and consolidation of a Costa Rican business class. In simpler words, banking allowed the financing of the projects of the bourgeois classes

in Costa Rica, but also the development of high quality of life standards for a good part of the population.

3.2.1 The Emergence of TVET Structures

In the educational sphere, the INA, TEC, university colleges, para-university colleges, and the technical colleges of the MEP began to be more relevant because of industry and services developments.

The Ministry of Public Education (MEP) was created in 1949 within the framework of the new political constitution (after the events described in the civil war of 1948). Although it had existed since 1868 under the name “Secretaría de Instrucción Pública”, it was not until 1949 (and specifically in 1951) that the legal framework for public education was created through the highest body in charge of the main decisions regarding education in Costa Rica: the Consejo Superior de Educación (Higher Council of Education). The origin of Technical Professional Education is established in the Fundamental Law of Education No. 2298, Art 17, of November 22, 1958.

Moreover, the National Apprenticeship Institute (INA) was founded on May 21, 1965. INA is the governing body of professional training in Costa Rica. The Tecnológico de Costa Rica (TEC) is an autonomous national institution of higher education dedicated to teaching, research, and extension of technology and related sciences for the development of Costa Rica. It was created by Law No. 4,777 of June 10, 1971.

The actions carried out in the field of technical education in this historical period, according to López, Víquez & Ávila (2001, pp. 60-61) are:

Table 2 Main developments in the structure of the TVET system in Costa Rica between 1953 to 1978

Year	Action
1953	Creation of the Heredia School of Arts and Crafts
1955	Official vocational education begins as an attempt by the public and ecclesiastical sectors to order and provide professional training for young people with limited resources. TVET Universalization throughout the country
1957	The Monseñor Sanabria School is made official. This is the first technical school in Costa Rica
1958	The fundamental law of Education gives legal content to the beginning of Technical Professional Education (law N. 2298): “Vocational education shall be offered to those who wish to pursue careers of a vocational or professional nature”

Year	Action
1958	Initiation of functions of the Vocational College of Golfito; creation of another vocational school in Alajuela and Limón is defined
1960	Effective opening of the Alajuela Agricultural College, proposed to create other technical colleges in different areas of the country
1961	Beginning of operations of the school in Abangares, which would be the first agricultural school in Costa Rica
1962 - 1971	Opening of several very important technical colleges and technical schools throughout the country, in Palmar Norte, San Carlos, Orotina, Siquirres, and Tarraú, among others. New commercial careers are also being opened. For example, commercial courses begin to be taught at the Colegio Vocacional de Artes y Oficios (Vocational College of Arts and Crafts)
1973	The document “Plan Nacional de Desarrollo Educativo de 1973” (National Plan of Educational Development of 1973) is established, in which basic guidelines to deepen the preparation aspects of intermediate-level professional activity are established, without neglecting the indispensable knowledge required to continue in higher education
1972 - 1977	Creation of 38 agricultural technical training institutes and 7 industrial technical training institutes. These were later transformed into professional technical institutes
1976	Thanks to an agreement between the Governments of Spain and Costa Rica, creation of the Center for Research and Improvement for Technical Education (CIPET). In 2008, CIPET became the CFPTE of the National Technical University (UTN). In 1976, of the 872 specialty teachers working in technical schools, only 197 were properly trained to teach (2001, p.147)
1977	Creation of three agricultural technical training institutes

Source: Author’s elaboration based on data from López, Viquez & Ávila (2001, pp. 60-61).

3.2.2 Crisis of the import substitution model and the beginning of the formation of the transnational entrepreneur

In the face of accelerated population growth, new social and economic needs, and the penetration of capitalist forms of production in agriculture, the state-entrepreneur model soon began to show serious deficiencies.

The rapid transnational intervention in Costa Rica's economy exacerbated the country’s fiscal crisis, due to the (insufficient) amount of money the state had to invest in social projects and the external dynamics of the market. Faced with a deficit, the only thing left to do was to go into debt both internally and externally. The demand for labor was not sufficient in relation to supply, causing a considerable increase in the unemployed and underemployed population. It

is unsurprising that the years between 1960 and 1970 witnessed the first large population of precarious workers in Costa Rica.

In this time, social problems were deepening. Some political groups feared the collapse of the national bank, and inflationary problems persisted throughout Latin America. All this brought one of the pillars of the development of the welfare state into scrutiny: bank nationalization.

By the early 1950s, problems with inflation and payment balances generated fears that import substitution industrialization had a limit. The 1955 reorientation was more important than elsewhere, as it involved a major stabilization effort and a commitment to more market-oriented policies (Villasuso, 2000).

The increase in poverty and unemployment in these years led to an intensification of national indebtedness. To counteract these consequences, the last government associated with the welfare state (Figueres-Ferrer government '70 to '74) limited itself to making adjustments to the model that had been promoted in terms of the labor force's physical production and social peace. For this reason, the slogan of this last government was "fight against extreme poverty" (Esquivel, Freddy, 2008, pp 19-20). To combat extreme poverty, the Instituto Mixto de Ayuda Social (IMAS) was created, with the objective of reducing poverty and suffering. President Figueres, in the same way and with the same objective, created the Family Allowance Program to reduce inequality and poverty.

The transition away from this system properly began with the culmination of a model that faced internal and external economic and social problems¹⁶. The crisis of the welfare state was further compounded by the deterioration of the terms of trade and the international oil crisis of 1978. The solution: Between 1974 and 1975, the foundations of the new development model, based on fiscal austerity and liberalization-privatization policies, were introduced.

By 1974 to 1975, the prices required by monopoly capital to maintain profitable rates led to a crisis of overproduction in which capital (in the form of commodities) was hindered from being transformed into capital in the form of money. This led to a decrease in the rate of accumulation (Alvarado 1981, p. 31).

As a result of the crises, Costa Rica experienced a change in the absolute and relative increase of productive public investment. The state, which invested in infrastructure, aimed to divert its capital to other activities in the hope of obtaining profits and accumulating as much capital as possible.

¹⁶ In 1975 Costa Rica experienced a GDP growth of only 2.1%.

This change of objective necessarily entailed a restructuring of the state apparatus. Financial, fiscal, and monetary aspects were modified, curbing the budget for social policies.

If the model of industrialization through import substitution was dominated by a caste of *entrepreneurs-politicians*, the new caste that was emerging because of the fiscal crisis and the growth of poverty was the *politicians-entrepreneurs*. As an analytical category, the term “politician-entrepreneur” represents a group of politicians convinced by neoliberal ideas and linked to agro-export and new industrial structures, who sought power in order to act not as *politicians* (who would manage public goods for the common good) but as *entrepreneurs*, that is, who would pursue profit via political power (Alvarado 1981, p. 31).

This new historical group emerged with the proposal to change the perspective of the previous elite group that developed in the era of the welfare state: the “entrepreneurs-politicians” who were small and medium producers and who promoted the model of industrialization by import substitution that in the mid-70s would enter into crisis. The main objective of this new economic group (“politician-entrepreneur”) was not necessarily to possess private property or the means of production, but to increase capital by controlling public investment. In other words, state officials who fulfilled the function of entrepreneurs pursued their own economic and social interests in the country’s development. Another important characteristic of politicians-entrepreneurs was that they favored penetrating transnational companies and thus were able to link the state's public resources to the multinational company's capital.

The points on which this group had to fight cannot be ignored in the time in which the politicians-entrepreneurs took power (1974 to 1978). It was necessary to both fight against inflation and stimulate production and new areas of productive investment for which private investment was sought. Above all, the main objective was to avoid economic recession.

However, the conditions for reproducing the labor force were affected with the penetration and growth of transnational corporations, together with social policies that tended to privilege the middle classes. Discontent produced the uprising of popular movements, such as those of peasants and urban workers, educators, and students. The housing deficit grew, water continued to be scarce in large communities, and garbage collection services failed. There were strikes in neighborhoods, communal demonstrations, and popular movements that involved unions. Important struggles, such as the one in 1970 against the multinational Aluminum Company of America (ALCOA) (Cerdas, 2017) and the strike that took place in ICE in 1976, together with the crisis of 1975, influenced the dynamics of social and union movements, which became livelier (Solís, 2002).

At the same time, due to the significant increase of foreign debt, and with effects of the international oil crisis, the country received a lot of pressure from international organizations like the International Monetary Fund and the World Bank to take urgent actions and modernize the state. It is precisely at this moment – as was found in the interviews with TVET actors – that discourse on “modernization” of TVET institutions began to emerge.

Specifically speaking, in the period 1950 to 1980, the Developmentalist Model, the Costa Rican State had a very active role within the economy, with an interventionist development model with which it dominated many sectors of the economy, including replacing the private sector (Vargas-Solis 2015, pp. 1-2).

When the Central American Common Market (CACM) was created in 1962, its early development as a customs union was not the fortuitous result of market action or the change in the allocation of resources caused by changes in the relative prices of goods or factors of production. Instead, its development was due to deliberate policies and the conscious action of the Costa Rican state. Indeed, from 1965 to 1973, industry grew at an average annual rate of 9.4%, increasing its share of GDP from 16% to almost 20% in those years. This higher production reflected in an increase in labor force employment. Thus, industry, which in 1963 absorbed 12% of total formal employment, exceeded 15% in 1978. The high growth rates in public employment led the state to increase its share from 6% in 1950 to 19% in 1983. (Villasuso 2000, p. 7).

The industrialization process required a more qualified labor force and increased state participation through the development of TVET institutions. This resulted in an increase of the percentage of salaried workers and in the increase of qualification needs.

To summarize this historical stage, the following conclusions can be made:

Since Costa Rica joined the Central American Common Market (CACM), the the internationalization of capital intensified under the influence of U.S. foreign policy (Gallardo, 2021). However, entry into the CACM at first failed to adhere to the laws of the world market, due to circumstances which generally corresponded to the deterioration of the social conditions of capitalist accumulation and the deterioration and impoverishment of the working class due to inflation. Difficulties in balancing payments reflected an imbalance in the face of average national productivity and internationalization. However, the institutional development (not only of TVET), was remarkable and unprecedented in Costa Rica's history. The creation of a national industrial base, together with an entrepreneurial culture dominated by entrepreneur-politicians between 1950 to 1978, made possible the development of a TVET educational infrastructure that could supply the industrial and commercial labor market. This period saw the establishment

of the first public universities, technical-agricultural colleges, para-university institutes, university colleges, and the creation of the National Apprenticeship Institute.

4 Characteristics of the current TVET system in Costa Rica

The following chapter describes the structure of the Costa Rican educational system, emphasizing the structure, organization, and objectives of TVET institutions. It discusses the concept of TVET used in Costa Rica and then goes on to describe the levels of qualification that exist in the country.

4.1 The TVET concept in Costa Rica

The use of the concept of Technical Education and Vocational Training is relatively new in Costa Rica and has lent itself to confusion and ambiguity in defining the roles and functions of institutions that train for work.

Historically, “Educación Técnica” (“technical education”) has been used in Spanish to refer to training for work in the formal system, with “Formación Profesional” (“vocational training”) to refer to training for work in the non-formal system. This suggests that, in Costa Rica, the difference between the formal and non-formal systems has indeed been strongly delineated. Regarding the structure of TVET and the training of workers in the formal¹⁷ and non-formal¹⁸ system in Costa Rica, Álvarez-Galván (2015, p. 18) indicates that:

The formation of technical workers in Costa Rica takes place in two ways. The first is the Technical Vocational Education offered by the Ministry of Public Education (MEP), which forms part of the process to obtain the diploma in secondary education and includes theoretical and practical training in a technical field. Graduates of this program obtain a diploma as a middle level technician. The second way is the so-called non-formal training

¹⁷ Formal education is institutionalized, intentional, and planned through public organizations and recognized private bodies, and in their totality constitute the formal education system of a country. Formal education programs are thus recognized as such by the relevant national education or equivalent authorities, e.g., any other institution in cooperation with the national or sub-national education authorities. Formal education consists mostly of initial education. Vocational education, special needs education, and some parts of adult education are often recognized as being part of the formal education system (UNESCO 2012, p. 11)

¹⁸ Non-formal education is institutionalized, intentional, and planned by an education provider. The defining characteristic of non-formal education is that it is an addition, alternative, and/or complement to formal education within the process of individuals’ lifelong learning. It is often offered to guarantee the right of access to education for all. It caters to people of all ages, but does not necessarily apply a continuous pathway structure; it may be short in duration and/or low-intensity; and it is typically provided in the form of short courses, workshops, or seminars. Non-formal education mostly leads to qualifications that are not recognized as formal or equivalent to formal qualifications by the relevant national or sub-national education authorities or to no qualifications at all (UNESCO; 2012, p. 11).

option, which is provided by the National Apprenticeship Institute (INA) and to a lesser extent by private companies and organizations.

It is not known with certainty when the term TVET began to be used to refer to these two parts of the TVET system, but in the last decade, the term has appeared increasingly often and is currently consolidated in official public policy documents. Still, it must be said that in the Fundamental Law of Apprenticeships (1957)¹⁹, there is no concrete definition for TVET, only a definition for technical education in the formal system.

In most current official documents (including laws and regulations), the concept of TVET appears in a standardized form. For example, in Article 4 of the Dual Apprenticeships Act 2019, TVET is defined as “a part of education that deals with imparting knowledge and skills or abilities for the world of work”.

The Costa Rican National Qualification Framework uses the definition given by UNESCO (UNESCO, 2015, p. 2): “Technical vocational education and training (TVET) is that part of education concerned with imparting knowledge and skills or abilities for the world of work”.

In Costa Rica, TVET is defined as education that develops skills and knowledge for the world of work, taking place in upper secondary education, non-formal education, and technical higher education. For this reason, when mentioning the TVET system in Costa Rica, it refers to the role of the MEP, the INA, the UTN, the TEC and other training institutions that offer vocational training programs²⁰.

In any case, in practice, there is still a marked difference between the two systems – formal and non-formal – in terms of objectives, financing, learning orientations, reputation, and interests on the part of different social actors.

For example, the formal TVET system is designed to ensure an education with general knowledge and specialized knowledge for a specific profession. In its curriculum, the learning orientation is school-based²¹. Non-formal education, however, is about training for work, and its curricular flexibility allows apprentices to carry out work-based learning processes, or at

¹⁹ Law 2160 of 1957

²⁰ Although in other countries, such as Germany, economic and political actors are usually included in the definition of the TVET "system", in Costa Rica these actors appear as external to the system. Currently, the intention is to build a system that includes a broader conception of "system" where employers, unions, political actors, etc. are included.

²¹ The students stay from 7:00 a.m. to 4:00 p.m. at the vocational training institution every day learning general knowledge plus the vocational part.

least to spend more learning time in companies because apprentices do not have to take basic subjects (such as mathematics, biology, Spanish, chemistry, and so on).

Another important difference between the formal and non-formal system is their financing structure and employers' expectations. Since the non-formal public system (INA) is financed, in part, by employers, and since it is a work-based learning system, the employers expect the INA to meet their qualification and training needs more directly. This issue is being developed more in the political field, manifested by the attempts to institutionally reform of the INA, which business groups have successfully promoted over the last ten years.

4.2 The Costa Rican educational system

As the educational system developed, two important characteristics were created that would define the direction and design of educational structures: on the one hand, the public-private character of education, and on the other, the formal and non-formal character of education.

The Political Constitution of Costa Rica establishes in Article 78 that “Preschool, general basic, and diversified education are compulsory and, in the public system, free and financed by the nation”. However, despite the public education system established in 1876 and constitutionally in 1949, Costa Rica has developed quite strong private education structures at all educational levels.

The eighth State of Education report (Mata; Oviedo; Trejos 2021, pp.12-13) indicates that:

Globally and for 2018, 16% of students attend private centers on average, but with large variations by educational level. In general education, about 9% of students attend private or semi-private centers. This percentage is higher at the preschool level (15%) given the lower coverage of public education at this level, but drops to less than 10% of students in primary and secondary education. On the other hand, in higher education (university and para-university), the presence of private centers becomes important, serving 46% of students at this level.

At this point, it is important to recognize how private education has played an increasingly relevant role within the Costa Rican educational system, given that families tend to invest more and more money in this type of education (Mata; Oviedo; Trejos, 2021). For example, in 2019, the CANAEP (National Chamber of Private Education) was created to represent the growing number of private education institutions in Costa Rica.

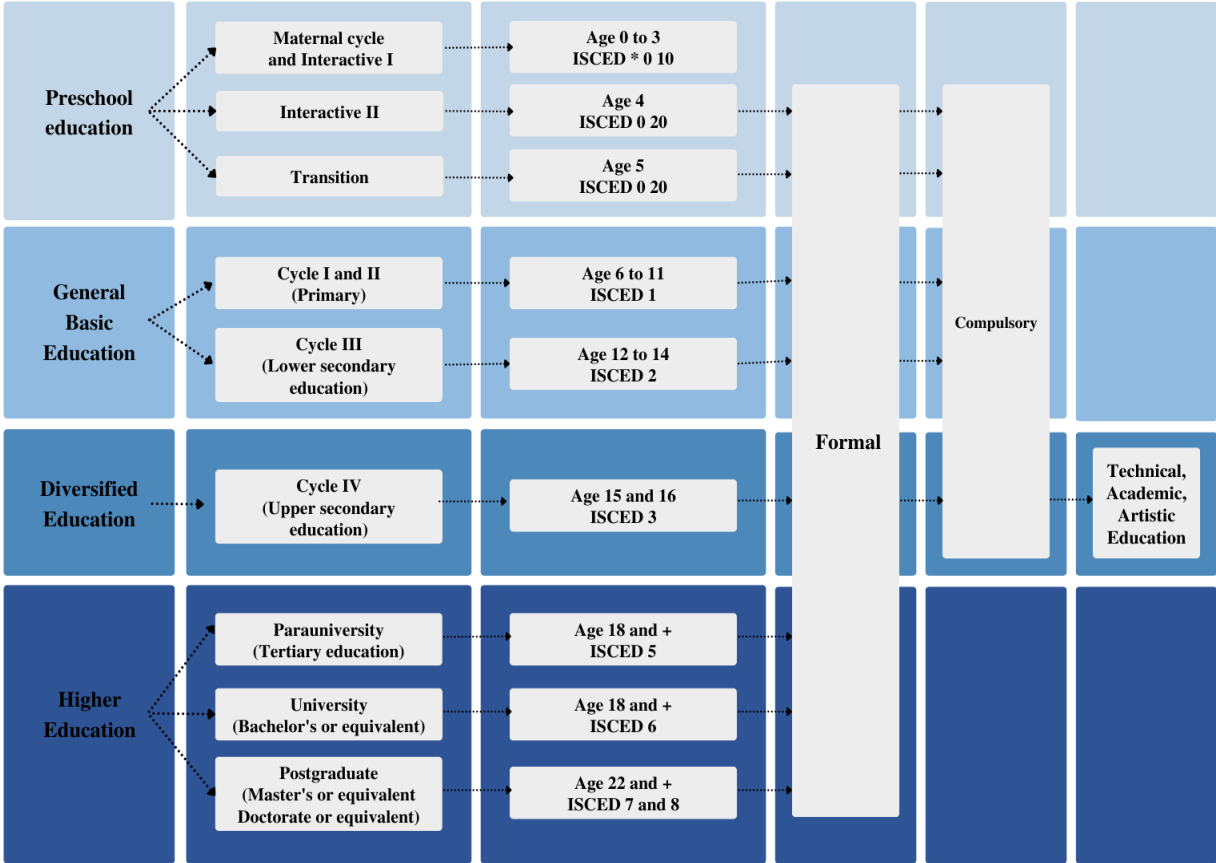
However, the impact of this phenomenon on TVET remains unclear. It is known that for secondary technical education represented by the MEP in 2017, there were 223 technical educational services, of which two private schools offered technical careers (MEP, 2018, p.

3²²), but in the non-formal part, which is represented publicly by the INA, the private offer is much broader. However, there is no data on private enrollment in non-formal training.

In formal higher technical education – represented by the UTN and the TEC – it is known that the educational offer is composed by about 50% of para-university institutes and private universities. For example, for 2019, 26 private para-university institutions offering 112 technical careers were reported (Marco Nacional de Cualificaciones, 2018, p. 21). Another important fact is that Costa Rica has five public universities and 56 private universities, so it is estimated that 50% of the supply of technical careers is located in the private education sector (National Qualifications Framework 2018, p. 28).

According to Art. 7 of the Fundamental Law of Education, the Costa Rican education system has the following structure, without integrating the non-formal system (INA):

Figure 1 Educational levels structure in Costa Rica

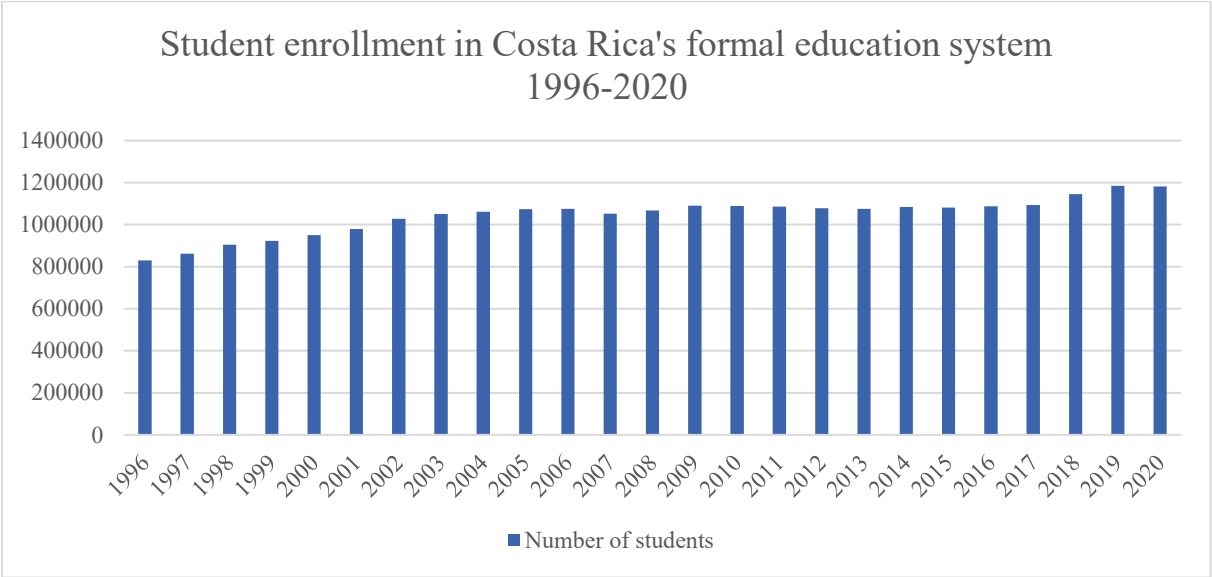


Source: Author’s elaboration

²² https://www.mep.go.cr/indicadores_edu/BOLETINES/09_18.pdf

As can be seen in Figure 2²³, in 1996, there were 830,636 students enrolled in the formal system, ranging from preschool to university. Ten years later, in 2006, the number grew to 1,075,827 students and in 2020, the number of students enrolled was 1,182,299.

Figure 2 Student enrollment in Costa Rica's formal education system 1996 to 2020



Source: PEN with data from MEP, Department of Statistical Analysis (author's translation).

The following is a description of the different educational levels that make up Costa Rica's educational system.

4.2.1 Preschool education

According to Fernández (2016, p. 6), this is the formative cycle prior to compulsory primary²⁴ education. Traditionally, it is not considered part of the school process, and therefore it was called preschool (before primary school). However, in Costa Rica, preschool education is compulsory. This means that compulsory education in Costa Rica begins at the age of four. New pedagogical currents refer to this as initial education or early education, including it within the educational process. In Costa Rica, preschool education is divided into two educational cycles: the “Maternal and Infant Cycle”, and the “Transition Cycle”.

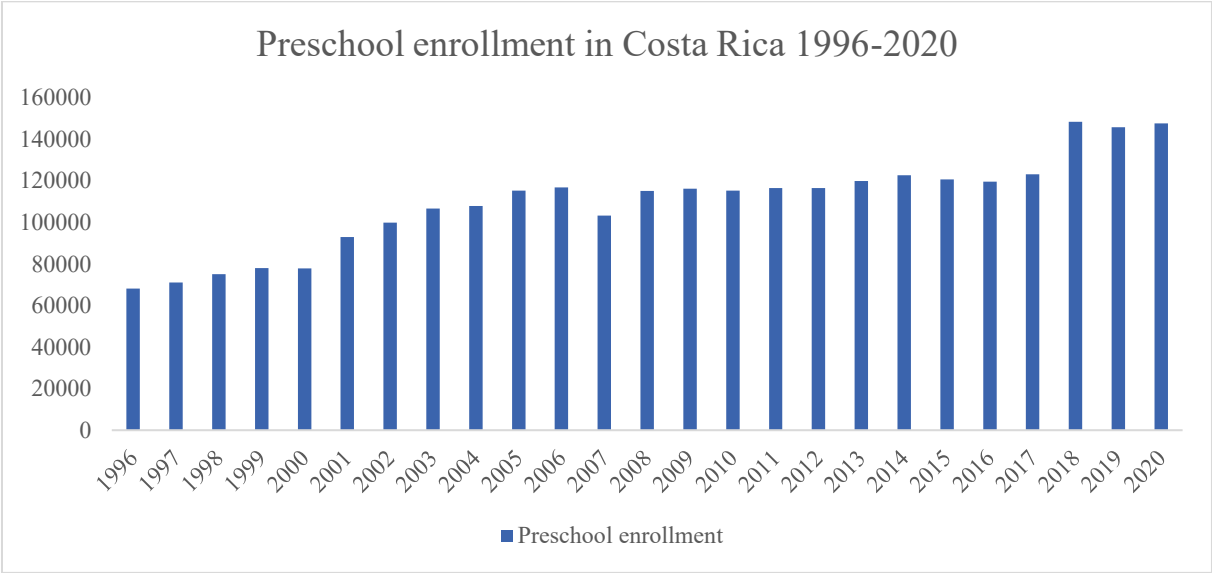
The Maternal and Infant Cycle, or the first cycle of preschool education, includes the care of infants from birth to five years and three months of age. It is divided into the following stages: Maternal, Interactive I, and Interactive II.

²³ No data available between 1980 and 1995

²⁴ In 1997, preschool education was declared mandatory by Law No. 7676.

The Transition Cycle, or the second cycle of preschool education, includes the care of infants from five years and three months of age to six years and three months of age. This cycle directly precedes primary education.

Figure 3 Pre-school annual enrollment in Costa Rica*



Source: PEN with data from MEP, Department of Statistical Analysis (author's translation).

* Here we do not differentiate between the enrollment of the Maternal Cycle and the Transition Cycle, but rather establish the preschool enrollment cumulatively.

In the 1980s, the coverage of the Transition Cycle of Preschool Education continued to expand, from 42% of 5-year-olds in 1980 to 60% in 1989. In 2008, the highest gross coverage rate of the Transition Cycle in the history of the country was reached – this was an enrollment of 95.5%. From this year onwards, however, it began to decrease, even dropping to 89% in 2013 and 2014. This is due to both an increase in the estimated 5-year-old population (from 70,839 in 2008 to 75,808 in 2014) and a stagnation in the enrollment of the Transition Cycle (from 67,662 students in 2008 and 67,712 in 2014), even though the number of preschool education institutions increased from 2,755 in 2008 to 2,888 in 2014, of which 2,510 were public (Fernández, 2016, p.53). In 2016, 82.3% of 5-year-old children were attending preschool educational institutions (SITEAL 2019).

4.2.2 General Basic Education (I, II, and III cycle)

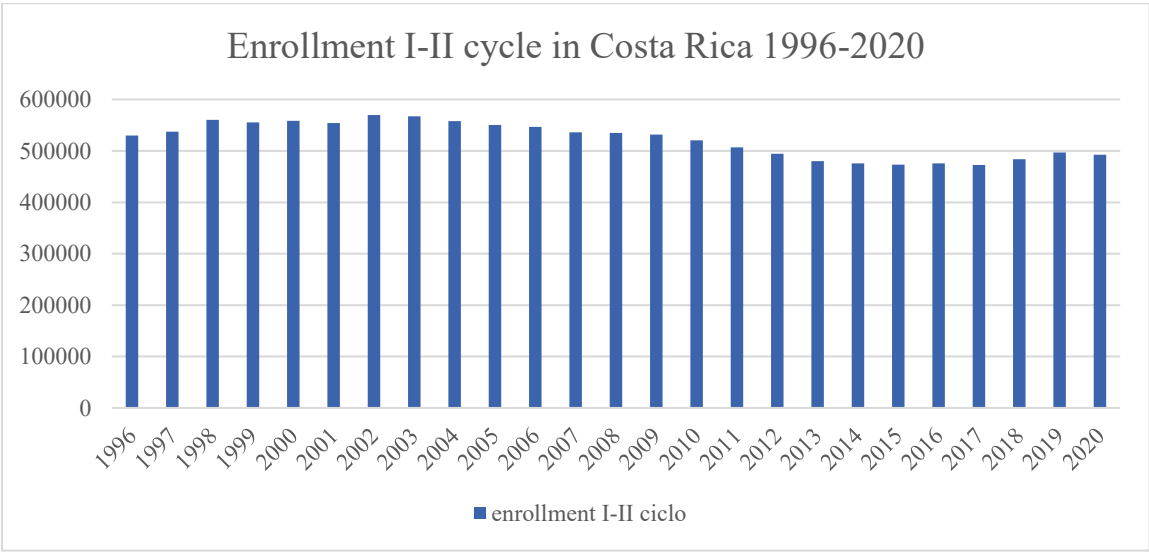
General basic education in Costa Rica consists of three cycles. In the UNESCO classification of education systems, the first and second cycles correspond to the primary level (ISCED 1), and the third cycle to the lower secondary level (ISCED 2). All three cycles are compulsory.

The first cycle corresponds to the first half of primary school for children between six and eight years old; the second cycle corresponds to the second half of primary school for children

between nine and eleven years old. The III cycle is established in the first half of secondary school and is aimed at adolescents between 12 and 14 years of age.

Cycles I and II (complete primary) ensure proper literacy, that is: reading, writing, basic arithmetic, and some cultural concepts considered essential. The purpose of these two cycles is to provide all students with a common education that makes possible the development of individual motor skills, psycho-social well-being, relationships, and social performance with the acquisition of the basic cultural elements, the relative learning mentioned above.

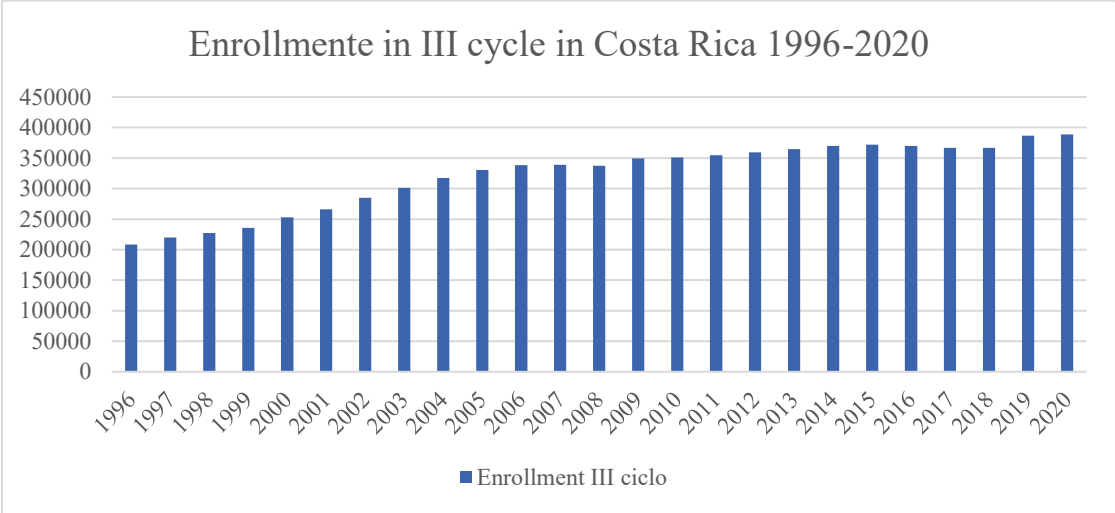
Figure 4 Enrollment in cycle I and II of general basic education in Costa Rica 1996 to 2020



Source: PEN with data from MEP, Department of Statistical Analysis (author's translation).

The objective of cycle III is to prepare the student to pursue higher education. At the end of secondary education, the student is expected to develop sufficient skills, values, and attitudes to achieve a good performance in social and academic life. To enter this cycle, students must have passed the first and second cycle. These centers serve the educational needs of students in those institutions, called “Liceos” or “Colegios,” with the purpose of providing students with the basic knowledge necessary to enable them to interpret, understand, and manage the country’s socioeconomic and cultural reality.

Figure 5 Enrollment in III cycle in Costa Rica 1996 to 2020



Source: PEN with data from MEP, Department of Statistical Analysis (author's translation).

Access to primary education is universal. In 2016, 99% of children aged six to eleven years were in school. In 2018, 94. % of 5-year-olds were attending preschool and 99.2% of children aged six to eight attended the first cycle. 99.8% of 9- to 11-year-olds attended the second cycle and 96.8% of 12- to 14-year-olds attended the third cycle, as can be seen in the following table (SITEAL 2019).

Table 3. Enrollment rates in I, II, III and IV cycles

Age	Year					
	2000	2005	2015	2016	2017	2018
5	38,4	57,5	79,5	82,4	86,5	94,8
6 - 8	95,2	98,2	98,4	98,5	98,5	99,2
9 - 11	97,8	99,2	99,8	99,6	99,7	99,8
12 - 14	85,0	91,8	96,0	97,0	97,4	96,8
15 - 17	61,4	75,5	85,4	85,6	88,0	88,0

Source: SITEAL 2019, base on EHPM del INEC

4.2.3 Diversified education: The beginnings of technical education in the formal system

Compulsory education includes a fourth cycle of “Diversified Education,” so the state finances this type of education. This is the beginning of the TVET offer in the formal part of the educational system. Diversified education is intended for adolescents aged 15 and 17. As can be seen in the table, in 2018, 88% of persons between 15 and 17 years of age were enrolled in diversified education.

“Diversified Education,” as its name indicates, seeks to offer students diverse options that tend to satisfy their educational needs and interests. Diversified Education is divided into three main branches, namely: “Academic Education,” “Technical Education²⁵,” and “Artistic Education,” which in turn are subdivided into modalities, and these into specialties.

The academic branch concludes with the awarding of the Baccalaureate degree, provided that the student passes the final Baccalaureate exams in any of the three annual examinations, a degree that entitles the student to enter higher education. The academic education curriculum includes Spanish, social studies, civic education, mathematics, physics, chemistry, biology, foreign language (English or French), visual arts, physical education, religious education, psychology, philosophy, and technology.

4.2.4 Technical Education

This modality is offered by the Ministry of Public Education (MEP), as a modality of the Diversified Cycle (IV) of secondary education. According to the Directorate of Technical Education and Entrepreneurial Skills (DETCE) of the Ministry of Public Education, “technical education” is defined as a subsystem of the formal education system. Therefore, it constitutes an effective alternative that favors incorporating men and women into the workforce and promotes a comprehensive education for students. In addition, it offers equal opportunities for equitable and nondiscriminatory access, since it offers specialties in the technical schools of the country (colegios técnicos) (Foster, 2021). For example, day programs are offered for full-time students, and night programs for students who work during the day and study at night, or who simply prefer to study at night.

As can be seen in the following table, enrollment in the day and night modalities has continued to grow, although in some years, there has been some stagnation in the night modality, which has faced setbacks in enrollment since 2005.

²⁵ Alternative: Students may pursue TVET education in formal system.

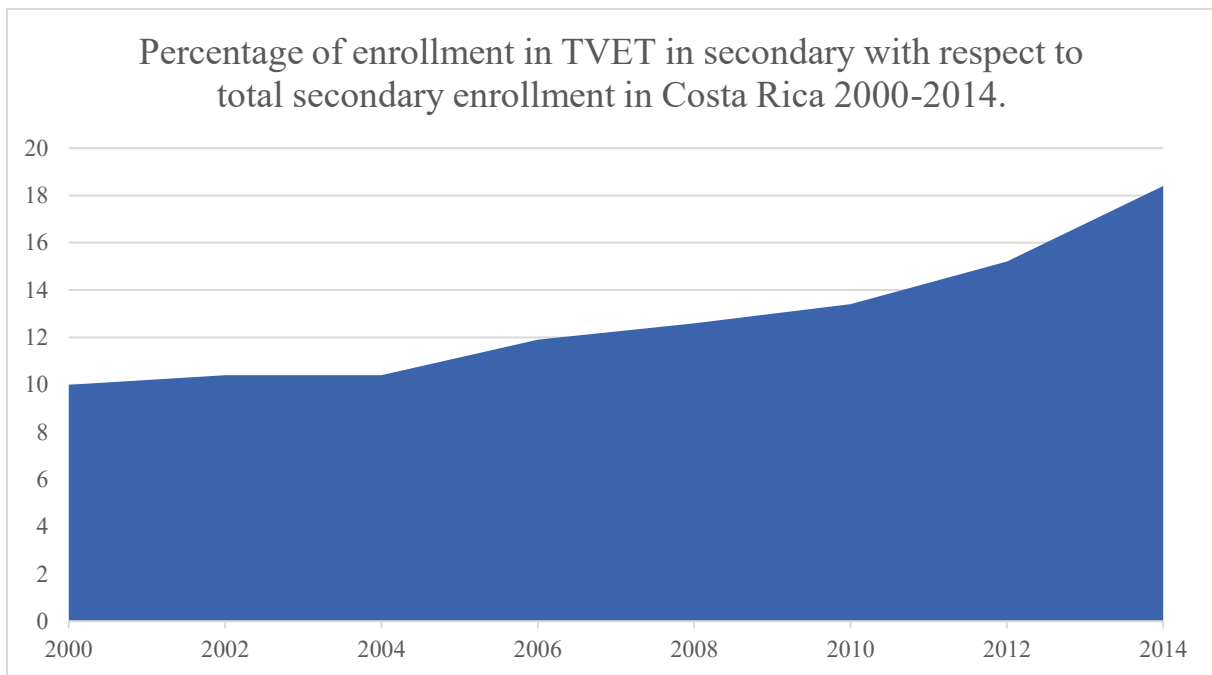
Table 4. Enrollment in technical education, day, and night modality in the period 1988-2020

Year	Enrollment	
	Daytime	Nighttime
1988	13 100	586
1989	13 903	434
1990	14 477	436
1991	15 405	413
1992	18 720	455
2005	58 592	1 287
2006	60 386	1 707
2007	62 370	1 699
2008	64 109	1498
2009	66 927	1 805
2010	67 992	2 331
2011	68 492	1 371
2012	73 408	1 282
2013	79 408	1 409
2014	85 951	1 413
2015	89 401	1 564
2016	90 235	1 640
2017	90 631	1 631
2018	92 137	1 597

Source: Author's elaboration based on MEP (2018 a/b)

The participation of MEP's technical education students has continued to grow in general terms, including day and night enrollment, over the last two decades. For example, in 2000, only 10% of the total secondary enrollment corresponded to enrollment in technical education while by 2014 it was 18%.

Figure 6 Percentage of enrollment in TVET in secondary with respect to total secondary enrollment in Costa Rica 2000 to 2014



Source: Author’s elaboration using data from the study by Fernández (2015).

This growth in enrollment has gone hand in hand with important curricular changes. As indicated (Villalta, 2015, p. 21), the Ministry of Public Education promoted an important change in the curricular structure of Technical Education when it transitioned from a traditional system to a competency-based education system. The Higher Education Council approved the Education Model Based on Competency Standards (EBNC) proposed by the MEP, with the objective of not only addressing students’ comprehensive training requirements, but also the needs for their subsequent participation in the productive sectors (MEP, 2014, p. 259).

4.2.5 Vocational Training in non-formal education

The National Apprenticeship Institute (INA) is part of the non-formal system, joined by many other institutes in charge of providing education, training, or refresher courses for different social groups. The National Apprenticeship Institute is an autonomous entity created by Law N. 3506 of May 21, 1965, and reformed by its Organic Law N. 6868 of May 6, 1983. The INA was changed after the 1983 law, until 2021, when the last reform was approved. Law 9931 was called “Strengthening vocational training for employability, social inclusion, and productivity in the face of the industrial revolution 4.0 and the employment of the future”²⁶. Its main task was to promote and develop the professional training and education of men and women in all

²⁶http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=93545

sectors of production, to boost economic development, and to contribute to the improvement of living and working conditions of the Costa Rican people through training, education, certification, and accreditation for productive, sustainable, equitable, high-quality, and competitive work.

The INA divided its vocational training program according to the needs of three productive sectors: agriculture, industry, and commerce and services. For each of these sectors, there is a specific offer of long or short training programs for either future workers or for the existing labor force. Table 5 below shows how the supply of vocational training programs has shifted. For example, it can be seen how the service, commerce and industrial sectors have grown steadily since 1965, while the supply of vocational training programs in the agricultural sector has decreased.

Table 5. Enrollment in INA by productive sectors, agriculture, commerce, service, and industry 1965 to 2020

Year	Enrollment by productive sector			
	Agro-livestock	Industrial	commerce and services	Total
1965	-	173	88	261
1975	3 808	5 895	3 902	13 605
1985	7 206	9 530	13 669	30 405
1995	12 282	31 470	29 174	72 926
2005	20 354	70 743	105 194	196 291
2015	27 343	113 546	172 387	313 276
2020	11 453	52 230	108 981	172 664

Source: Author’s elaboration with data from the National Apprenticeship Institute (2020).

Article 2 of this new reform states that the National Apprenticeship Institute (INA)’s main purpose is to promote, develop, and enhance TVET in Costa Rica through transferable skills and qualifications that strengthen the ability of people to find, maintain, and improve the conditions for quality work or entrepreneurship and business development. This purpose applies to all sectors of the economy, promoting and contributing to economic development, social inclusion, and the improvement of living and working conditions of Costa Ricans (Law 9931, article 2).

From this perspective, Vocational Training is oriented to train people with knowledge, skills, and abilities for an adequate labor performance, based on both theory and practice, giving more emphasis to the latter. According to Recommendation 150 of 1975 of the International Labor Conference, the objective of vocational training is to develop aptitudes for a productive and satisfactory work life, and, in conjunction with the different forms of education, improve aptitudes to individually and collectively understand and influence concerns about working conditions and workers' social environment (ILO, 1975).

4.2.6 Higher Technical Education

In Costa Rica, two institutions of higher education are explicitly responsible for TVET in the country: the Universidad Técnica Nacional (UTN) and the Tecnológico de Cartago (TEC). However, the supply of training programs in higher technical education is highly dispersed and is offered by three other public universities, 55 private universities, and 27 para-university institutions.

The TEC was created by Law No. 4,777 on June 10, 1971. It is an institution in charge of training workers in the technological field, which is why many of its educational offerings are in engineering. UTN is the country's first technical university and was created by the Law signed on May 14, 2008. Both institutions of higher education have had a strong presence in the development of Costa Rica's TVET policies.

As aforementioned, the TVET offer goes beyond these two universities, but also involves other public and private universities and institutions of the tertiary education sector (namely, para-universities). This group of institutions is the third group of educational institutions that play an important role in the formal and non-formal technical education supply in Costa Rica.

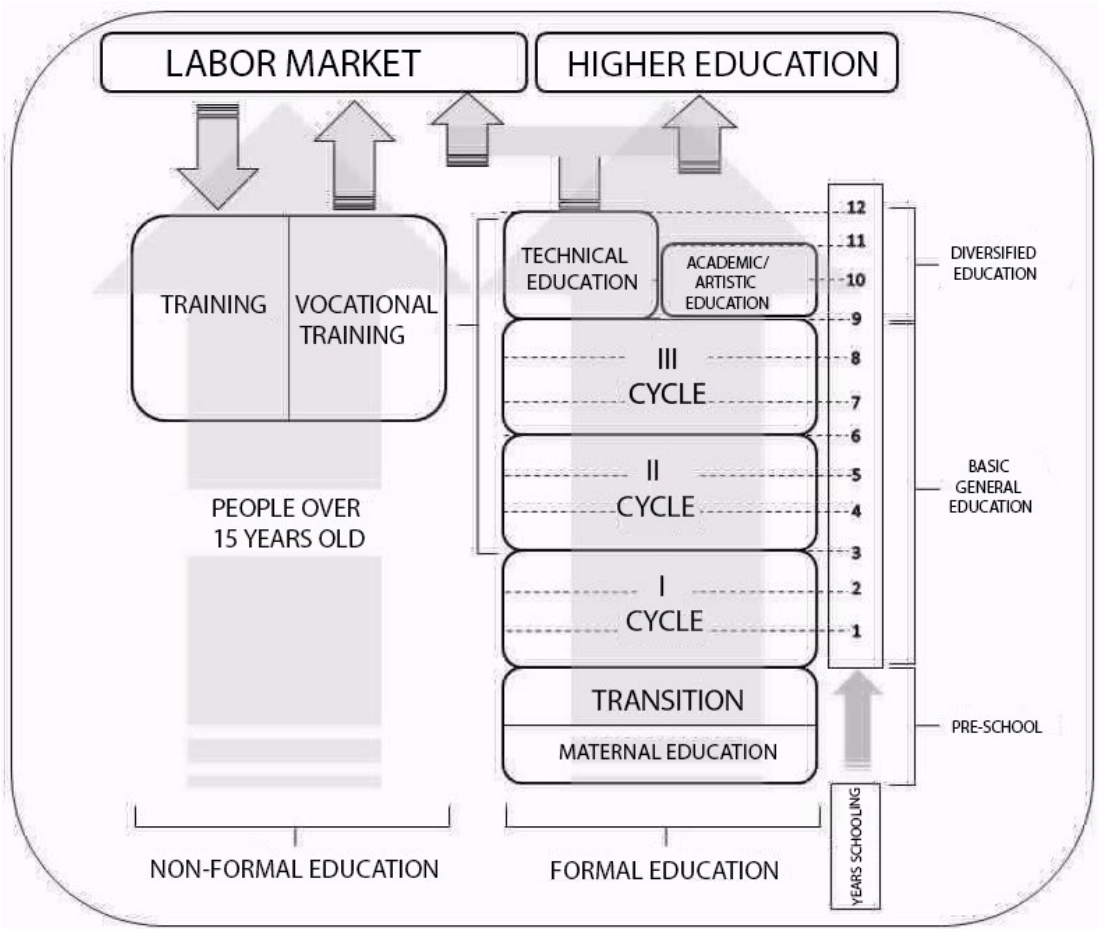
A study conducted in 2015 between CONARE and UTN (Marco Nacional de Cualificaciones de la EFTP-CR, 2018) on the supply of technical careers offered by educational institutions in Costa Rica indicates, among other things, that private universities and para-university institutions comprise 50% of the total supply of vocational training careers in Costa Rica. This indicate that not only INA and MEP are actors related to the supply of professional workers, but that the public and private university sector, as well as para-university institutions, play an important (upwards of 50%) role in the national supply of professional careers.

The representative of the UTN and the business in the National Qualifications Framework indicated that for many years there was an idea that only INA and the technical colleges of the MEP offered technical careers (I1-UCCAEP, 2021 and I12-EXPERT1, 2021). Some interviewees, working on the National Qualifications Framework, indicated that for many

years, there was an idea that only INA and the technical colleges of the MEP offered technical careers (I1-UCCAEP, 2021 and I12-EXPERT1, 2021).

With the increased emergence of private para-universities and university institutions since 2000, technical careers’ educational offerings have increased enormously, causing a disorder degree nomenclature, as well as a disorganization in the levels of qualification offered by these institutions, especially when comparing non-formal and formal programs. As one interviewee explains, in Costa Rica, it was normal for a private university to offer non-formal programs (such as those offered by INA) but with higher education degrees. These problems have been addressed by the creation of the National Qualifications Framework (I11-UTN, 2021)

Figure 7 Organization of the Costa Rican educational system. Formal and non-formal structure



Source: Author’s elaboration, based on MEP (2016)

5 Organization of the Costa Rican business sector

This section describes the composition of the Costa Rican business park. It is important to say that when one talks about business organization, one can be referring to several things: how companies are organized internally (this is the administrative and managerial perspective), how companies are legally constituted (that is: what types of companies they are) or how companies are organized among themselves to achieve goals and objectives (this means what associations, chambers, et cetera, they are involved in). This section refers to the last definition of business organization. Regarding the type of business organization in Costa Rica, the private sector is articulated through different formal and informal mechanisms. Business associations and chambers are formal expressions of business organization.

5.1 Business associations and chambers in Costa Rica

The most important business organization in Costa Rica is the Costa Rican Union of Chambers and Associations of the Private Business Sector (UCCAEP), since, on the one hand, it brings together a good part of the largest and most influential business chambers in the country, and on the other hand, it is the official employer representative before the state. UCCAEP has representatives on several boards of directors of ministries, public organizations, and institutes, including INA, for example.

It is important to note that in Costa Rica, it is not mandatory for businesses to be part of an association or a chamber. Each company decides whether or not to participate in some form of organization. According to a UCCAEP representative, because it is not obligatory for companies to belong to a chamber, there is no data on the level and form of participation of companies in chambers. This UCCAEP representative estimated that one out of every three companies belong to some type of chamber or business association (international, national, local, professional, et cetera). Unfortunately, it was not possible to obtain or construct data on membership and participation of business organizations in Costa Rica.

Although most of the important chambers are grouped in UCCAEP, many organizations throughout the country are not members. This is mainly in rural and coastal regions, where economic activities such as tourism, agriculture, and livestock farming predominate.

The specific weight of UCCAEP lies in its influence on decision-making related to the design of public policies, where intersectoral dialogue is encouraged to generate consensus and avoid conflict between parties. An example of this is the salary increase negotiation for the private sector: UCCAEP generates pressure by considering that fixing a minimum salary is the most in accordance with their interests. Also, the UCCAEP exerts influence in the mediation of free trade agreements where commercial interests are involved and, in the imposition, or exemption

of new taxes. In the field of TVET policymaking, UCCAEP has the legitimacy to officially represent the associated chambers before the State. UCCAEP is also the employer's representative before the ILO.

It is important to mention that all associations and chambers have their own dynamics and interests. Still, they all subscribe to UCCAEP with the objective of consolidating negotiating power with the state, as well as of being part of international organizations such as the Business and Industry Advisory Committee of the OECD (BIAC) and the International Organization of Employers (IOE).

At the political level, the state itself has several structures that support the formation of public business policies. First, there is the Ministry of Economy, Industry, and Commerce (MEIC), responsible for generating incentives for Costa Rican business development in all economic sectors for micro-, small- and medium-sized enterprises. On the other hand, there is the Ministry of Foreign Trade (COMEX), whose main objective is to implement public policies aimed at inserting Costa Rica in world markets. COMEX has two fundamental arms for the promotion and strengthening of business: the Costa Rican Coalition of Development Initiatives (CINDE) and the Costa Rican Foreign Investment Promotion Agency (PROCOMER). In the chapter on information analysis, we will further describe these business institutions.

5.2 Composition of the business sector in Costa Rica

It is important to mention that in Costa Rica, the data used to classify companies is limited to company size. In addition, there is no historical data. For this reason, the composition of the business sector will be described using official data according to the size of the company.

As mentioned, most of the Costa Rican business park is made up of micro-, small-, and medium-sized companies, with large companies composing only a very small portion of the total. In addition, in 2019, “SMEs²⁷ on average contribute 34.12% of formal private employment to the country. Large companies contribute 65.88% of employment” (Arce & Villalobos, 2021, p. 9). The contribution of SMEs to the GDP in 2019 was 37.66%, the micro enterprise has a higher participation with 12.78%, the small one contributes 12.54 and the medium one 12.34%. (Arce & Villalobos 2021). Table 6 details the composition of the total Costa Rican business park between 2012 and 2019.

²⁷ Small and medium-sized enterprises (SMEs)

Table 6 Costa Rican business park in the period 2012 to 2020

Year	Company size			
	Micro	Small	Medium	Large
2012	102,177 (81,6%)	15,277 (12,2%)	4,76 (3,8%)	2,984 (2,4%)
2013	103,959 (81,4%)	15,454 (12,2%)	4,945 (3,9%)	3,087 (2,4%)
2014	103,414 (81,2%)	15,783 (12,4%)	4,98 (3,9%)	3,169 (2,5%)
2015	102,797 (80,9%)	15,999 (12,6%)	5,119 (4,0%)	3,202 (2,5%)
2016	104,604 (80,5%)	16,781 (12,9%)	5,275 (4,1%)	3,339 (2,6%)
2017	108,079 (80,8%)	16,9 (12,6%)	5,409 (4,0%)	3,377 (2,5%)
2018	111,914 (80,9%)	17,286 (12,5%)	5, 671 (4,1%)	3, 496 (2,5%)
2019	110,973 (80,8%)	17,237 (12,5%)	5, 635 (4,1%)	3,533 (2,6%)

Source: Author's elaboration with data from Arce & Villalobos (2021)

An important point to note is that although the total amount of businesses shows a growth in all years, it is slow growth, especially in small, medium, and large companies. Likewise, the changes between the proportions of each size show very small variations, as in no case is it more than 2.5%.

For 2012, as indicated in Table 6, the behavior of economic activities and their importance in the composition of the GDP as shown in 2005 continues to be stable. Compared to 2005, goods are reduced by 3.5%, and by 2021, reduced by 3.6%. The manufacturing industry is the most dynamic, although a large reduction is observed, it continues to be the most significant.

Table 7 illustrates employment participation according to company size. Data from the Ministry of Economy and Commerce shows that in 2019, SMEs contributed to formal employment with more than 358,000 people employed, which corresponds to an increase of 4.89% compared to 2015. For their part, large companies have steadily increased their contributions, with 969,755 jobs, representing 64.8% in 2015 (to reach 66.5% in 2019). This corresponds to an increase of 13.13% with respect to the base year. The following table shows the total contributions to employment in absolute terms (MIC, 2021, p. 51).

Table 7 Number of formal employees by size of company between 2015 to 2019

Company size	2015	2016	2017	2018	2019
Micro	104 963	106 194	106 105	108 086	109 958
Small	115 117	120 802	121 872	121 227	120 960
Medium	121,591	124,990	126,714	128,926	127,104
Total SMES	341,671,351	351,986	354,690	358,238	358,022
Large	628,085	666,116	694,051	710,998	709,894
Total	969,755	1,018,102	1,048,741	1,069,236	1,067,916

Source: Meic (2021, p. 51)²⁸

When analyzing the combined weight of other services and basic services, for the year 2012 they gained an influence of 9.1%. and for 2021, 3.8%. The behavior of the activities in the two sectors continues to be irregular, with a large part remaining almost static, and others increasing.

Table 8 GDP by economic activity Costa Rica 2012 to 2021

Economic Activity	Percentage	
	2012	2021
Gross Domestic Product	100	100
Goods	33.1	29.5
Taxes on products and imports	8.5	7.4
Agriculture, livestock, forestry, and fisheries	5.4	4.5
Mining and quarrying	0.3	0.3
Manufacturing industries	13.5	13.4
Construction	5.4	3.9

²⁸ Author's translation

Basic services	6.7	6.4
Electricity, gas, and water	2.8	2.6
Transportation, storage, and communications	3.9	3.9
Other services	60.2	64.3
Wholesale and retail trade, repair of vehicles	9.4	8.5
Commerce, restaurants and hotels	2.6	2.1
Information and communications	3.5	5.3
Financial and insurance activities	4.7	4.7
Real estate activities	8.9	8.2
Professional, scientific, technical-administrative, and support service activities	10.1	12.3
Public administration and compulsory social security schemes	4.3	4.2
Education and human health and social work activities	13.9	13.9
Other activities	2.8	3.4

Source: Author's elaboration based on ECLAC 2021.

In terms of productive activities and their participation, the trend seen in the nineties continues, with a reduction in the production of goods such as agriculture, livestock, forestry, and fishing. The construction sector remains stable, and manufacturing has a slight increase.

In 2013, the growth in the formation of SMEs shown above continued, with a total of 64,980 companies registered. The industrial sector decreased slightly while services remained stable, agricultural SMEs decreased more significantly, and finally, the commerce sector grew by 4% compared to 2006 (Cousin, 2021).

A study conducted between 2015 and 2019 and published in 2021 by the Costa Rican Ministry of Economy and Commerce on the characteristics of the business sector in Costa Rica established the following findings (MEIC, 2021, p. 9-11²⁹):

- (1) In terms of the number of companies, Costa Rica continues to be a country with a business park composed of a majority of SMEs.
- (2) In the five years analyzed, on average, 97.4% of the companies are SMEs, of which 80.84% are micro-, 12.46% are small- and 4.10% are medium-sized.

²⁹ Author's translation

- (3) In absolute terms, as of 2019, the Costa Rican business park is composed of 137,378 companies, of which 133,845 are SMEs.
- (4) During the study period, the number of companies increased from 135,395 to 137,378, representing an increase of 1.5% in the business park. For SMEs, there is an increase from a total of 132,165 SMEs in 2018 to 133,845 SMEs, representing an increase of 1.3%.
- (5) The behavior of the number of microenterprises in the country has increased in the study period, with a rate of 0.52%, from 110,400 SMEs to 110,973 microenterprises.
- (6) For small companies, there has been an increase of 4.85% in the study period, with a total of 16,439 small companies in 2015 and 17,237 small companies in 2019.
- (7) In medium-sized companies, the growth rate for the period under study is 5.80%, indicating a change from 5,326 to 5,635 companies.
- (8) San José is the province with the highest number of companies, with a total of 59,451 companies, as well as the highest concentration of SMEs, for a total of 57,626 for the year 2019, followed by the provinces of Alajuela and Heredia. Limón is the province with the lowest number of companies, with 5,910 companies and 5,768 SMEs.
- (9) The economic sector bringing together the largest number of companies is services. In 2019, it represented 66.0% of the total number of active companies in the country, while commerce represented 21.1%, industry 5.0%, and the agricultural sector 6.2%.
- (10) Only the service sector companies have grown over the years, having grown from 86,136 companies to 90,636 companies (an increase of 5.2%).
- (11) Meanwhile, the industrial sector has a negative growth rate, going from 7,408 companies to 6,803 companies, with a decrease of -8.2%. This is followed by the agricultural sector, with a shrinking rate of -6.8% and the commercial sector with a rate of -3.6%.
- (12) The services sector and the agriculture and livestock sector concentrate the largest number of microenterprises, 83.1% and 86.8% respectively, in 2019.
- (13) In the services sector, the activity with the largest number of SMEs in 2019 is “professional, scientific and technical activities” with 9.1%, followed by “construction” with 8.6% and “accommodation and food services” with 7.4%.
- (14) On average, SMEs are responsible for 34.12% of formal private employment in the country. Large companies contribute to 65.88% of overall employment. However, the growth rate in employment generation is higher in large companies, with a rate of 13%, while in SMEs, it is 5%.
- (15) On average, over the five-year period, micro-sized companies contributed to 10.34% of formal employment, small companies 11.6%, and medium-sized companies 12.18%.

- (16) The services sector accounted for 57.6% of the workforce, followed by commerce (19.1%), industry (13.8%), and, finally, agriculture (9.2%). In this last case, the agricultural sector, although it includes more companies than the industrial sector, generates less employment overall than the industrial sector.
- (17) In terms of exporting companies, the number of SMEs decreased from 72.1% to 70.7%, while the number of large companies increased from 27.9% to 29.3% in the same period.
- (18) In terms of export value, the participation of SMEs decreased by 7.5% from 2018 to 2019; the exports of these smaller companies represented 7.2% of total exports in that year.
- (19) The SMEs classified as commercial export the most (30.91%), followed by the industrial sector (16.05%), the services sector (15.09%), and finally the agricultural sector (9.08%).
- (20) In terms of destination, Panama is the leading destination for SME exports, the United States is second, Nicaragua is third, followed by Guatemala, Honduras, and El Salvador.
- (21) The contribution of SMEs to the Gross Domestic Product (GDP) averages 37.66%, with the micro companies having the largest share with 12.78%, followed by the small companies with 12.54% and the medium companies with 12.34%.
- (22) At the sectoral level, the sector that contributes the most to the GDP is the service sector, with an average of 25.68%, followed by trade with 3.99%, agriculture with 2.38%, and industry with 2.23%.
- (23) The number of companies registered with the MEIC as SMEs have increased significantly over the years. In 2011, about 800 companies were registered, and by June 2021, there will be more than 26,000 companies, a growth of more than 3,000%.
- (24) 83% of the companies registered with the MEIC are micro-sized, 14% are small and 3% are medium-sized.
- (25) 57% of the companies registered in the MEIC are in the service sector, 33% in the trade sector, and 11% in the manufacturing sector.
- (26) The more than 26,000 companies registered in 2021 report more than 100,000 jobs.

6 Theoretical Framework

The following chapter presents and disaggregates the conceptual foundations with which the research problem is approached. For this purpose, it relies on Latin American configurationism as the theoretical explanatory approach to the political participation of entrepreneurs and their organizations in the construction of the TVET system in Costa Rica.

First, I present the configurationist perspective as a theoretical alternative to other social science approaches, such as the classical, neoclassical, institutionalist, neo-institutionalist, functionalist, and hermeneutic positions. This part is central to understanding the epistemological problems that configurationism seeks to solve.

The second part defines the concepts of *configuration*, *subjectivity*, *structure*, *action*, and *organized political action* to articulate the theoretical analysis. This theoretical description is important because it serves as an argument for why the research has a historical basis analytically divided into three dimensions: subjective codes, social structures, and organized political actions of entrepreneurs and their organizations to build the TVET system in Costa Rica from 1980 onwards.

6.1 Latin American configurationism as a theoretical alternative: the struggle against determinisms and the loss of the subject

The 1980s and 1990s were marked by increasing critical reflections on methodologies in the social sciences in Latin America, problematizing the creation of meanings and the role of the subject in hermeneutic and Marxist approaches (Felix, 2020, p. 131).

Some of the most important criticisms were related to the structuralist and culturally deterministic mode into which these positions fell, which were insufficient to explain subject-object relationships. Later, in Europe and the United States, with the rise of poststructuralist and institutionalist positions from the 1970s onward, economic institutionalism, organizational theories, and neo-institutionalist approaches were consolidated, while theories of dependency, philosophies of liberalization, contributions of Wallerstein's world-system theories, and other critical aspects of capitalism entered into crisis in Latin America.

On the one hand, the hegemonic structuralist, functionalist, and institutionalist currents exposed a capitalism without a subject (at least without agency or reduced to economic rationality) and, on the other hand, the currents that sought to rescue the subject neglected the role of structure, for fear of falling into structuralism or poststructuralism.

In this context, Latin American configurationism was born as a proposal to rescue the subject, his subjectivity, and his structures without falling into subjectivist or structuralist determinism

or institutionalist reduction to explain social problems. But before defining configurationism as a theoretical alternative, it is necessary to understand the criticisms from which it makes its proposal. These have to do with the conceptions of the subject developed in the various traditions of the social sciences, the methods of theoretical argumentation, and the methods of study.

For example, the classical conception of the rational subject is described as a “homo economicus” (Stuart Mill 1874, p. 321), one who is calculating and who pursues his own objectives, established by the market. Such a model supposes the existence of previously given economic ends and pursued by selfish subjects.

Later, with the development of neoclassical conceptions (Leon Walras, Irving Fischer, Vilfredo Pareto), the existence of a rational actor who pursues maximum profits is no longer assumed, but a calculating subject, limited by institutional bureaucracy and markets’ imperfection. In this context, of high state participation in regulating private property, of taxes and normative restrictions, the subject must be calculating, a gambler and optimizer of his resources. De la Garza (1992) points out the following weaknesses in the conception of the rational actor: doubt regarding the possibility of contemplating all options, concern that information is incomplete, concern that there may be other motives for action (moral, emotional, among others), a consideration that choices may depend on the social and economic network, and the knowledge that there may be institutional limits, rules, policies, and so on, which constrain an actor’s behavior.

Institutional economics envisions humans as immersed in imperfect exchange due to a lack of information. Habit and learning for institutional contexts imply specific (evolutionary)³⁰ cognitive models for decision-making in the market. That is, rational calculation is an evolution of cognitive adaptation to institutional regulations and norms. That is, institutional economics attempts to explain the emergence of institutions, such as the firm or the state, by referencing a model of rational individual behavior and investigating the unintended consequences from human interactions. An initial “institution-free” natural state is taken for granted. In this model, the explanatory framework moves from individuals to institutions, considering individuals as givens. This approach is often referred to as “methodological individualism” (Hodgson 2001, p. 16).

³⁰ Not only lack of info but also inaccuracy of the information.

The methodological individualism developed by the neoclassicals will be a constituent feature in the economists' perceptions of marginalists such as Menger (1871³¹) and Wicksell (1893³²) (Austrian and Swedish schools), which combine the rational choice approaches and the "old" economic institutionalism (Veblen, 1965³³, Commons, 1970³⁴). The latter, above all, includes learning as a process of action in contexts of uncertainty and little information. To reduce the uncertainty caused by "market deviations," subjects learn to move within institutions through norms and rules. Their actions are regulated by these rules and norms to achieve their objectives.

The conception of an opportunistic-administrative subject was most obviously developed by new institutionalists (North 1998; Hall 1996; March & Olsen 2005; Powell & DiMaggio, 2001) and organizational theories. For example, approaches based on the transaction cost theory developed by Ronald Coase and Oliver Williamson provide causal models to explain how individuals and organizations make decisions, while also accepting the limits of instrumental rationality under two premises: 1) through institutions that exchange uncertainty for something stable in the long term, such as formal and informal rules, norms, and conventions, which provide a structure for action and, 2) under a new supposed rationality based on knowledge and learning (North, 1990; 2005). North's interest (and the center of his theory) is in explaining the learning processes related to how subjects learn and define the criteria for decision-making under conditions of uncertainty (North, 2005³⁵).

Language is the medium through which cognitive processes of meaning are realized. North (2005, p. 24) states that humans attempt to reduce uncertainty (or convert it into risk) by

³¹ Menger, C. (1871) *Principios De Economía Política*.

³² *Value, Capital and Rent*, 1893.

³³ Thorstein Veblen, *The Theory of Business Enterprise*, Nueva York

³⁴ Commons, J. R. 1970. *The economics of collective action*. Madison, WI: University of Wisconsin Press.

³⁵ New institutional economics (NIE) studies institutions and how institutions interact with organizational arrangements. Institutions are the written and unwritten rules, norms, and constraints that humans devise to reduce uncertainty and control their environment. These include 1) written rules and agreements that govern contractual relations and corporate governance; 2) constitutions, laws, and rules that govern politics, government, finance, and society more broadly; and 3) unwritten codes of conduct, norms of behavior, and beliefs. Organizational arrangements are the different modes of governance that agents implement to support production and exchange. These include: 1) markets, firms, and the various combinations of forms that economic actors develop to facilitate transactions; 2) contractual agreements that provide a framework for organizing activities; as well as 3) the behavioral traits that underlie the arrangements chosen. In studying institutions and their interaction with specific arrangements, new institutionalists have become increasingly concerned with mental models and other aspects of cognition that determine how humans interpret reality, which in turn shapes the institutional environment they build (North, 1990, p. 3-6; Williamson, 2000) (in Menard y Shirley 2005, p. 1).

learning. The cumulative learning of a society (embodied in language, beliefs, myths, and daily practices) not only determines societal performance at a particular moment, but through the way in which it constrains players' choices.

From this perspective, subjects are subsumed by institutional norms, where learning plays a central role in reducing uncertainty. This means that the subject has agency but is ultimately determined by institutional norms and rules³⁶.

Likewise, the new historical institutionalism (Puente & Schneider 2020; Busemeyer, 2012), widely developed by political science and sociology in recent decades, shows important (but limited) advances on the conception of the subject. The new historical institutionalism focuses on explaining institutional change and the development, impact, and effect of public policies on society. Historical institutionalism had developed more strongly the notion of "path dependence" as a way of establishing logical connections that historically determine present decision-making). This perspective lacks a historical material dimension that would establish structural causal relationships, and it neglects considering the subjectivity and agency of the subject. The perspective of historical institutionalism has an important presence and reputation in the scene of international comparative studies on TVET. Puente and Schneider (2020, p. 1357), consider institutionalist hegemony in the study of business participation and development. However, they also contend that market institutionalist approaches (which compose the neoclassical model) fall short in explaining development and business participation in developing countries, precisely because they ignore historical and subjective dimensions of business organization, connections with the local and global economy, as well as the state as a barrier to capitalist development.

At the same time, theoretical versions that pretend to overcome sociology and economics' neoclassical views, as the theoretical approach of the Varieties of Capitalism, analyze entrepreneurs as a way of administering and managing capitalism. That is, business and the process of policymaking are the result of previously given institutional norms and rules (Puente and Schneider 2020, p. 1359; Rixen & Viola, 2009).

The theoretical problem of hegemonic theoretical approaches (such as historical institutionalism, isomorphism, and path dependence perspectives) is that they leave aside a

³⁶ The notion of resistance as a subversive element is central to understand how rules and norms can be socially confronted through different strategies and tactics, through resistance practices Westwood and Johnston (2012) analyze for example "humor" as a mechanism of resistance, as a subversive mechanism against the status quo in business organizations. Institutionalists neglect the deep subjective meaning that these practices have for women, black people, indigenous people, or certain ethnic minorities within organizational dynamics.

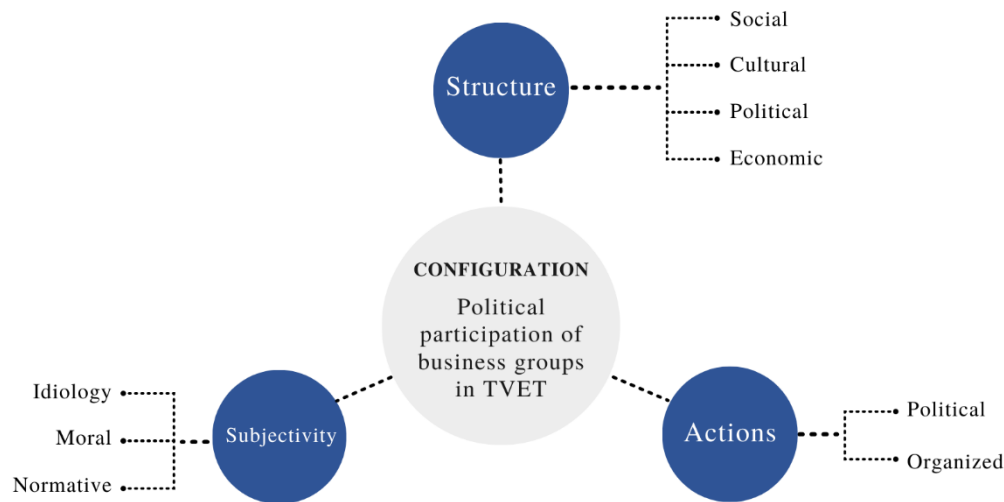
subjective perspective of action, explaining the social from normativity and institutional rules, forgetting agency and subjectivity. The subject disappears definitively as a social subject (Hernández Romo, 2014).

Faced with these theoretical gaps in the hegemonic currents, an epistemological challenge arose, one that configurationism sought to solve: how to explain the action of entrepreneurs and their subjectivities without neglecting the structures, rules, and norms that pressure the subjects' capacity for agency? How does configurationism define social reality?

As Felix indicates (2020, p. 132) configurationism mandates that reality must be understood as a process in which structures and subjectivities intervene, in a process in which none of these *determines* reality, but rather *pressures* it (De la Garza, 2012).

In this way, configurationalism uses movement, space, and configuration as central concepts, differentiating itself from determinism, structuralism, and objectivism, but without falling into subjectivist perspectives, although it is committed to the creation of meaning. By “configuration” we mean the relationships between structures, subjectivities, and interactions, in attempting to reconstruct all of reality. But a totality restricted to the explanation of the object of research, starting from a position of not deductive, but reconstructive use of theory (see Figure 8).

Figure 8 Structure in the configurationist method



Source: Author’s elaboration based on De la Garza (2001)

The subjects under investigation (which in this case are the entrepreneurs and their organizations) cannot be analyzed as objects of study free of any social influence, but are instead part of a complex web of social relations, intervened by subjective ethical, aesthetic, and moral codes, as well as everyday reasoning. They are also influenced by a series of economic factors, such as notions like competitiveness, unemployment, and employability, as

well as by idealizations, such as the entrepreneur's role in society and his or her contributions to development.

Next, the concept of configuration is defined as a mechanism for the articulation of subjectivity, actions, and structures.

6.2 Concept of configuration

The concept of configuration developed by De la Garza (2001) is an analytical unit with which one can understand the structure of theories and propose a way of studying reality in an integral way. This concept refers to the way in which different concepts are related. For example, while in logical positivism, the theoretical structure is based on logical-deductive axioms, Marxism has a theoretical structure based on dialectics and on the movement of the concrete to the abstract. In logical empiricism, the analytical relation is based on mathematical logic and empirical observation. In epistemological poststructuralism, theory is more complex, and there is no difference between theoretical and observational language. Theory is an overlapping network between the theoretical and the observational (in contrast to the logical empiricists, for whom theory is a closed system) (see Table 8).

In configurationism, theory is an open structure of concepts that admits assumptions at different levels of reality. This statement is central, since if in classical critical positivism and logical empiricism, theory was a deductive system, in poststructuralism, theory is a network of theoretical and nontheoretical concepts, and in Marxism, it is a construction of the concrete, abstract, concrete movement, in configurationism it is an open configuration of concepts.

Table 9 Epistemological constructions of the main theoretical approaches

Approach/paradigm	Structure of theories	Methodological basis
Logical positivism	Hypothetical-deductive	Logical-deductive axioms
Marxism	Dialectics	Concrete-abstract-concrete
Logical empiricism	Hypothetical deductive	Mathematical logicism- empirical observation
Epistemological poststructuralism	Hypothetical-deductive	Observational level (empirical language) – non- observational level (theoretical language)

Configurationism	Dialectics	Observational and non-observational continuum configuration
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Source: Author's elaboration base on De la Garza (2001)

In configurationism, the theoretical structure admits theoretical contradiction (because it is not a closed system) and the conceptual approach is made through several levels of reality. Therefore, its theoretical configuration has observable and unobservable conceptual units, recovering the theoretical continuum between non-observable and observables and extending it to the continuum between theoretical terms (whether observable or non-observable) and a common language. A configuration can accept a range of terms in its continuum, i.e., there may be theories with a higher density of non-observable than others, but also with a higher density of theoretical terms than others.

For example, observable and non-observable concepts include “action,” which can manifest itself through a concrete act (a law, a project, a protest, a conflict), and “subjectivity,” which is not easily observable. How to identify the subjectivity of people? The concept of subjectivity is related to observable concepts such as “action,” “discourse,” and “argumentation,” which are used in this research.

A central characteristic of configurationism is that it establishes coherent relationships between concepts: the epistemological relationship between each conceptual unit is established, not only through inductive, but also deductive, causal, and functional thinking. For example, the relationship between “structure” and “subjectivity” is related to the degree of agency that the subjects (entrepreneurs) have. Here there is relational thinking. Another example is the concept of “organized entrepreneurial action” established to differentiate an “organized action” from an “unorganized or individual action.” Thus, what is to be studied are actions involving a specific entrepreneurial organization, for example, the entrepreneurial organization organized around the creation of TVET institutions or specific laws (dual apprenticeship law or INA reform law).

Another characteristic of configurationism is that the theoretical network does not exclude contradiction, discontinuity, dysfunction and obscurity: The concept of “conceptual network” can be useful, provided that its properties are specified. For example, in this research, the concept of “business participation” is a highly contradictory concept that at the empirical (observable) level shows features of obscurity, since the empirical delimitation of “business groups” around TVET assigns specific characteristics that exclude other business groups. For example, 48% of the enterprises in Costa Rica are in the informal sector, which excludes a good part of so-called “business groups”. For this reason, it is important to clarify the scope and limitations of the research.

In summary, configuration should be understood as a theory that admits a network of open concepts involving the subjective realm, social actions, and multilevel structures. A configuration requires a description articulated under ordered concepts, and so the ordering concepts will be presented below: subjectivity, structure, action, enterprise and entrepreneur, entrepreneurial action, and organized entrepreneurial action.

6.2.1 Subjectivity

From configurationism, subjectivity is understood as the “process of creating meanings,” or “the process of giving meaning to social action” (De la Garza, 2010). The starting point is the external world of the subject, including other subjects and nature. It is possible to recover Berger's (1968) idea that consciousness is always of something, so meaning is always of something, too: It is concrete, and so responds to the pressures of the world in terms of giving meaning, answers, and practical solutions, all of which mobilize the meaning-making apparatus called subjectivity. From this point of view, entrepreneurs have:

- Awareness of themselves, their roles, and their functions as actors (at different levels and of a very varied nature).
- An ideology of how the world should work (although the logic of entrepreneurs and business organizations is to seek profit)
- Awareness of the functions and role of TVET in Costa Rica. At the same time, the private sector is called to play an active role in the institutional, legal, and curricular development of TVET institutions. Incentives for participation are not always clear, especially because they depend on economic and political strategies, which are often defined by market orientation and social welfare. (These elements are also investigated in this study.)
- A worldview mobilized with specific actions – this mobilization is organized by a business chamber, for
- Contact and interaction with other “sense-making processes” (trade unions, state, civil society). This interaction generates conflicts, projects, groups, tensions in power relations.

The above elements have parts connected with hard, causal, or soft relationships of contiguity, discontinuities, contradictions, and/or the possibility of polysemic meaning. In other words, subjectivity as a social process is complex, because the process of meaning-making within business groups and TVET has diverse expressions:

- The subjectivity of small, medium, and large entrepreneurs; of various productive sectors; and of entrepreneurs with different positions with respect to state protection among

others, as well as their needs, their social advantages, their incentives, and their problems. These are solved and understood differently.

- The subjectivity between national and transnational entrepreneurs. This depends on how political pressure is expressed, on productive capacity, and on how economic policies favor or disfavor certain business groups. The elaboration of meanings is not carried out through the identification of codes, but rather through the mobilization of subjective codes in argumentation; that is, through a process of self-justification or self-explanation of why, how, when, and with whom certain actions are realized (De la Garza, 2000, p.15).
- The institutional design of TVET is developed under certain structural and subjective guidelines inscribed in social contradictions; that is, the institutional design of TVET is not always logical or rational and is made to achieve an objective. For example, in the 1960s and 1970s, the INA and the MEP had a clearly developed organizational structure for agrarian development, although at the political and economic level, the integration of Costa Rica into other commercial and industrial sectors remained the main challenge. The dispute between discourses, norms, and institutional culture should be understood as the result of historical structural and subjective interaction.

Subjectivity is a central element in configurationism, since institutional rules and values are not considered expressions of subjectivity or subjectivities, as is the case within institutionalist currents. In other words, not all meanings are necessarily normative, nor do subjects act by adjusting their values to the institutional regulations of the market or culture. There is, therefore, a wide subjective spectrum, which will be called “subjective fields.” These include the moral, aesthetic, and cognitive forms of everyday reasoning (Moscovici, 1984). This means that from a configurationist standpoint, the agency of the subject is central, as there are no structural, normative, economic, or cognitive determinisms involved in the process of giving meaning.

Consequently, a central theoretical element is to understand subjectivity as a process of production of meanings based on subjective fields, which in a broad sense develop in cultural, institutional, and social frameworks, putting pressure on how subjects give meaning to their actions, but never determine them (Thompson, 1981). The process of giving meaning can take place in different fields of accumulation of meanings, which De la Garza calls “subjective fields”:

Thus, it is possible to speak of the fields of subjectivity as diverse spaces that allow giving meaning because they contain accumulated elements to give meaning socially, not through the identification of Codes that would reduce subjectivity to culture, but as a

process that incorporates the accumulated codes creating subjective configurations for the concrete situation. Fields such as knowledge (cognition and information), norms and values, aesthetic sense, sentiments as social phenomena and daily reasoning (Di Giacomo 1984 in De la Garza 2001, p. 95³⁷)³⁸.

This last point is central, since in several institutionalist, hermeneutic, and functionalist currents, culture and subjectivity tend to be confused. This research views culture as a system of which heterogeneity, discontinuity, and contradiction are part, that is, as a social accumulation of meanings that form social configurations (De la Garza 2000, p.7).

Later, it will be seen how between 1949 to 1978, Costa Rica, developed a national business culture, with cultural values developed by medium- and large-sized agro-exporting and commercial entrepreneurs. The specific subjectivities surrounding TVET were limited to understanding educational institutions as external providers. Then, between 1980 and the present, culture and subjectivity changed, and new configurations were generated.

For configurationism, the empirical level of reality is captured through the senses. Still, the empirical data is not an absolute that presents itself in a pure state, but rather depends on the theoretical concept used to capture it, the data collection instrument and the culture and subjectivity of the subjects investigated (De la Garza 2018, p. 354). Empirical data should be considered as a relationship between subject and object, a historically determined relationship, especially in cultural and linguistic terms.

At the same time, empirical data have a component of extra-discursive reality. In scientific research, there are three issues concerning empirical data: On the one hand, theory in the abstract, which requires certain data, and, on the other hand, the subjectivity of the researcher and of the reality that escapes the will of the subjects conducting the research. Thus, the empirical does not appear simply as something given, nor as something determined exclusively by the field of consciousness (De la Garza, 2018, p. 88).

6.2.2 Structure and action

For Giddens (1984), structures are the rules that guide recurrent ordered practices; practices entail rules, and rules exist in practices, that is, they do not exist in themselves, apart from practice. Thus, the continuity of structure requires structuration to reproduce negotiated social relations over time.

³⁷ Author's translation

³⁸ De la Garza quotes Heller 1987, saying: "Discourse could synthesize what has been said before. express it as a subjective product. but all synthesis is simplification and, with it, loss of meaning".

In structuration theory “structure” is regarded as rules and resources recursively implicated in social reproduction; institutionalized features of social systems have structural properties in the sense that relationships are stabilized across time and space. “Structure” can be conceptualized abstractly as two aspects of rules – normative elements and codes of signification. Resources are also of two kinds: authoritative resources, which derive from the co-ordination of the activity of human agents, and allocative resources, which stem from control of material products or of aspects of the material world (Giddens, 1984, p. 31).

Here, Giddens attempts to resolve the duality between structure and action; structures condition action and, at the same time, are results or are actualized by practices; the center is, therefore, praxis, not consciousness or structure (Shaft, 1974). In other words, structures cannot exist without practices, but neither can they be reduced to practices (de la Garza 2018, p. 184).

Structures can be understood in two senses. First, as the result of human actions that objectify themselves, becoming relatively independent of their creators and turning upon them. Second, as natural realities that are not the result of human action on nature, but preexist it (solar storms, meteors, etc.), and that also those actions can put pressure on humans in their actions and conceptions. Structures can exist at various levels of abstraction; they are abstractions that depend on conceptions, but also on realities that exceed the subjectivity of the subjects. Structures are irreducible to economic concerns; one must discover the relevant levels of abstraction for each space of social relations pertinent to the object. This is an inherent part of any research task. To this extent, structural configurations can be defined as those networks of relations between diverse structural levels of different areas of social relations pertinent to the object of study (de la Garza, 2018, p. 352).

According to the above premise, the given (i.e., the data, or the observable) is not the empirical, just as the field is exclusively the consciousness of the researcher (with the researcher’s preconceptions and prejudices), but a reconstruction between data and interpretative frameworks. It is important to understand this because the elaboration of scientific questions and of the chosen theoretical frameworks are products of the researcher’s sociohistorical context, one that must always be explicit, for example, as the scientist must indicate where he/she is located (socio-historical context) and the point from which he/she is reflecting (theories and methodological perspectives).

Configurationism assumes that that social processes involve structures of different orders, such as economic, political, cultural, discursive, emotional, and cognitive. Not all of these processes influence social phenomena equally; their explanatory efficacy should be discovered, rather

than assumed. That is, structures do not determine forms of action or consciousness, but rather impinge on them, and to be translated into actions, they must pass through the subjectivity of social subjects (De la Garza, 2018, p. 352).

6.2.3 Entrepreneurial action and organized entrepreneurial action

Thus far, different conceptions of human being implied in different theoretical currents have been presented to define enterprise and entrepreneur. This has been useful to provide a solid base to the triad: subjectivity, structure, and action of configurationism. Now, the next step is to present key concepts to explain the empirical level of reality. One of these concepts is that of *entrepreneurial political action*. The vision of reality, the subject and action in the neoclassical and structuralist currents has already been criticized. On the one hand, the neoclassical rational man is motivated by the desire to maximize utility. This opportunistic agent seeks an optimal result, and behaves according to structures that pressure him from a cultural context. Research traditions focus on studying how entrepreneurs relate to state officials to achieve specific purposes in specific historical moments. But, as we have seen, the complexity of the social fabric and theoretical advances have not been considered in the analysis of business action in the social structure within the framework of interests, resources, power, and conflicts (Castellani, 2012, p. 167).

In the Costa Rican case, Blanco (2010, p. 167) states that in the historical analysis of political and economic development, entrepreneurs and politicians are not actors that can be separated. It is important to note that neither the economic dimension, nor the political dimension, are reified essences³⁹, but multidimensional phenomena, the expressions of material, historical, and social forces, which have been intertwined with power resources, discourse, strategies of domination, and extraordinarily complex modes of legitimization (Berger and Pullberg, 1965). This is consistent with the concept of the entrepreneur as a political actor previously outlined. The challenge, as Blanco (2010) states, lies in demonstrating how these multiple interrelationships between levels occur, where there is no automatism, mechanism, or overdetermination of one dimension over the other.

For this research, the concept of entrepreneurial action is central, because it is the articulating axis of the relationship between subjectivity, structure, and action. Entrepreneurial action is a particular type of social action by which a group of capitalist actors organize themselves around specific objectives, developing various practices of articulation with the state or other social

³⁹ The McGraw-Hill (2004) Sociological Theory site Glossary defines “reify” as: The process of coming to believe that humanly created social forms are natural, universal, and absolute things.

actors to achieve them (Castellani and Llanpart, 2012). This action can take place in two mutually exclusive senses: one, the economic sense; and the other, the political one.

The first sense refers to the set of microeconomic practices, namely the decisions of entrepreneurs (on issues such as production and investment, hiring policy, and pricing, among others), decisive for the functioning of the accumulation model. For its part, the political dimension of business action is defined in terms of practices aimed at articulating interests and policies with the public sector and other social actors. At this level, business actions are both the demands to the state and the strategies of participation and/or influence in the formulation and implementation of public policies (Barrastrero, 2019, p.14).

For Dossi and Lissin, (2010, pp. 419-420) entrepreneurial action can be corporate or individual. The latter refers to those entrepreneurs who have the capacity to outline their demands before the state without mediation. On the other hand, in what it call collective actions, it is necessary to join forces with other entrepreneurs to pursue the proposed objectives. Generally, the collective action produced by this type of actors is channeled through their representative organizations. This is called “organized business action” and is the type of business action that will be analyzed in this research. Organized business action is a type of political action and a subtype of collective action produced within business associations and resulting from the articulation of different organizational mechanisms. These mechanisms are presented to amalgamate dissimilar positions and express them through collective political action at the political-institutional level. As Castellani (2006) points out, actions the business sector deploy in the political sphere influence institutional policies, exerting pressure to obtain institutional responses to their main demands.

Offe (2019, pp 45-47) proposes a three-dimensional scheme to approach these organizations:

- (1) *Structural-economic dimension*. This refers to the set of common interests aggregated by the association, making it possible to understand a corporation’s structural dynamics. This explains the structural formation and objective interests represented by corporations.
- (2) *Internal-organizational dimension*. This dimension centers on the collective actor’s organizational characteristics, allowing an understanding of both the organization and its inherent dynamics, as well as focusing on the association itself. The association is understood as a singular and historical entity with an institutional organization chart, resources, and relations with other social subjects.
- (3) *Political-institutional dimension*. This dimension is based on the association’s political-institutional and ideological relations in the political system. It explains relations with the

political and economic system's other relevant actors, mainly state agents and other business associations of relevance in their sphere of action. Through this dimension, the role of organizations as social and political actors and the function they play in the social environment in which their collective action takes shape can be investigated.

Based on the dimensions proposed by Offe, this research takes into account the characteristics of the economic-structural dimension in the sense that it analyzes the economic interests in the context of the capitalist development of Costa Rica. In order to define the roles and functions of TVET, the objective is to understand the common elements that unite the Chambers of Commerce at the economic level. For example, Costa Rica is a country that has based a large part of its development on the tourism sector. This is a structural fact of the economic development of the country. From this point of view, it is worth asking how the business organizations act economically in order to build the workforce around tourism, and what are the TVET policies that are behind the ideological and institutional bases of tourism.

Besides the economic-structural dimension, this research also considers the characteristics of the political-institutional dimension. In this context, the entrepreneur is understood as a historical and social expression that is inserted in a network of social, ideological and institutional relations that allow the entrepreneur to define his or her roles and political actions, in this case around TVET. From this political-institutional dimension, it can be understood that organized political action is the result of: a shared economic interest; structural influence, that is, the economic development model; a set of broader social relations (political-cultural); and expressing ideological worldviews.

7 Methodology

This section presents the research's methodological foundations as well as its technical strategy. The first part describes configurationism's methodological contributions and the second part deals specifically with methods, techniques, and data processing.

7.1 Research method and approach

As mentioned in the theoretical section, this research is based on the methodological precepts of configurationism. The configurationist method is a multilevel articulation between structure, subjectivity, and action. This method implies the reconstruction of reality by levels, from the theoretical to the empirical, under implicit or explicit cultural and subjective conditions, and processes with different temporalities where the conjunctural and the structural appear (De la Garza, 1998).

In this sense, this thesis analyzes business political participation in a structural context (that is: in a social, economic, political, and cultural one), actions that business organizations have taken to transform or influence TVET policy, and how these business organizations give meaning to these actions through different subjective codes.

In order to understand structural transformations and how entrepreneurs and their organizations' actions and subjectivities have changed, this research applies a qualitative approach, because this makes it is possible to delve into more complex social relations than positivist approaches and is also more relevant with respect to the object of research. Indeed, "qualitative research gives depth to the data, dispersion, richness, interpretative, contextualization of the environment or surroundings, details and unique experiences. Also, it provides a fresh, natural, and holistic point of view of the phenomena, as well as flexibility"⁴⁰ (Hernández-Sampieri et al., 2004, p. 18). Furthermore, as Quintaña Peña (2006) states:

It is convenient to point out that the main difference between the so-called quantitative and qualitative research approaches does not lie exactly in the use of numbers in the first case and in the non-use of numbers in the second. The epistemological and technical differences that can be identified in these two ways of approaching research derive rather from two basic elements: the type of intentionality and the type of reality that one or the other research approach intends to address (2006, p. 47).

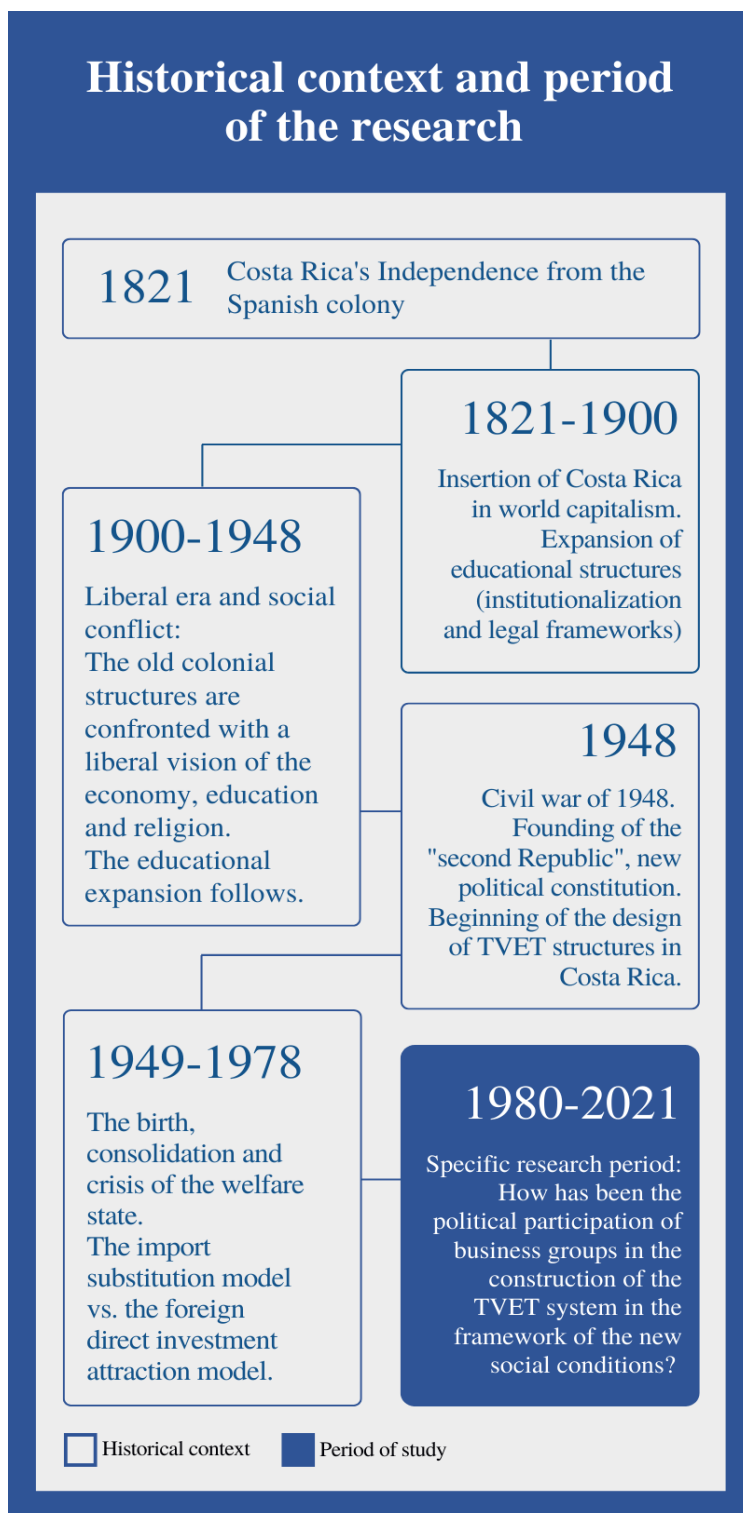
⁴⁰ Author's translation

Following Quitaña Peña's logic, this research intends to identify instances in which the problems of reality are socio-historically defined. Necessarily (and as would be consistent with configurationism), a qualitative approach to research is required to achieve this end.

At the same time, carrying out a brief historical reconstruction of the social, political, cultural and educational characteristics of Costa Rica prior to the specific period of research – that is, between the post-colonial period, from 1821 to 1980 (see Figure 9) – was necessary. This brief contextualization serves as a backdrop to the period under study in this thesis (1980-2021), and there is a specific political configuration of the business chambers regarding the TVET system within the framework of post-1980 structural transformations. Thus, although my specific period of study is 1980-2021, it is important to accompany this with a general contextualization of the structural development of post-colonial Costa Rica up to 1979.

This historical contextualization is a methodological necessity not to necessarily compare periods, but to understand the historical flow and multilevel dynamics that have occurred since 1980 with the importance of TVET in the context of a new productive, ideological, political, and social dynamic.

Figure 9 Historical context and specific research period



Source: Author's elaboration

7.2 Operationalization of the research object

This thesis examines the political participation of business groups in the construction of TVET in Costa Rica since 1980. The operationalization is analytically composed of three levels:

The structural level: This level includes factors related to the reform of the neoliberal state since 1980; the economic policy, derived from neoliberal ideology; productive transformations; transformations in TVET institutions; public policies on TVET; the emergence of business organizations; the role of business organizations in the country's development.

Table 10 Operationalization of the structural dimension

Dimension	Descriptions	Variables
Social	The set of social relations that intervene in the decision-making of entrepreneurs around TVET, such as structural poverty, structural unemployment, and productivity	<ul style="list-style-type: none"> • Institutionalization of economic and political orientation • Types of business organizations linked to TVET policy • Social development objectives • Historical characteristics of business organization
Political	Conditions of power that are established to maintain or transform functions and objectives of TVET. Political-economic power groups, democracy, and social legitimization	<ul style="list-style-type: none"> • Social conflict • Political parties • Legal, institutional organizations • Political legitimization processes • Political bodies (parliament, citizenship, collective action) • Trade unions
Economic	The set of characteristics that influence the forms of production of goods and services, such as labor relations, capitalist forms of production, and forms of commercial exchange.	<ul style="list-style-type: none"> • Economic development models • Business partnership relations • Characteristics of the labor market • Characteristics of the historical process of skill formation
Cultural	Historical accumulation of socially accepted meanings (De la Garza, 2018, p. 190)	<ul style="list-style-type: none"> • Corporate culture(s) • Institutional culture(s) • Costa Rican culture(s) • Youth culture(s)

Source: Author's elaboration

The level of actions: The level of actions is defined as the concreteness of political interference to change and propose TVET policies in Costa Rica from 1980 on. Therefore, it encompasses:

- The definition of short-, medium-, and long-term strategies to intervene in TVET
- Formal programs, projects, and concrete actions aimed at changing TVET

- Relationships with other social actors, such as unions and government representatives, deputies, and ministers, in the process of political action
- The perception of unions, education officials, and academics of these actions
- Public criticism and suggestions to TVET

Table 11 Operationalization of the level of action

Dimensions	Description	Variables
Organized Political Actions	Practical strategies carried out in a collective and organized way to influence TVET policy by entrepreneurs	<ul style="list-style-type: none"> • Proposals for legal action (bills, reforms) • Manifestations of political-ideological positions (activities, manifestos, demonstrations, ideological expressions) • Forms of political participation (tripartite participation, bipartite participation, negotiating tables) • Level of participation by economic sector, according to organizational capacity • Perspectives on results and achievements • Conflicts, differences, and similarities in business organization • Financing, Organization, Operation, Objectives, Orientations, Problems and Strengths etc. for political actions

Source: Author's elaboration

Level of subjective fields: For the purposes of this research, subjectivity is the process of giving and constructing meanings related to TVET development in Costa Rica since 1980. To ascertain this, I reconstructed the meanings of the entrepreneurs based on the determination of subjective fields (cognition, values, morals, ideology, sentiments, aesthetics). In other words, the configuration of subjective fields form everyday reasoning. As described in the theoretical chapter, subjectivity orders decision-making, and these decisions lead to social and individual actions.

To capture the entrepreneurs' subjectivities, it is first necessary to define the "hard" or "structural" fields, such as: the development model, historical business organization, economic structure, political configuration, and so on. Then the "soft" or "subjective" fields must be defined and characterized: These include cognition, values, aesthetics, ideology, and other forms of daily reasoning. Once structural and subjective fields have been identified and defined,

the actors' decision-making processes (actions) can be understood, since the process of giving meaning is, for the subjects, essential to defend their actions.

The variables that will make possible the reconstruction of the subjectivity of business organizations in relation to the development of the TVET system are:

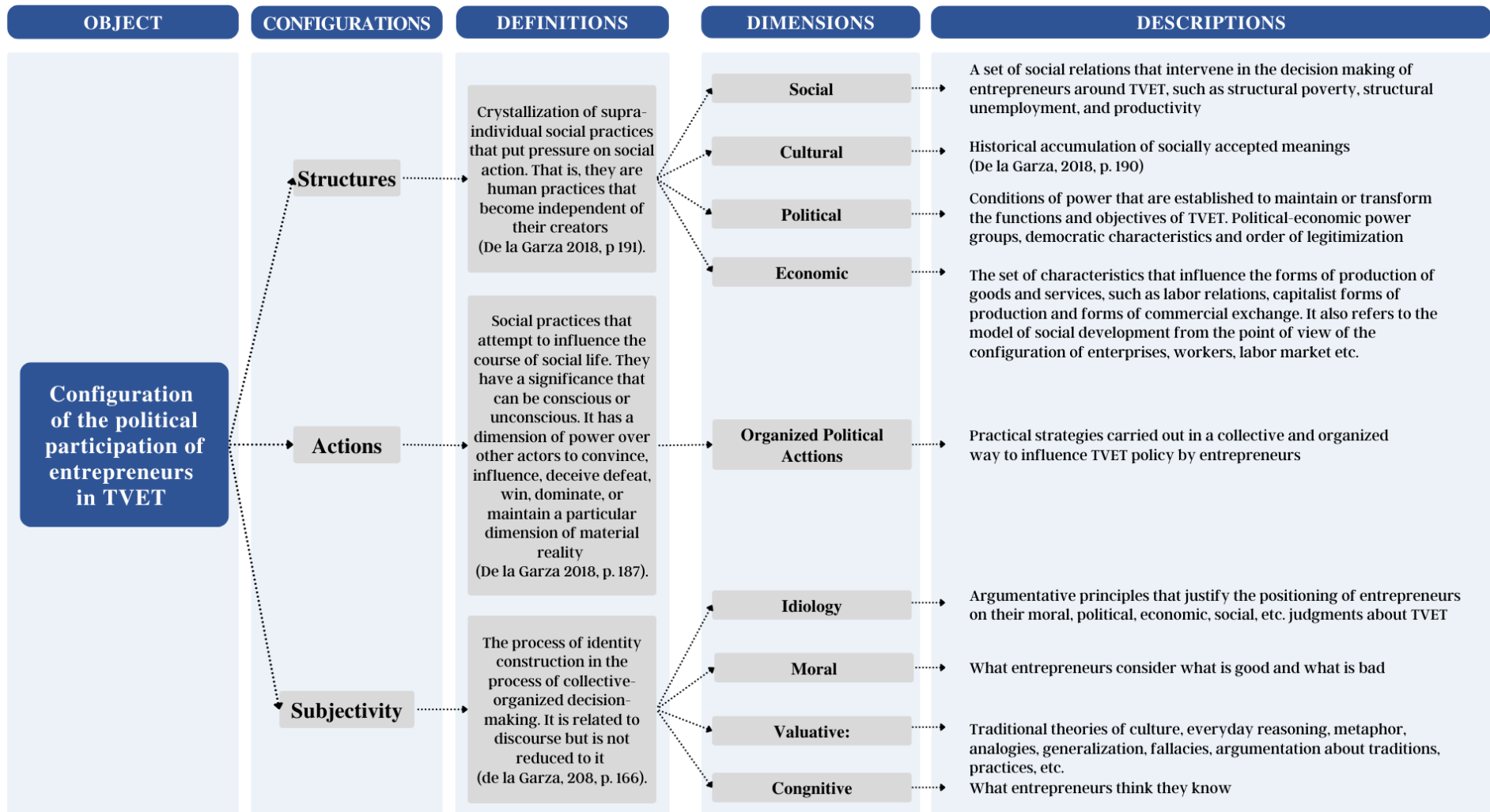
Table 12 Methodological operationalization of the subjective dimensions/fields

Dimensions	Descriptions	Variables
Moral	What entrepreneurs consider good and bad	<ul style="list-style-type: none"> • Standards and principles of business conduct • Codes of action and expression • Organizational values • Normative role of the TVET system in the economic, social, and cultural spheres
Ideological	Argumentative principles that justify the positioning of entrepreneurs on their moral, political, economic, and social judgments about TVET	<ul style="list-style-type: none"> • Definition of the role of TVET institutions • Discourses and arguments on the problems, challenges, and strengths of TVET • Role and functions in the elaboration of TVET policies • The role of the employer in training • The position of INA-MEP UTN and other institutions with respect to entrepreneurs
Value	Traditional theories of culture, everyday reasoning, metaphor, analogies, generalization, fallacies, argumentation about traditions, practices, etc.	<ul style="list-style-type: none"> • Forms of Argumentation of political, economic, legal, financial, etc. valuations of the TVET system • Good/bad • More/less • Discursive-argumentative forms of TVET reform actions
Cognitive	What entrepreneurs think they know	<ul style="list-style-type: none"> • “Proven” facts, scientific, social, and cultural claims that entrepreneurs have about TVET

Source: Author's elaboration

In sum, the operationalization of the object of study can be visualized holistically, as follows:

Figure 10 Configurations, definitions, dimensions, and descriptions of the object research



Source: Author's elaboration

7.3 Selection of Chambers and business associations

The study subjects were chosen according to two criteria: 1) previous research experience in the Costa Rican business sector and 2) inclusion and exclusion criteria from a qualitative perspective.

The first criteria, namely “previous experience,” refers to research conducted on the national offer of vocational training programs in Costa Rica in 2014. Through this research, it became possible to know the main business, institutional, union, public and private actors around TVET. As a participant in the tripartite dialogue table convened by the ILO to establish a dual model in 2017, I established contact to the business representatives most active in the elaboration of TVET policy. While compiling the study on costs and benefits of TVET (2017), as investigator, I met ten managers and business owners interested in training apprentices from a dual apprenticeships model. Finally, in the research conducted on business perceptions of the dual apprenticeships policy in Costa Rica, I was able to determine more precisely which business groups were optimal for conducting this research. These previous experiences contributed to my determining the inclusion and exclusion criteria for the subjects and business organizations that participated in this research.

The second criteria, namely inclusion and exclusion criteria, refer to those characteristics that are essential for certain subjects and organizations to participate in this research – and those characteristics that would not allow such participation.

For my inclusion criteria, I determined that business organizations can be understood as chambers or business associations. Business chambers are organized around an economic sector, such as a tourism or free trade zone chamber, while business associations are organized through common economic or political objectives that go beyond a productive sector – for example, there is the Business Alliance for Development, an intersectoral business organization whose purpose is to promote public-private alliances for social and economic development. Business associations can be public institutions that defend private interests, such as COMEX or CINDE. Business associations must be formal, i.e., legally established and recognized by business and the state. For example, the UCCAEP is the business organizations’ representative in vocational training issues at the ILO. The business associations should have a department or unit related to the development of TVET also oriented towards political participation in a constant and recognized manner during the study period. Another selection criterion is that the individuals and representatives who belong to the business associations should head the TVET department or own or manage enterprises, with sufficient knowledge about TVET.

As exclusion criteria, I decided that business organizations with no demonstrated involvement in TVET issues could not be considered in my study. Informal business organizations and those not recognized by the state or other business organizations were also excluded. Issues not directly related to TVET development were also not considered for this research.

In accordance with the above criteria, I created three groups of interviewees⁴¹.

The first group was that of entrepreneurs organized through a formal chamber or association. This group met for eight interviews. Based on the above criteria, the following business organizations were selected:

- (1) The Union of Chambers and Companies of the Private Sector of Costa Rica (I1-UCCAEP, 2021)
- (2) The Chamber of Industries of Costa Rica (I2-IC, 2021)
- (3) The Chamber of Tourism of Costa Rica (CANATUR) (I3-CANATUR, 2021)
- (4) Costa Rican Coalition of Development Initiatives (CINDE) (I4-CINDE, 2021)
- (5) Costa Rican-German Chamber of Commerce (AHK) (I5- AHK, 2021)
- (6) Chamber of Information and Communication Technologies (CAMTIC) (I6-CAMTIC, 2021)
- (7) Chamber of Free Trade Zones (I7- AZOFRAS, 2021)
- (8) Business representative on INA's Board of Directors (I8-INABUS, 2021)

The second group conducted three interviews with representatives of TVET institutions related to the coordination with the business sector. These include officials from INA, MEP, and UTN who had worked with Group 1, but who had the subjectivity of public officials and not entrepreneurs, though they claim to respond to business interests.

- (1) Directorate of Technical Education MEP and MEP's Business Linkage Department (I9-MEP, 2021)
- (2) National Apprenticeship Institute (I10- INA, 2021)
- (3) National Technical University (I11- UTN, 2021)

⁴¹ The interviews were audio recorded and transcribed in Spanish. The analysis of the interviews was done in the MAXQDA 2022 program in Spanish and the main results were integrated into the analysis in English.

The third group of interviewees corresponded to experts in the field of TVET in Costa Rica. The first expert worked in high positions in the Directorate of Technical Education of the MEP for three decades and was responsible for the implementation of reforms and changes in the TVET system during the period relevant to the study. He is currently a retired TVET policy advisor in Costa Rica. The second expert oversaw the implementation of the first pilot plan in dual apprenticeships in Costa Rica within the framework of the cooperation between Germany and Costa Rica in 1995. This group also included a social scientist who is an expert in the study of enterprises and their organizations in Costa Rica.

- (1) Expert1 (I12- EXPERT1, 2021)
- (2) Expert 2 (I13-EXPERT2, 2021)
- (3) Sociologist expert in business studies (I14- SCIENT, 2021)

Table 13 Actors under study

Actor		Interviewed person
Chambers and Business Associations		
1	The Union of Chambers and Companies of the Private Sector of Costa Rica (UCCAEP)	Executive director and member of different EFTP commissions
2	The Chamber of Industries of Costa Rica	Human Capital Development Advisor and member of different TVET commissions
3	The Chamber of Tourism of Costa Rica (CANATUR):	Executive Director
4	Costa Rican Coalition of Development Initiatives (CINDE)	Director of Investment Climate – business representative on INA's Board of Directors
5	Costa Rican-German Chamber of Commerce (AHK).	General Manager
6	Chamber of Information and Communication Technologies (CAMTIC)	President
7	Chamber of Free Trade Zones (AZOFRAS)	President
8	Business representative in the INA	Entrepreneur. Business representative on INA's Board of Directors
TVET Institutions		
9	Directorate of Technical Education MEP and MEP's Business Linkage Department	Director of Technical Education and Representatives of the Business Linkage Department
10	National Apprenticeship Institute	Technical Assistant Manager of INA – in charge of the Planning and Evaluation Process. Technical advisor, in charge of implementing dual apprenticeships. Former Executive President of INA

Actor		Interviewed person
11	National Technical University	Representative of the National Technical University in the National Framework of TVET Qualifications
Expert in TVET Costa Rica		
12	Expert 1	In charge of implementing the first pilot plan in dual apprenticeships in Costa Rica in the 1990s
13	Expert 2	Former Director of Technical Education MEP
14	Sociologist expert in business studies	Scientist of the sociology department. expert in studies on economic elites and companies in CR

Source: Author's elaboration

7.4 Research techniques

7.4.1 Document review

To carry out the historical reconstruction between 1821 and 1980, an extensive document review was carried out, grounded in historical texts, academic memoirs, scientific articles, and newspaper articles about the structural characteristics (economic, social, cultural, political, and educational) related to the object of study.

Likewise, for the analysis of the specific period of analysis (1980-2021) an extensive review of historical documents was conducted in two ways; 1) via identifying the structural characteristics of Costa Rica in that period and 2) via tracking the specific business participation through political positions, bills, official communiqués, memories of business congresses, the development plans of the business chambers, and the objectives of the projects proposed since 1980.

The search for documents was done in digital databases, but mainly in libraries and institutional repositories of university libraries in Costa Rica between 2018 and 2021, since most historical texts are not digitized (these include those found in theses, journals, newspaper articles).

It is important to mention that the data collection was often done virtually, through different virtual communication platforms such as Zoom or Microsoft Teams, because of travel restrictions levied during the COVID-19 pandemic. Some interviews were conducted in person when restrictions were relaxed at the end of 2021. I conducted all interviews myself.

7.4.2 Semi-structured interviews

As aforementioned, the historical nature of the research did not allow for “observing” all social events, especially those that occurred between 1980 and 2010. For this reason, the semi-structured interview was fundamental, since it enabled me to learn about specific topics, but with the flexibility of allowing the interviewees to add and comment on new information that

they remembered at the time. Hernández-Sampieri, Fernández and Baptista (2014, p. 403) indicate that semi-structured interviews are based on a guide of issues or questions and the interviewer is free to introduce additional questions to clarify concepts or obtain more information. It is important to mention that for the interviews with actors who could offer historical information, a guide with questions and important topics was delivered several days in advance by email or telephone, so that they could prepare and remember important elements that occurred at the beginning of the study period.

Another reason for using semi-structured interviews was the ability to delve deeper not only into the actions of the entrepreneurs, but also into their arguments and claims of validation of their subjective arguments. The objective of these interviews was to identify the subjectivities (interests and motivations) and the actions and interactions carried out since 1980.

For Bernard (2011, pp. 157-158), the semi-structured interview is used in:

Situations where you won't get more than one chance to interview someone, semi-structured interviewing is best. It has much of the freewheeling quality of unstructured interviewing and requires all the same skills, but semi-structured interviewing is based on the use of an interview guide. This is a written list of questions and topics that need to be covered in a particular order. The interviewer maintains discretion to follow leads, but the interview guide is a set of clear instructions—instructions. Formal, written guides are an absolute must if you are sending out several interviewers to collect data. But even if you do all the interviewing on a project yourself, you should build a guide and follow it if you want reliable, comparable qualitative data. Semistructured interviewing works very well in projects where you are dealing with high-level bureaucrats and elite members of a community—people who are accustomed to efficient use of their time. It demonstrates that you are fully in control of what you want from an interview but leaves both you and your respondent to follow new leads. It shows that you are prepared and competent but that you are not trying to exercise excessive control.

These interviews were conducted with different actors. First, directors or senior managers of business associations and chambers who exercised not only administrative but also business positions were interviewed. Then, those in charge of TVET development departments in the business chambers were interviewed. It should be noted that those in charge of developing TVET projects are usually people who are also entrepreneurs, so for the purposes of the research they fulfilled a dual role as both entrepreneurs and TVET project developers.

A social scientist who has studied the role of entrepreneurs and businesses in the economic and social development of Costa Rica was also interviewed, which proved very important in better understanding the research approaches used in the different social sciences.

Due to its holistic nature, the configurationist methodology recommends investigating not only the central actors (entrepreneurs of the business chambers) but also those who enter the political arena of social relations, such as unions and workers of TVET institutions. Therefore, three representatives of the MEP were interviewed, as well as three representatives of the INA who coordinate the departments linking the company with TVET policy development. In the MEP, the director of the TVET department and the coordinators of the department of connection with the company were interviewed. At INA, the technical assistant manager and those responsible for business research were interviewed.

7.4.3 Observation

According to Hernández- Sampieri et al. (2004, p. 399), observation is a research technique carried out with all the senses. According to Miles, Huberman and Saldaña (2013), observation allows understanding processes, links between people and their situations, experiences or circumstances, the events that occur over time and the patterns that develop. For Hernández - Sampieri; Fernández and Baptista (2014) observation is given by degrees of depth where the researcher has a specific role in understanding relationships and social interactions (see table 14).

Table 14 Observer roles

Non-participation	Passive participation	Moderate participation	Active participation	Full participation
For example, when watching videos	The observer is present, but does not interact with participants	Participates in some, but not all, activities	Participates in most activities; however, does not fully mingle with the participants, remains primarily an observer	The observer is just another participant

Source: Hernández-Sampieri; Fernández y Baptista (2014, p. 403)⁴²

According to the descriptions in Table 14, the observation that was carried out had various nuances and degrees of intensity according to the periods of study. In other words, since this was a longitudinal investigation, the events that took place between 1980-2010 are to be placed

⁴² Author’s translation

into the category of “non-participation”. To better understand what happened in this period, I had to resort to a thorough literature review and interviews with actors linked to the research topic in that period. From 2010 to 2021, my participation was moderate to active. Between 2010 and 2013, I participated in few spaces of business interaction, but between 2014 and 2021, I actively participated in the most important spaces of business and tripartite dialogue.

From June 2014 to 2016, I conducted research on nomenclatures and national offers of vocational training in Costa Rica. This project inspired my study on the central role of business participation in the national qualification framework of TVET, and it was in this study that I was able to meet most of the entrepreneurs and business organizations interested and historically linked to TVET. Between February and September 2017, I participated in tripartite sessions of the dialogue table that the Government of Costa Rica implemented to develop the dual apprenticeships policy as a representative of the UTN. During that time, I got to know in depth the arguments, positions, and discussions of both business representatives and the state and unions (Láscarez & Schmees, 2021). The tripartite dialogue also allowed me to get to know the history and personal subjectivities of members of the business sector, with respect to their worldviews, their moral criteria on the role of other actors, and their ideological positions on the economy, education, unemployment, and the functions of TVET.

During March and October 2017, together with ten companies, I elaborated a hypothetical cost-benefit model on the implementation of dual apprenticeships. During the research, I was able to observe the dynamics within the companies and the positions of the companies' owners or managers on the entrepreneurial role for the development of TVET. The results of this research were presented in the most important business chambers and at the ILO in the tripartite dialogue table (Láscarez, 2017). In any case, the observation in these two business spaces was essential to understand arguments and subjectivities of entrepreneurs.

7.5 Data analysis

The interviews were analyzed based on the definitions and descriptors set out in Figure 10 to identify the contents that refer to the structural, objective, and political action dimensions. This is an open analysis of the interviews based on the variable dimensions. This was done with support from MAXQDA.

Then, to deepen the subjectivity of the interviewed actors, Toulmin's argumentation analysis was applied (Toulmin, Rieke and Janik, 1984, p. 14). Toulmin defines argumentation as “the whole activity of making assertions, refuting them, backing them up by producing reasons, criticizing those reasons, refuting those criticisms, etc.”. This dynamic of resonance develops

in fields of reasoning (Toulmin 2007, p. 29) that differ in the possibility of presenting more or less rigorous arguments. An “argument,” in the sense that it is a “train of reasoning,” is the sequence of interconnected statements and reasons that, among themselves, establish the content and strength of the position defended by a given speaker (Toulmin et al., 1984, p. 14). In this sense, this form of inferential analysis of the text contributes to deepening the subjective dimensions described above (moral, ideological, evaluative, cognitive).

Another positive element in the use of argumentation of ideas, according to Toulmin, is that argument fields are directly related to two other elements: relevance and context. These elements are fundamental to any theory of argumentation “since it is almost impossible to understand argumentative activity away from the circumstances, the place, the appropriate moments, the time in which it occurs” (Mercado, 2016, p. 15). In the context of discursive production, one must discover the force and function of each part that constitutes argumentation (Toulmin et al., 1984, p. 11).

As this was a qualitative analysis of information, the main units of analysis focused on meanings, practices, actions, roles, functions, beliefs, arguments, and political and ideological positions (Hernández-Sampieri 2014, pp. 397-398). These units of analysis logically correspond to the proposed configurationist model of integrating subjectivity, actions, and structures.

It is important to say that the 16 semi-structured interviews were recorded under oral consent, and then the interviews were transcribed using the “Konch” software. After the first transcription, a double review of the transcription was carried out.

Table 15 Synthesis of the methodological proposal

Object of study	Configuration of political participation of business associations in the construction of the TVET system in CR since 1980		
Research question	How has the organized political participation of business groups around the TVET system been configured in the context of social, economic, and political transformations since 1980 in Costa Rica?		
Configurations	<i>Structural configuration</i>	<i>Subjective configuration</i>	<i>Configuration of actions</i>
Categories	<ul style="list-style-type: none"> • Industrialization process and accumulation • Political economy • Social conflict • Transformations in the world of work • Educational institutions • Education and labor policy 	<ul style="list-style-type: none"> • Argumentation of corporate speeches • Political, economic, and educational interests and motivations • Corporate subjectivity • Political positioning vis-à-vis other TVET stakeholders 	<ul style="list-style-type: none"> • Participation in dialogue tables, technical and political commissions • Proposals for laws, specific projects on TVET • International cooperation in TVET • Relations with TVET institutions
Instruments	<ul style="list-style-type: none"> • Semi-structured interviews • Document analysis 	<ul style="list-style-type: none"> • Semi-structured interviews Discourse analysis • Observation 	<ul style="list-style-type: none"> • Semi-structured interviews • Document analysis • Observation
Supporting questions	<ul style="list-style-type: none"> • Which specific business groups have expressed organized political action around TVET in Costa Rica since 1980? • What goals, objectives, and meanings do these groups believe the TVET system in Costa Rica to have? • What concrete actions have these business groups undertaken to try to achieve their goals and objectives around TVET? 		

Source: Author's elaboration

7.6 Research limitations

The research presents at least three theoretical and methodological limitations that should be presented, ideally in the hope of overcoming them in future research.

It was mentioned earlier that the absence of a scientific tradition in the field of TVET in Costa Rica is an opportunity to inaugurate a new line of research, but at the same time it constitutes

an important limitation that impacts in two ways: in the absence of sufficient and reliable data, and in the absence of literature and theoretical discussions on the topic. In the absence of TVET research institutions, it was very difficult to find qualitative and quantitative data related to business participation in TVET, the number of companies involved, enrollment, and details about TVET institutions.

The identification of relevant actors was made possible by my own previous research experience and by interviews from some entrepreneurs and representatives of TVET institutions.

Another important limitation of the study is that there are no reliable databases on how many companies exist with respect to economic sectors, size, and number of workers, as well as contribution to GDP. This is relevant to point out because there are sources of information that do not coincide with each other. For this reason, data from the Ministry of Economy and Commerce have been used. The existing data are not entirely clear. Nor do the business chambers have specific data on the companies that exist in an economic sector. One of the reasons for the difficulty of creating data is that in Costa Rica, there is no obligation for companies to be affiliated with a business chamber, in addition to the fact that the informal economy comprises 50% of the total economy, which means that 50% of all companies in Costa Rica do not register complete data on their operations.

Another theoretical and methodological limitation is that this research focused on organized political action, that is, on business action carried out by the formal business chambers and associations, leaving out of the study the country's informal businesses, which also have opinions, interests, and visions about what the TVET system should be in Costa Rica. Most of the companies not taken into account are micro- and small-sized companies. On the other hand, the companies that were selected were those with a historically greater capacity to politically articulate their economic and social interests through the strongest chambers of the economy: tourism, commerce, industries, free trade zones, technologies. This does not allow us to know the needs, perspectives, and actions of other business groups that perhaps also have a political and educational interest in the TVET system.

8 Results

This chapter presents the results of the analysis of the data obtained according to the theoretical-methodological criteria and procedures described in last chapters.

Specifically, this chapter is divided into three main sections. Section 8.1 presents the results of the historical-structural configuration; section 8.2 describes the results of the configuration of firms' actions; and finally, section 8.3 describes the results of the subjective configuration of entrepreneurs between 1980 and 2021 regarding the construction of the TVET system.

8.1 Historical-structural configuration

Chapter 3 offered a historical contextualization of economic and political forces as well as the genesis of the Costa Rican TVET system from postcolonial times until 1978. Now, this section provides a more in-depth analysis of the structural dimensions related to the participation of business in TVET from 1980 to 2021. It is a socio-historical analysis (economic-political, educational, and social) that has influenced the educational and political changes in TVET since 1980.

8.1.1 Economic liberalization, new business groups, and the new role of TVET institutions

During the crisis and weakening of the welfare-state, new conceptions of social and economic development emerged, dominated by liberal theses. New power groups called “transnationalists” presented a development alternative based on financial “modernization” as a strategy for insertion into the capitalist market (Alvarado, 1981). Basically, they proposed simplifying the state apparatus and slowing the process of state capitalism that had been developing since the early 1950s.

Transnationalist groups criticized the entrepreneurial state, stating that it has induced an inorganic growth of the dominant groups, and consequently involved a fiscal imbalance and an dissatisfaction regarding effective social demands.

For this new political class, privatization and economic liberalization were the most effective ways of curbing to curb state growth and quickening stagnant growth rates of certain economic groups. Of course, the neoliberal discourse was also presented as an answer to the problem of poverty in society through the idea that the fewer barriers companies have, the more employment opportunities they can create. State interventionism, as expressed by business-politicians in different media and articles, was synonymous with corruption, inflation, and a misuse of resources, as well as the fact that the state, per se, is an obstacle to the development of private initiative. But then, what was the role of these new transnationalist groups?

These groups did not necessarily own the means of production. Instead, they facilitated the installation of transnational companies in the country, directing and ordering a whole strategy of public administration that reduced public spending. In addition, they oversaw selling public enterprises and opening trade barriers. For example, during the period 1961-1991, the only preferential trade agreement signed by Costa Rica was the one that gave rise to the Central American Common Market. Then, between 1994 and 2007, nine trade agreements were signed (Alonso, 2009, p. 3).

The economic model promoted was one of financial modernization. Financial modernization was no longer understood as nationalization, but as financial openness. It should be remembered that bank nationalization was the basis on which the welfare state was built. Since the Costa Rican Development Corporation (CODESA) (Raventós, 1995, pp. 10-13) was the maximum representation of a state with nationalized banking, these modernization measures resulted in selling of CODESA's shares. In addition, some measures included the attraction of financial centers, as they were considered an instrument of expansion that supported banking denationalization (Gorostiaga, 1978).

8.1.2 Structural Adjustment Programs (SAPs) and state reforms

In the late 70s and early 80s, the state faced a major financial crisis, new international recession, rising international oil prices, falling prices of export products, and rising international interest rates. Undoubtedly, there was a confluence of internal and external factors that determined the emergence of the crisis and its severity (Vargas, 2015, p. 6). The "colón", the national currency, was devalued in 1981 to 1982, dealing a hard blow to the economy. Inflation went from 17.8% in 1980 to 81.8% in 1982, which meant that it went from 8.6 colones per US dollar in 1980 to 60 colones per US dollar in July 1982. The external debt tripled by 1982. It was in this time that financial loans from the International Monetary Fund and the World Bank appeared as solutions to the crisis Costa Rica was going through, together with the idea of the need to modernize the economy through market liberalization. The IMF proposed to finance programs and resources to the country while a financial stabilization plan was being established (Raventós 1995, pp. 74-75).

The second government of the neoliberal era (1982 to 1986) introduced austerity measures demanded by the International Monetary Fund as a condition for the continued financing of the state. This government signed the contract with the IMF and witnessed the first Structural Adjustment Program (SAP I in 1985) put into practice (Raventós, 1995, p. 80), which in turn led to cuts in the public budget. This was when the banking system was truly denationalized,

and the first steps of private investment began to take place. The objective of this PAE was financial equilibrium and expenditure control, for example, through freezing public-sector salaries.

Later, in the third government of this period (Arias Sánchez 1986 to 1990), the second SAP was implemented (Raventós, 1996, p. 105) which increased privatization and state control. This second SAP pursued the same objectives as the previous SAP and basically involved a reform of financial policy, the agricultural sector, foreign trade, and the public sector.

This was followed in 1995 by SAP III, which consisted of state reforms (Raventós, 1995, pp. 145-154). This Structural Adjustment Program sought a deeper reform of the state through the pension system, privatization policy, financial liberalization, and fiscal policy. These reforms would almost immediately impact the entire labor and educational structure of Costa Rica. The following configuration describes the relationship between these processes in the institutional reforms of TVET and how employers participated in these processes. Some of the measures implemented at this time were (see table 16):

Table 16 Liberal reforms implemented in Costa Rica between 1980 and 1999

Dimensions	Year	Implemented Policy
Import Liberalization	1984	Revision of the Central American Common Tariff
	1986-1992	Gradual tariff reduction
		Elimination of quantitative restrictions
	1990	Unification of the common external tariff
	1992-1998	Tariff relief
Central American Tariff and Customs Regime		
Exchange Market Liberalization	1983	Unification of the exchange rate
	1984	Modification of the exchange rate regime (mini-devaluations)
	1992	A system of dirty flotation is established, but the following year the system of mini-devaluations is returned to
Capital Account Liberalization	1992	The capital account is liberalized
Tax Reforms	1983	The sales tax base is broadened, and sales tax rates are increased. Selective consumption tax is modified
	1987	Income tax reform (broadens the base and distinguishes between individuals and corporations)
	1987	Sales tax coverage is expanded

Dimensions	Year	Implemented Policy
	1989	Measures to improve collection efficiency, greater controls, define tax crimes and establish stricter penalties
	1989	Modification of the income tax scale
	1992	Repeal of many tax exemptions
	1995	Extending the sales tax base to new products
	1995	Reform of the legislation that allows the closing of evaders' businesses
	1995	Modification of the income tax scale
	1995	Liberal professionals are taxed
	1995	The tax on assets is created
	1995	The real estate tax is created to finance municipalities
Public spending reforms	1981	The Budgetary Authority is created
	1984	With the Law for Financial Balance, vacancies are eliminated, and the hiring of new officers is prohibited
	1984	Public companies are obliged to make mandatory contributions to the Central Government
	1985	Partial elimination of subsidies to commodity prices
	1996	Renegotiation of internal debt with state entities
Financial reforms	1983	Incorporation of elements such as the external rate and the supply and demand of internal funds to determine interest rates
	1987	The minimum term (90 days) at which non-state banks may borrow is reduced
	1988	The General Audit Office of Financial Entities is created to be in charge of supervision
	1989	Financial intermediaries are allowed to define their interest rates
	1991	Credit limits are eliminated
	1993	Policy towards the standardization of reserve requirements is initiated
	1995	The policy of unification of reserve requirements is continued and the base is broadened
	1995	Access to rediscount for private banks
	1995	State monopoly on current accounts is broken
Privatization	1985-92	Sale of CODESA companies
	1993	Privatization of Fertica and Cempasa

Source: Author's elaboration based on Villasuso (2000, p. 24).

In early 2000, an attempt was made to privatize the Costa Rican Electricity Institute (ICE) and the National Insurance Institute (INS), but due to the arduous social protests and the overall deep social conflict caused by the transition to a model that further affected the proletarian classes and disempowered middle classes, it was not possible to privatize them.

The 2009 process of negotiation and approval of the Central American Free Trade Agreement (CAFTA) with the United States represented an important turning point in Costa Rica's social and economic policy. Its social significance is in its being part of a gradual process of economic, labor, and institutional transformation that began in 1980. It is within this historical framework that the discourse and practices of TVET modernization and reform in Costa Rica make sense.

8.1.3 The emergence of new business groups and the beginning of discourse surrounding TVET modernization.

The shift in vision of development based on the reduction of protectionism, internal liberalization, the opening of financial markets, and the privatization of state enterprises was the basis for the transformation of the productive sector (Lizano, 1994, p. 70). This created the conditions for the abrupt emergence of two new economic groups in the liberal era: private financial groups and groups of nontraditional exporters⁴³ (Lizano, 1994, p. 4).

Before these transformations, this new transnationalist business and political class, which based its vision of future development on the attraction of direct foreign investment, realized the need to generate a program to productively integrate public sector workers who would be laid off into the private sector. Furthermore, a training program was required to meet the needs of the large multi- and transnational companies that would arrive in Costa Rica. This training plan was a consequence of the economic opening and a comprehensive state reform.

The 1990s were the decade auguring the beginning of the expansion and restructuring of secondary-level technical education offerings, the emergence of private educational institutions with technical postsecondary offerings, the strengthening of financing for technical education, and above all, the beginning of the link between TVET institutions and the business sector. The above socio-political configuration explains why when we speak of the relationship between the TVET system and businesses, what we are talking about is the relationship of TVET institutions with the new configuration of transnational companies, and no longer with the small- and medium-sized national-industrial entrepreneur.

⁴³ Export contracts, maquila, free trade zones, incentives for tourism activities.

The 1990s also witnessed the inauguration of several initiatives to modernize TVET, such as the first national public-private forum to implement dual apprenticeships, the initiation of several pilot projects for dual apprenticeships, cooperation agreements with Germany and Taiwan, infrastructure development (weak and insufficient), and a public debate on the social, economic, and political functions of TVET. Some of these actions and events have been compiled in the following table 17.

Table 17 Main changes in the TVET system in the era of economic liberalization in Costa Rica between 1983 to 2021

Year	Actions
1983	The Higher Education Council approves new plans and programs for agricultural education and family and social education
1990	A new curriculum proposal for technical education is submitted for approval and implemented in 1993
1993	The Law for the Financing and Development of Technical and Professional Education No. 7372 is approved, which provides technical schools with resources from INA's surplus
1995	The MEP implements a new educational offer for the agricultural, industrial, commercial, and service modalities of the technical education subsystem
1994 - 1998	Plans and programs of study were revised, occupational profiles of the different specialties were developed, new specialties were opened and the minimum requirements for teaching each of the specialties were elaborated
1997	The Seminar on Linking TVET with the productive sector was held
1998	Signing of the Articulation Agreement between professional technical colleges and university colleges
1998	The National Integrated System of Technical Education for Competitiveness (SINETEC) was created to promote assertive coordination between the education sector and the business sector, with the aim of creating a balance between the supply of technical graduates of the system and the demand of the labor market
1999	The act of recognition of studies of the technical colleges in the university colleges is formed
2006	Approval of the education model based on competency standards
2008	The MEP's Department of Business Linkage is created
2008	The National Technical University is created, the first technical university in the country

Year	Actions
2016	The governments of Costa Rica and Germany sign an agreement for the development of dual apprenticeships in Costa Rica and other areas
2017	A national tripartite dialogue table is created to discuss the issue of dual apprenticeships in Costa Rica
2018	The National Qualifications Framework for TVET is created
2019	Approval of the dual apprenticeships law
2021	The INA Reform Law is approved
2021	Due to the failure of SINETEC, a proposal is created to create a national TVET system

Source: Author's elaboration based on López., Viquez and Avila (2001); and Láscarez (2017; 2021)

From a configurationist point of view, these actions should be understood as interests, motivations, and the emergence or consolidation of an entrepreneurial subjectivity aimed at transforming the productive apparatus by qualifying the Costa Rican labor force.

For example, there was a shift from the state-entrepreneur as the main employer to the private sector as the generator of a large part of the new jobs. By the end of the 1990s, 60% of activities were modern and 40% were traditional (López, Viquez & Ávila, 2001, p. 63). Therefore, the work of TVET was vital in facilitating the transition from traditional activities to activities with greater technological applications. The labor market trend in Costa Rica rapidly shifted from agriculture as the main source of employment to the textile industry, mechanics, electronics in the industrial sector, computer programming, tourism, and secretarial work in the service sector (López, Viquez & Ávila, 2001, p. 63). The main facts about this period are:

- As mentioned, at the end of the 1970s, the ideological bases (neoliberalism⁴⁴) and the material bases (crisis of the state-entrepreneur) were established for the country to begin a transition from a state model based on import substitution industrialization to a model of market liberalization based on attracting foreign investment (Díaz, 2015). The 1990s were characterized by the promotion and implementation of a series of state reforms

⁴⁴ A thorough analysis of the emergence, development, and materialization of neoliberalism in Costa Rica can be found in the work of Arias 2019. *History of neoliberalism in Costa Rica: the emergence in the electoral contest, 1977-1978.*

inspired by a neoliberal agenda: new forms of transnational investment, new spaces for commercialization and capital accumulation, and a reduction in the state's capacity to intervene in public issues and in the market. In education, this era was marked by assigning greater importance (at least discursively) to the quality and quantity of labor available for the development of new productive activities that could meet the reform strategies and the needs of transnational corporations in Costa Rica (I14-SCIENT, 2021).

- The capitalist economic development in Costa Rica is part of the historical framework that explains the development of the Costa Rican TVET system in general terms. While it is true that the colonial and postcolonial past is important, what explains the current TVET system is the transition between the crisis of the entrepreneurial state and the implementation of liberalism as an economic, cultural, and educational project. Thus, the development of neoliberal capitalism since 1980 is the cultural basis for the expression of certain business interests, motivations, and actions – business subjectivities that define the organization, structure, functions, and objectives of TVET in Costa Rica.

8.1.4 Business culture in Costa Rica

As we have seen in previous sections, from the 1970s on, a new business group came to power against the backdrop of structural transformation and social conflict borne of an economic crisis with a negative impact on unemployment, inflation, and the limited capacity to create solutions that went beyond ideological agendas.

The era of liberalization of financial markets for services and the strategy of attracting foreign investment implied a reformulation of the objectives of the state itself and its institutions. A new business culture took shape, under the guidance of a new accumulation of socially understood meanings (Hernández 2005, p. 49). Not only was it a new business group with a different ideological orientation towards markets, the role of the state, and the role of regulation, but it was also a business group that would implement the discourse of modernization of the Costa Rican state, in turn imposing the discourse of competitiveness and integration into the globalizing dynamics of the 1980s.

If the new business culture is understood as the accumulation of meanings and codes to create meanings, then the question arises as to what these new codes are that would begin to accumulate within the new transnational group from the 1980s onwards.

To answer this question, it is necessary first to identify the entrepreneurial values that form the basis of the accumulation of new cultural meanings. These new values emerge from an

ideological and theoretical critique of a Costa Rican state highly intervening in market processes between 1950 and 1978. The values of deregulation, competitiveness, efficiency, minimum expenditure, managerial control, liberalization, and privatization became not only the discursive, but also the cultural framework on which the business elites would base their subjectivities and actions. Clearly, there is a contrast between a state that failed, one that increased public spending and went into crisis, versus a state that leave it to “the market” to solve the fundamental issues for the creation of wealth (instead of intervening in public and private affairs).

The process of accumulation of meanings of the new business groups was oriented to the relationship with other social actors. The anti-union discourse has increased in pitch up to the present day. The new business groups saw trade unionism as an obstacle to progress and to a good so-called “investment climate.” In this sense, it can be understood why from this time onwards, education unions were among the few survivors of a disguised anti-union strategy in Costa Rica. At the same time, the anti-public-worker discourse dominated the codes of the new business groups. For the new business groups, the public worker was unproductive and a productive obstacle, as he/she represented a high-state bureaucracy.

Unlike the old peasant, agro-export, and medium industry business groups that supplied the domestic market and saw the state as an employer, the new business groups saw the state as a major obstacle, so that another cultural code that began to prevail: that of business presence in the decision-making process of state institutions. It was no longer a business group outside the political world, but business groups taking political power from the most liberal sectors, who were more willing to reduce the state and to abandon social investment.

The framework of this productive restructuring was closely related to deregulation, liberalization, privatization, maximization, and technification of productive processes. All this allowed Costa Rica to skip some stages of the development process, in what economists have called a “leapfrogging,” thus managing to move from an economy primarily based on traditional productive activities to one largely based on industry and medium- and high-technology services (Monge, 2017, p. 12). This productive restructuring favored, with its economic policies, transnational capital, and large local capital with export capacity. In other words, the vision of the company and the entrepreneur gestated in this context of productive reconversion was that of an entrepreneur and a highly productive company. This process of productive reconversion placed the entrepreneur at the center of decision-making, assigning the

entrepreneur the responsibility of restructuring his company if he/she wanted it to be competitive (Hernández, 2006, p. 47).

Thus, one can find different types of companies:

Maquila: These are highly export-oriented companies that have, in recent years, been established in free trade zones, which provide tax benefits and high labor flexibility. These companies hire low- and medium-skilled workers, and feature low wages and high labor turnover⁴⁵.

Large companies with transnational capital: These exporting companies' production processes are based on advanced technology. They hire low- and medium-skilled labor with competitive salaries and feature a low personnel turnover due to the need for bilingual profiles, which are scarce in the Costa Rican market.

Medium-sized companies with local capital: These are normally exporting companies with a moderate technological base. They require low-skilled personnel and have a stable turnover rate.

Micro- and small-sized companies: These companies constitute 60% of the Costa Rican business park. These are local consumption companies, with a low technological base, and employ no more than five people, normally with low qualifications.

Therefore, since 1980, with the liberalization reforms described above, the focus has been on attracting foreign capital, or, in other words, there has been no policy to develop small and medium-sized companies with national capital. It is important to note that vocational training policies were designed from and for certain types of enterprises, requiring a minimum of preparation on the part of institutions and enterprises to begin the process of modernizing TVET structures. Economic development policies have been based on the attraction of foreign direct

⁴⁵ Costa Rica has a special regime for the attraction of foreign and domestic investments, called the free zone regime (RZF in Spanish), established by Law 7210. A free zone is a geographical area within the country where a group of companies can introduce goods of foreign origin (e.g., inputs) without having to pay customs duties and other taxes. The companies that may apply to the free zone regime are: 1) companies exporting services, which must export at least 50% of their total sales; 2) companies in strategic sectors, defined by the Costa Rican authorities, which must be located outside the greater metropolitan area (GAM); 3) scientific research companies, which may be companies or organizations; and 4) major suppliers, whose sales to free zone companies must represent at least 40% of the total (Monge, 2017, p. 20).

investment, leaving aside a large part of the business sector that has moved, over time, towards forms of de-financing, bankruptcy, or labor informality.

As Hernández (2004, p. 49) points out, business action is partly configured in relation to subjective fields, culture, and power relations. Thus, state actions have tended to strengthen a certain business culture (namely, the exporting business culture of large local and transnational capital), which has given rise to different expressions of social conflict. If, between 1950 and 1978, economic policy was oriented to developing a small- and medium-sized agro-exporting businessman, oriented toward local consumption, with the new development model, economic policy turned to strengthening a medium-sized exporting and transnational businessman. In other words, new policies represent the dismemberment of an old business class by a new business elite. To this end, a series of central business organizations were created to define policies of attracting investment and exports, which were intimately related to the transformation of the TVET system.

8.1.5 Synthesis of the structural configuration

In a previous chapter, a historical overview offered a concrete understanding of the participation at the political and educational level that business groups have had in the definition and construction of the TVET system. The following table 18 is a synthesis of the main features of each stage of development:

Table 18 Summary of the socio-historical and cultural configuration of entrepreneurial participation in the TVET system

Development stage	Institutional development TVET	Workforce	Entrepreneurial culture
Postcolonial period 1821-1949:	<p>Low-skilled labor force</p> <p>Lack of initial and continuous training processes linked to informal education</p>	<p>Subsistence farmers</p> <p>Agricultural laborers (coffee industry employees)</p> <p>Wholesale and retail traders</p>	<p>Economic groups and traditional colonial elites, especially coffee and agricultural elites (Parada 2019; Vargas 2015), the development of a peasant and valley-centric culture, the creation of entrepreneurial organizational forms based on small subsistence agricultural production</p>

Development stage	Institutional development TVET	Workforce	Entrepreneurial culture
			for most of the population. Basic skills for work. Traders, fishermen, et cetera
Entrepreneurial state and import substitution industrialization on 1950-1980:	Creation of legal and regulatory frameworks for the creation of the first Public University, INA and MEP Creation of private professional training institutions	Industrial and agro-exporting proletariat	Rise and consolidation of a Costa Rican entrepreneurial class, based on domestic industry
Economic liberalization 1980-present:	Diversification and updating of offers Initiation of linkages with the business sectors Expansion and modernization of the “competencies” curriculum, dual apprenticeships, and the national qualifications framework	Expansion of transnational maquila and free trade zone capital. Low- and medium-skilled workers	Liberal worker Entrepreneurship Large masses of young people linked to informal work, self-employment, and free trade zones

Source: Author’s elaboration, based on Cruz (2013)

8.2 Configuration of the organized political action of the business sector

Section 7.1 described business organizations in Costa Rica. It also explained how, starting in the 1980s, a new political structure began to promote economic liberalization, such as CINDE, COMEX, and PROCOMER. In addition, the chapter explained how these business organizations were linked to the modernization of TVET structures under two fundamental discourses: the discourse of modernization of the productive apparatus, and the discourse of improving what was understood as the “investment climate.” Now, Section 7.2 will present the concrete political actions that business groups have developed around TVET.

8.2.1 A new institutional framework: human capital and attraction of foreign investment

In the context of rapid productive transformation, the strategies of economic opening, liberalization, and export promotion required a strong institutional framework that, to this day, serve to attract new foreign capital and promote exports. In addition, they were and are central to the process of modernizing TVET structures. Specifically, these institutional interventions include the creation of the Costa Rican Coalition of Development Initiatives (CINDE) in 1982 (an agency for attracting foreign direct investment), the Ministry of Foreign Trade (COMEX) in 1996, and the Foreign Trade Promotion Agency (PROCOMER), also created in 1996.

These institutions are essential for this research, as they lead development strategies, for example, by promoting several free trade agreements with several countries, as well as by attracting companies that played a historical role in TVET development.

Costa Rican Coalition of Development Initiatives (CINDE)

CINDE was born in the context of trade liberalization and the need to lead the country to productive diversification processes, removing the country's dependence on the four traditional export products: coffee, bananas, sugar, and meat.

CINDE was created in 1982. Thus, it is important to mention that between the late 1970s and early 1980s, the world experienced a great economic depression, with a particularly strong effect on Costa Rican society. In addition, the geopolitical context (Cold War) played an important role, not only in the liberalization process, but also in the creation of the institutional framework to implement the liberalization plans. Due to the fight against communism in Central America (especially by the Sandinista movement in Nicaragua), the United States Agency for International Development (USAID)⁴⁶ was interested in promoting a shift in the economic model as part of its strategy. (COMEX 2012; Aguilar, 2008; Fox & Monge 1999). The U.S. strategy of military and political dominance, i.e. geopolitics, was consolidated through USAID. In other words, it was not only an economic change of course but also a political and military one in the context of the Cold War and the Central American military conflict (Isla, 2021, p. 24). In this social, military, and political context, CINDE was created.

In 1982, amid a very complicated economic and social situation for Costa Rica, Daniel Chaij, then-Director of USAID in Costa Rica, had the idea that the Costa Rican private sector should play a more active role in the discussion and decision-making around the country's economic

⁴⁶ USAID would finance CINDE with an initial grant of just over \$11 million, which became effective in 1983, through periodic disbursements (Comex 2012, p. 69).

and social future, for example, in issues such as promoting export and attracting direct foreign investment. Mr. Chaij communicated his idea to Richard Beck, a businessman of great trajectory (founder of Atlas Electrónica, honorary president of UCCAEP and former president of the Costa Rican Chamber of Industries), who welcomed the idea with great interest and assumed the commitment to find other people from the Costa Rican private sector with whom to discuss the implementation process. (COMEX 2012, p. 67).⁴⁷

From the beginning, CINDE focused on the development of human talent. For example, it created the Training Program (PROCAP) whose objective was to provide training through scholarships (training, Master's, and doctoral degrees) to senior and middle management in the private export, financial, and university sectors. Subsequently, its coverage in the private sector was expanded to include training for middle and lower technical levels. PROCAP was a key part of the scaffolding for attracting investment and stimulating non-traditional exports, and without the training of human resources, these objectives set would not have been achieved. Since its creation until 1994, PROCAP has organized more than 1,000 events (such as seminars and conferences) and trained (through short courses and scholarships) around 30,000 Costa Ricans. The program continued for much longer than originally planned, given the results observed in the program (COMEX 2012, pp. 78-80).

From its creation in 1984 until 2000, CINDE was responsible for adjusting its investment attraction strategies. Procter & Gamble (P&G) in 1999, Hewlett-Packard (HP), IBM, Hospira, Boston Scientific, Baxter, Arthrocare, Allergan, and Coloplast (2000s) invested in Costa Rica, among several others.

Even after several institutional reforms due to changing market dynamics, budget cuts, and staff reductions, CINDE participated in the negotiation of several free trade agreements. Perhaps the

⁴⁷ These Costa Rican entrepreneurs were the ones who designed the structure of CINDE (COMEX 2012, pp. 78-80): Jorge Manuel Dengo (manager of the Instituto Costarricense de Electricidad (ICE), former executive vice president of the Central American Bank for Economic Integration (CABEI), and former vice president of the Inter-American Development Bank (IDB)); Eduardo Lizano (former president of the Central Bank), Jorge Rossi (former vice president of the Republic and general manager of CORMAR), Ernesto Rohrmoser (general manager of Corporación de Financiamiento Industrial Cofisa), Rodolfo Cortés (agro-industrial entrepreneur), Guillermo von Breyman (former executive vice president of Corporación Banex), Carlos Manuel Escalante Van Patten (architect and member of the Board of Directors of INCAE), Juan Rafael Lizano (former president of the National Chamber of Agriculture and Agribusiness, and also of the National Union of Chambers-UCCAEP), as well as Edwin Méndez and Carlos Araya Lizano, who were President of the Chamber of Commerce and President of the Chamber of Industries, respectively.

most conflictive and important was the Free Trade Agreement between Costa Rica and the United States and Central America (CAFTA), which was approved in 2009.

In terms of the concrete relationship with the TVET system, CINDE has played an important role at various levels and areas, which include:

- Support in curriculum development and diversification processes for initial training programs of INA, MEP, TEC, UCR, UTN, UNA, para-university institutions, and university colleges, among others
- Review, creation, and promotion of training programs for workers in companies
- Support in the development of public policies for vocational training (dual apprenticeships)
- Programs aimed at strengthening technology-based and bilingual programs for different educational levels. (I4-CINDE, 2021)

More specifically, CINDE has had links with TVET institutions through the following actions (Comex 2012; I4-CINDE, 2021):

- CINDE developed the English for Contact Centers program, which was launched in 2005 and strengthened in 2006, in collaboration with the National Institute of Education (INA). Approximately 2,000 people graduated between 2006 and 2008, and 1,000 have graduated in 2009. In November 2009, in conjunction with INA, they coordinated a recruitment fair for students who graduated from this program. This activity brought together ten multinational companies in the service sector and facilitated the incorporation of graduates into the market. In the Universidad de Costa Rica, twenty young people graduated from the English for Engineering program in January 2008
- At ITCR, the Computer Engineering program was implemented in 2009, with an initial enrollment of 50 students. At the technical school level, the Service Center Executive program was launched in 2006. Some 350 students graduated in 2008⁴⁸, and 2009 saw a similar number of graduates; by 2019, some 330 graduates are expected⁴⁹.
- At the private sector level, CINDE also developed several projects, especially scholarship funds for the study of English, with financial contributions from private companies.

⁴⁸ To view the curriculum of the last year of training visit this web page.

<https://www.mep.go.cr/sites/default/files/programadeestudio/programas/ejecutivo-centroservicio-12.pdf>

⁴⁹ It was not possible to corroborate the number of graduates for 2019 -2022.

Ministry of Foreign Trade of Costa Rica (COMEX) and the Foreign Trade Promoter of Costa Rica (PROCOMER)

Law 7638 of October 30, 1996 was passed to promote the rational use of public-sector resources and facilitate the orderly and competitive insertion of the country into the globalized economy. This law established the Ministry of Foreign Trade as the governing body of the sector in charge of creating the Foreign Trade Promoter of Costa Rica (PROCOMER). PROCOMER was conceived with the purpose of concentrating in a single institution the functions that until then corresponded to the Corporación de Zonas Francas de Exportación S.A., the Centro para la Promoción de las Exportaciones e Inversiones (CENPRO), and the Consejo Nacional de Inversiones (COMEX 2012, p. 109).

The functions of COMEX are:

- To define and direct foreign trade and foreign investment policies, including those related to Central America.
- To direct bilateral and multilateral trade and investment negotiations, including those related to Central America, and to sign treaties and agreements on these matters.
- To define the tariff policy, together with the Ministry of Economy, Industry and Commerce, the Ministry of Agriculture and Livestock, and the Ministry of Finance.
- To represent the country in the World Trade Organization and other international trade forums where treaties, agreements and, in general, trade and investment issues are discussed.
- To establish export regulatory mechanisms, when necessary due to restrictions on the entry of Costa Rican goods to other countries. In these circumstances, the regulations must be motivated, clear, equitable, and non-discriminatory. The Ministry of Foreign Trade may rely on the Ministry of Economy, Industries and Commerce and the Ministry of Agriculture and Livestock to execute these regulatory mechanisms. Likewise, it may execute them through other (public or private) institutions related to the productive sector. These institutions may charge the users for the services rendered.

To determine trade sanctions derived from international agreements subscribed by Costa Rica (in consultation with the Minister of Foreign Affairs and the Ministers in charge of national production). These sanctions will be carried out in the country by the responsible agencies, in accordance with the procedures of the law and the matter in question. PROCOMER oversees:

- Designing and coordinating programs related to exports and investments.

- Providing technical and financial support to the Ministry of Foreign Trade (COMEX). to administer special export regimes
- Administering a single window system for foreign trade.
- Promoting and protecting the country's commercial interests abroad.
- Centralizing and expediting import and export procedures.
- Following up on foreign trade statistics.

COMEX becomes the head of foreign trade policy in charge of attracting direct investment. Its two arms are the PROCOMER and CINDE organizations, which have been strongly linked to the development processes of TVET in Costa Rica since 1984.

8.2.2 Beginning the curricular and institutional transformation of TVET: the influence of INTEL

Since the founding of CINDE in 1984, and the implementation of the Structural Adjustment Programs against the backdrop of a political discourse on modernization, a major political interest emerged to provide the country with a strong technical and professional educational institutionalism to meet the demands of large transnational corporations. However, as Beirute (2018) shows, the institutional framework of TVET is really weak and shows distortions at various levels of institutional management, the planning of the educational offer, serious problems of financing and communication between TVET actors. Beirute (2018, pp- 16-20) indicates that Cost Rica does not have a national TVET policy articulated to the work processes at the level of the different regions of the country.

The 1980s were characterized by a slow and unclear “accommodation” of the role and functions of TVET, mainly because the institutional structures remained static in the 1960s, and the fiscal crisis did not allow for investment in education. For interviewees (I14- SCIENT, 2021 and I4- CINDE, 2021), this period – a time of the great financial crisis and social upheaval – resulted in what is typically referred to as the “lost era” (1980 to 1990) in Costa Rica. Low levels of public investment, austerity measures, and increasing poverty and inequality caused a strong stagnation in education investment. Nevertheless, several agricultural and livestock technical schools were created and expanded throughout the country, as well as schools for the maquilas and textile factories for companies located in the free trade zone regime.

At the beginning of the 1990s, changes in TVET public policy began to occur, concrete actions that promoted its modernization based on business participation. An important change occurred in 1990, when computers and business management were introduced, and important changes were made based on the idea of strengthening the entrepreneurial spirit (I12-EXPERT1, 2021).

Another central aspect in the strengthening process occurred in 1994, when Law 7372 was signed, providing resources to the technical colleges from part of the INA surplus. For the first time, the technical schools had their own resources to make investments (I10- INA, 2021). But perhaps one of the major milestones of the 1990s was the arrival of INTEL in Costa Rica in 1998. Interview I12- EXPERT1, 2021, who led the institutional reform of technical education since 1980 and who was present in the negotiations to attract INTEL's investment, indicated the following:

Intel represented the materialization of the government's policy of attracting foreign investment. The first big company that arrived was Intel and this meant big educational changes in the part of professional training because one of the first things that Intel managers asked for was well trained workers. We promised to make the necessary institutional changes to supply Intel and the other companies with good workers. We had to start with a curricular reform.

The process of transformation in the curricular offerings, through the diversification of careers and through content closer to business needs that occurred in the 1990s, had a lot to do with the arrival of INTEL in Costa Rica. The arrival of INTEL, in 1998, marked the beginning of the major reforms of TVET in Costa Rica because it also served as a signal to other multinational high-tech companies to feel confident to invest in Costa Rica, since the social environment was stable, the salaries were low compared to other countries (but high for Costa Rica) and the labor force was relatively good (I12- EXPERT1, 2021⁵⁰).

For interviewees (I4-CINDE, 2021; I8-INABUS, 2021; I9- MEP, 2021; I12-EXPERT1, 2021, I14- SCIENT, 2021), INTEL's arrival to Costa Rica represented a great dynamism in the economy and an opportunity for the MEP, INA, and TEC to supply the labor force requirements the company would need to operate in Costa Rica. TVET institutions faced two main problems: the quantity of new graduates and the quality of those graduates. At that time, the international cooperation agreement in technical education signed between the Costa Rican government and the Taiwanese government was central, especially in modernizing the curricula of mechanics, electronics, and electromechanics.

Still, interviewees I12- EXPERT1, 2021 and I14- SCIENT, 2021 recognized that at the beginning, INTEL's impact on employment generation was overestimated. INTEL's

⁵⁰ Author's translation

introduction in Costa Rica pushed institutions in charge of providing basic technicians, medium technicians, specialized technicians, and engineers. In any case, the impact in terms of the reordering of the TVET system was indisputably significant. This can be observed through the growth of enrollment in the main TVET institutions when INTEL arrived in the country, such as in the following institutions:

Enrollment in computer and electronics programs at the Instituto Tecnológico de Costa Rica (ITCR) increased by 30 percent and the demand for electronics graduates and technicians increased by 300 percent one year after Intel arrived in Costa Rica in 1997. Between 1986 and 1994, the National Apprenticeships Institute (INA) had an average of 47,000 students per year. In 1995, it increased to 72,926, in 1996, to 104,266, and in 1997, to 124,191.

According to data from the Directorate of Technical Education of the Ministry of Public Education (MEP), the impact of enrollment in technical schools was significant. It went from 39,388 in 1996 to 43,592 students in 1997 (La Nación, March 18, 1998). An ILO study on the impact of INTEL on Costa Rica's economy indicates that:

In the last 30 years Costa Rica went from having an economy based mainly on traditional productive activities to one based, to a large extent, on medium and high technology industries and services. In other words, it went from having a productive matrix connected to traditional and predominantly agricultural global value chains with relatively low value added and low skill levels (coffee, sugar, bananas and later textiles) to an economy with increasingly solid connections to global value chains with higher value added and higher skills and quality of employment. The most visible and widely commented case of this productive transformation, recognized in the world literature on these issues, was the start of operations in 1998 of a microprocessor assembly and testing plant of the Intel corporation that led to the creation initially of more than 2,200 direct jobs with higher wages than the national average in the manufacturing sector, a figure that exceeds 3,000 jobs a few years later (Monge 2017, p. 8⁵¹).

As training requirements demanded higher standards, it became indispensable to develop new competencies in vocational training and technical education in the areas of computer science, manufacturing systems, materials handling, English, and business administration.

In a 1998 interview with the executive director of INTEL, he stated:

⁵¹ Author's translation

If Costa Rica is going to put its economic growth in the hands of high-tech companies, it will have to give greater impetus to technical education and to diversify the areas of specialization of young people (...) I think the biggest issue we need to work on is educational infrastructure; this in order to ensure the adequate supply of technically well-trained people. That is why we generally work very closely with the local educational institutions (Periódico la Nación, August 12, 1998⁵²).

One of the media and political effects of INTEL on TVET in Costa Rica was related to the political debate on the supply-demand relationship in TVET. An article in the newspaper *La Nación* published on March 8, 1998 discussed the specific actions that should be taken to address the weaknesses and criticisms that managers and directors of large companies (such as INTEL)) frequently made about the quality of the educational system, namely low levels of English and few technology-based programs.

- To resolve this detected deficit, the INA, the MEP and the ITCR developed a series of proposals starting in 1997: Almost in parallel, INA and the Technical Education Directorate of the MEP redefined objectives and initiated a restructuring process.
- The ITCR and university colleges redefined some of their programs of study, even opening courses or careers that directly met the demand of the industry in computer and electronics.

In 1998 the MEP launched a pilot plan in 15 technical schools throughout the country to intensify the teaching of English, computer science and the use of high-tech laboratories. This MEP pilot plan was financed by the Costa Rican government and will be implemented in the National Technical Education System, whose purpose “is to unify study plans, programs and efforts so that the four university colleges, the 80 technical colleges, the ITCR and the INA do not continue to operate individually”. A program was created to strengthen the areas of electronics, electromechanics, mechanics and information technology, financed by the Taiwanese government through a \$7 million donation (La Nación, March 8, 1998).INTEL’s continued weight and influence in the generation of jobs and in the transformation of curriculum has been highlighted in this section. For many entrepreneurs and experts, this is where the modernization of TVET institutions began, a process that is still ongoing. For example, in an interview with the person in charge of the Investment Climate at CINDE and the former director of Technical Education at the MEP indicated that the lack of bilingual speakers has not been

⁵² Author’s translation

resolved, the close work with companies is not stable or dynamic in all sectors, and bureaucratic roadblocks to updating technical careers continue to exist. In addition, the pedagogical problem has become one of the most important issues institutions and entrepreneurs face, insofar as teachers do not have the necessary pedagogical tools to improve learning outcomes. The control mechanisms are insufficient and the systems for hiring teaching staff are not focused on the evaluation of these competencies.

8.2.3 Linking TVET institutions and business organizations: the curricular philosophy of “Less width, more depth”

According to the former Costa Rican national director of technical education, curriculum modernization began at this time under the slogan “Less width, more depth ⁵³”.

This means that the bases of the curricular reform should reduce the contents and topics of the programs of study, and rather deepen in reduced contents. “It is better to know a lot about a few things than to know a little about a lot”. We got this idea from our relations with the technical education experts of the Taiwanese government (I12-EXPERT1, 2021)

From 1980 until almost the beginning of 2000, direct relations between TVET institutions and businesses formally began, stimulated by the actions that CINDE, PROCOMER, and COMEX had been carrying out since 1980. To be exact, the process of linking companies and TVET institutions began in 1996 (during the negotiations for INTEL’s arrival). That process was framed by the curriculum principle of “Less width, more depth”, so both employers and educational institutions had to identify the best ways to fill with content what the idea of “Less width, more depth” meant to Costa Ricans. Thus, a question begs to be asked: What was a less broad, but deeper curriculum for businesses? To this end, two things should be noted: First, that this idea was born as a product of cooperation with Taiwan on TVET curriculum, and second, that it was born as a critique of the curricular characteristics of technical programs before 1996. A “narrower” program meant that the thematic content had to be reduced, but the level of knowledge in the few subjects taught had to be deepened. The idea was no longer to train students who knew a little about a lot; now they wanted students who knew a lot about a little.

In this consultation process, business associations became the source of information. However, it is important to indicate that the business culture was not accustomed to systematically initiating these processes at the curricular level, that is, at the level of pedagogical discussion with TVET institutions. They found more openness in certain larger companies with a formal

⁵³ Menos ancho, más profundo.

department of human resources. A work that the institutions, especially the MEP, initiated with companies was the search for new specialties (such as quality culture, digital design) or the identification of updates or curricular reforms to pre-existing technical careers, including a change in name of some specializations.

This point is central to this research because it is from here that companies and business organizations began a new, more direct tendency to influence the directions of TVET institutions.

8.2.4 Dual apprenticeships: the flagship policy of TVET modernization

The history of dual apprenticeships in Costa Rica is relatively new, as it has been developing in the Costa Rican political-business and educational context for only about four decades. However, since 1990, it has become a central issue in the business agenda and is the main reason for many conflicts between the state, businesses, students, and unions. In the following, I will explain how the politics of dual apprenticeships have been presented in the business world, and what concrete actions have been taken to implement dual apprenticeships in the Costa Rican TVET system. It is important to mention that the temporal delimitation is based on available bibliographic evidence and interviews with business and institutional actors with a close relationship with the topic.

The historical record of discussions surrounding when dual apprenticeships began to be institutionalized in Costa Rica is not entirely clear. Some interviews with educational experts indicate that there were politicians talking about the German model of dual apprenticeships as early as the late 1950s, but I found no evidence for this claim. Frank Mittmann's book *La educación dual en Costa Rica. proyecto piloto mecánica automotriz del Colegio Vocacional. Monseñor Sanabria 1996-1999* describes a cooperation between the Colegio Técnica Monseñor Sanabria in Costa Rica and the Technical College of Osterholz-Scharmbeck (Germany), which developed in 1984 within the framework of Monseñor, a program of the Ministry of Education of the State of Lower Saxony to “bring the world into the schools” (Mittmann, 2001, p. 5). Mittmann also narrates how the experience of two Costa Rican teachers who received scholarships in Germany in the 1960s made it possible to create a good environment for implementing a dual apprenticeships project. In 1986, both schools signed the agreement, which in 1988 was included in the Cultural Agreement between Germany and Costa Rica (I13-EXPERT2, 2021).

There is also evidence that in the 1980s, there was significant political attention directed toward the issue of training in the MEP. In this regard, the Costa Rican Minister of Education in 1991

mentioned that “Concerns about the dual plan date back to the period 1978-1982, when I was Vice Minister of Education. The system was very well studied, including some Latin American experiences” (Guzmán, 1992, p. 7).

It could be said, then, that the discussion on dual apprenticeships began to be institutionalized in the political, business, and institutional spheres largely in the 1980s, thanks to the agreement between technical schools between Germany and Costa Rica and the studies that the MEP began to carry out at that time.

However, it was not until the early 1990s, specifically between November 13-15, 1991, that the possibilities of building a public educational policy based on dual apprenticeships in Costa Rica, inspired by the German dual apprenticeships model, were systematically discussed for the first time (discussions held between business and politicians). In 1991, a seminar-workshop was organized to discuss and analyze the dual experiences developed in Costa Rica. This seminar-workshop was organized by the Goethe Institute, the Ministry of Science and Technology, the Costa Rican Association of Former Students of the Federal Republic of Germany, and several German experts who were invited to speak about the German experience on this topic. This seminar’s main objective was to outline the actions and commitments to implement dual apprenticeships in the country (Guzmán, 1992). It should be noted that the business sector represented by CINDE, business chambers and private companies had an active participation in the organization of the activity, the search for solutions and spaces for dialogue with the government and international experts on TVET. The main conclusions drawn from the working session between entrepreneurs and representatives of TVET institutions are summarized and categorized below:

Dual apprenticeships plans and programs: Dual apprenticeship plans and programs should involve the business sector in their approach, from providing content for the curricular design to defining reality-adjusted strategies, which can be flexible and constantly revised. Moreover, a consultancy ought to be hired to determine the technical education needs in the business sector, providing guidelines to the MEP.

The training systems for technical education teachers: Training should be organized and programmed based on different stakeholders’ assessments, and with incentives and labor guarantees for participants. A national technical education congress should be held to open opportunities for teacher and technical education and training.

Financing system for TVET in Costa Rica: The INA agreement should be reviewed with the technical schools regarding the provision of equipment and materials to improve the laboratories.

The dual apprenticeships system in Costa Rica: Regarding the dual apprenticeship system, one conclusion that came out of the employers' meeting was that “dual apprenticeship is based on bipartite and equal responsibility, with consensus and not obligation. Otherwise, it doesn't work”. Pilot plans must be developed in priority areas to begin to assess adjustments to make in the future. Another conclusion of the meeting was the importance of establishing an “incentive program for companies”. In the opinion of the employers, “the company must be given *a carrot to take* on an apprentice”. This 1992 report expresses the need to establish cost-benefit ratios so that companies can make decisions and participate in the on-the-job learning process. And finally, another conclusion that came out of the workshop is that for the entrepreneurs since 1992 the status of the apprentice in the workplace has been a problem: is the apprentice a student or a worker? From this moment it was known that in Germany the apprentice in the dual apprenticeships system was conceived as a worker “in a learning process” while in Costa Rica this status was associated with high training costs. Almost 30 years later, the dual apprenticeships law passed in 2019 conceives the apprentice in the dual system as a student. An important element of the first workshop on dual apprenticeships in Costa Rica was the participation of politicians and entrepreneurs who belong to the “politician-entrepreneur” era described in previous chapters. Many of their arguments centered on the need for institutional reform of TVET were as follows:

- The success of the dual system in Germany should be an example for Costa Rica.
- Dual apprenticeships as a response to the challenges posed by trade liberalization processes.
- Dual apprenticeships as part of the modernization adjustments for trade liberalization (PAES).
- Transforming and modernizing technical education is a challenge in the face of so many scientific, technical, and technological advances. The profound structural adjustments that economies worldwide are undergoing make it necessary to produce and compete with quality.
- The major problems of TVET are curricular, human resources, financial resources, and structural-organizational.

8.2.5 Implementation of dual apprenticeships 1992 to 2010: pilot plans and business commitment in training processes

Between June 1993 and February 1997, the National Apprenticeships Institute (INA) carried out the first apprenticeship project under the Dual Modality in Costa Rica, in alliance with the Association of Maintenance Workshop Owners (APTAMAI). It was a Precision Mechanics program, aimed at young people between the ages of 16 and 19.

The second pilot project of the Dual Modality, and the first in a Costa Rican Technical College, was the Dual Automotive Mechanics pilot project, carried out at the Monseñor Sanabria Vocational College in collaboration with INA and three business organizations (APTAMAI, National Association of the Automotive Business Sector (ANSEA), Association of Service Managers (AGESA), as well as some thirty agencies and automotive mechanics workshops. It was a two-year program, aimed at high school graduates or young people with an approved fifth year (Mittmann, 2002, p. 1).

In an interview conducted with senior Mittmann in 2021 in Germany, some relevant aspects about business participation and its role in the training of TVET students were deepened. For example, Mittmann mentions that, in the 1990s, companies had a high political commitment to modernize technical education, but the participation of automotive companies was slow, and these did not always understand how the dual system worked, because it was necessary to make a dual apprenticeships system “a la tica”⁵⁴ i.e., adapted to the Costa Rican context. The question about the processes of adaptation of educational policies is who defines what the “local context” needs. In the end, there was a good participation in the training process of the Association of Service Managers of Agencies (AGESA) and the Association of Owners of Maintenance Workshops (APTMAI).

Mittmann also compared between the German model and the Costa Rican model of technical education. This is crucial because it represents the conception(s) entrepreneurs held about the learning process (see Table 3). Namely, the relationship between student and company should be based on an educational (not employment) relationship and the amount of learning time on the job, which is very short.

In the second stage, the experimentation with German technical assistance of the pilot plan in automotive mechanics at the MEP and INA-led union, educational, legal, family and employer actors to reflect on the true capacity of articulation between the INA and the MEP, on the legal

⁵⁴ “A la tica” means to create a dual apprenticeships system according to the “Costa Rican style”.

support of the dual apprenticeship process in the company, on the legal protection of minors, on remunerations, on legal limitations for the full participation of employers in the training stage, on the evaluation of competencies, the certification of these co-skills, and on the general institutional recognition and legitimacy of the “tropicalized” dual system (Láscarez & Schmees, 2021).

8.2.6 Political conflict around dual apprenticeship

This stage, like the previous one, is also characterized by implementing dual programs according to institutional criteria. Still, pilot plans or dual programs respond to an overall strategy to regulate or legislate dual apprenticeships. For example, a pilot plan in automotive mechanics was created and implemented in 2016, under the dual modality between the MEP and the INA, with support from GOVET, which had as one of its central objectives to define the characteristics of the national dual apprenticeships system. This project generated an intense debate between union organizations and companies against TVET institutions. Along with this pilot plan in 2016, several bills to regulate dual apprenticeships were presented by UCCAEP with support from several business chambers.

In interviews conducted with different business chambers, the Costa Rican-German Chamber of Industry and Commerce (AHK Costa Rica) was identified as playing a central role as advisor and facilitator (together with the German Embassy in San José) in the dialogue processes regarding dual apprenticeships (I5-AHK, 2021). Likewise, the Business Alliance for Development held a central role in dialogue processes, promoting the discussion through various spaces with all actors in TVET, and generating alliances with organizations such as the Konrad Adenauer Stiftung, INA, and the Chamber of Industries of Costa Rica to train entrepreneurs on the fundamentals and importance of dual apprenticeships. The Chamber of Information Technology and the Chamber of Tourism and UCCAEP played a central role in discussing human talent and dual apprenticeships in the framework of different aspects of the bills (I2-IC, 2021).

Due to the frequent strikes and political demonstrations against any initiative on dual apprenticeships by union organizations and some student sectors between 2016 to 2019, the MEP had to ask the ILO to moderate a national tripartite dialogue table in which different actors such as unions, the MEP, the INA, the UTN, the Ministry of Labor and the business sector participated. As indicated by Láscarez & Schmees (2021), who conducted a study on the discursive construction of entrepreneurs on the process of transferring the German dual model to the Costa Rican context, this tripartite dialogue process was characterized by a history of

conflict of an ideological and socio-labor nature. The dual model became a subject of ideological dispute in the context of labor and educational conflicts generated by neoliberal policies in the last decades in Costa Rica. For this reason, dual apprenticeships became, for entrepreneurs, an opportunity to influence educational and labor reform policies through flexibilization and deregulation. In a similar vein, Carballo (2020) analyzes the use of “dual apprenticeships” as part of the discourse of labor flexibilization or deepening of the neoliberal project in Costa Rica between 2006 and 2020.

Finally, the dual apprenticeships law was approved in September 2019, and is currently in the implementation stage. According to interviews with business representatives of the Dual Apprenticeships Advisory Commission for the implementation of dual apprenticeships in Costa Rica, multiple difficulties related to the low commitment of companies in student training have emerged. Companies wanted a dual apprenticeships system, but they do not want to train students. Another problem companies face is the rigidity of the bureaucratic structures of the MEP, INA, and other institutions. The deputy director of UCCAEP and representative of GAN Costa Rica indicates that Costa Rica will be better prepared to implement dual apprenticeships more widely, and as already mentioned, UCCAEP through GAN, are developing mechanisms to facilitate this process.

The president of CAMTIC, the advisor of the Chamber of Industries, the director of investment climate at CINDE, and the president of the German Chamber mentioned that the business and institutional culture slows down the process of implementing dual apprenticeships, so the first steps should be aimed at raising awareness and training TVET actors and companies (I6-CAMTIC, 2021).

8.2.7 First dual apprenticeships agreement under the new Dual Apprenticeships Law

Previous mentioned how the entrance of INTEL's operations represented a turning point in the history of TVET development in Costa Rica. Then, after several decades discussing implementation, a dual apprenticeships law was approved in Costa Rica in 2019. Interviewees mentioned that dual apprenticeships implementation had been complex and difficult because business actors had little awareness about the importance of training students and the institutions do not allow for fluid adaptation – i.e. institutional changes are required. To make this possible

However, on February 24, 2022, the first dual apprenticeships agreement was signed between INTEL, the Chamber of Industry, and INA after the approval of the dual apprenticeships law. This program will have 12 students from INA in the field of “Industrial Maintenance”. Upon

completion of the program, these 12 INA students will be able to perform predictive, preventive, and corrective maintenance processes as well as record measurement variables and install industrial machinery and equipment, according to safety, environmental, quality, and technical procedures (El Observador, 2022).

This agreement presents three fundamental points to highlight, since it represents, in a way, the culmination of a process that began in 1980.

First, the active participation of the Chamber of Industry of Costa Rica through the department of Human Talent (in charge of TVET issues). This chamber, as already mentioned, supported the design, discussion, and approval of the dual apprenticeships law and its political participation was decisive. The chamber created a “one-stop shop” for dual apprenticeships in cooperation with the INA, so that all processes related to dual apprenticeships would be carried out in a single office:

“The signing of this agreement between INA and Intel Costa Rica fills us with satisfaction as it represents a milestone in the history of the ICRC One-Stop-Shop and evidences the positive impact of public-private alliances, in this case, to develop Costa Rican human talent with a vision of the future and in an agile manner, and in turn contribute to the creation of quality jobs” (Enrique Egloff, representative of the Costa Rican Chamber of Industries, La República 2022).

Second, the discourse of the public-private alliance emerges as a strategy for the modernization of TVET. The public-private alliance is understood as the cooperation that private enterprise can do in what the state should do but does not do well or cannot do. In this sense, according to entrepreneurs, the state does not know how to train qualified labor.

And third, the fact that INTEL trains students in the dual system is reminiscent of the role INTEL played in the late 1990s when it first arrived in the country, being the largest transnational company. And although it could be seen as something positive, from the point of view of business participation, it reveals a weakness of the Costa Rican dual apprenticeships system: the low participation of transnational companies in the systematic training in the work process and the low number of graduates in the system. For example, the training of 12 students in industrial maintenance, as a dual apprenticeships process, and as an experience of public-private collaboration will be an important line of investigation in future research. It will be necessary to know how the aforementioned problems have been solved regarding the teaching-learning process in the workplace, how systematic this process is, how the different pedagogical

aspects are evaluated, how the companies participate in the different levels of training and finally to know the subsequent educational trajectory of the training of the twelve apprentices.

8.2.8 Creation of a national technical education system: a failure and a new opportunity

Due to the major economic, political, and educational events that took place between 1990 to 2000, some political and business leaders, together with representatives of the TVET sector, proposed the creation of a national system of technical education and vocational training. A first proposal arose from the need to group and direct the major TVET reforms from a single responsible body. This first proposal was called SINETEC (Sistema Integrado Nacional de Educación Técnica para la Competitividad). SINETEC was created in 1998 by Executive Decree 27113 (López; Viquez & Ávila, 2001).

The central objective, according to article three of the decree, was the harmonious integration of different levels of technical education, both public and private, from the basic level to the higher technical level, with a criterion of efficiency and efficacy through concerted actions between the training institutions and the demanders of the productive sector, thus favoring human development in harmony with socioeconomic development.

The specific objectives of SINETEC, according to Article 4, were:

- (1) To establish mechanisms of horizontal articulation and vertical integration among institutions innovatively training human resources in the technical-professional sector in order to make technical-professional education more attractive and thus increase quantity, improve quality, and promote new technical careers.
- (2) To efficiently use available resources of the technical-professional sector for education, training, and continuing education through appropriate coordination.
- (3) To meet the needs of the productive sector, present and future, in those areas demanded by the labor market by favoring the modernization of the primary, secondary, and service sectors.
- (4) To promote technical education in its various levels and modalities in order to increase the prestige of this type of studies and thus broaden the quantitative base of workers.
- (5) e) Attract high-tech investments through the provision of high-quality technical education and the creation of human resources training programs with a higher level of knowledge. To contribute to the elaboration of investment projects, making use of each institution's own resources or those coming from international cooperation, among the members of SINETEC and in accordance with the national program of Technical Education.

- (6) To follow up and evaluate SINETEC activities. To establish mechanisms among system members for the validation of credits and recognition of studies, facilitating permeability, from the basic technician to the superior technician, based on the knowledge without administrative-bureaucratic impediments.
- (7) Help break the vicious cycle of poverty and school dropout rates through training alternatives for well-paid jobs and in activities that interest young people.

Business participation, according to Article 6 of SINETEC, included the following entities and organizations:

- Costa Rican Union of Chambers and Associations of Private Enterprise (UCCAEP)
- National Council of Cooperatives
- Chamber of Technology-Based Companies (Cámara de Empresas de Base Tecnológica)
- Costa Rican Coalition of Development Initiatives (CINDE)
- Costa Rican Foreign Trade Promoter (PROCOMER)

As evidenced, SINETEC's business representation was composed of the organizations and chambers that articulated the productive transformation and the structural reforms of the Costa Rican state from the beginning. For some interviewees (interviews I14 and I 13) involved in the SINETEC approval process, they mention that after a few meetings, the members that formed this organization did not remain constant and active, which meant that SINETEC did not have a role in the development of TVET in Costa Rica. Reasons for this failure include the fact that the operating structure for coordination between the formal system (MEP) and the informal system (INA) was very complex and made it difficult to clearly define priorities. The financial resources and support of the institutions' leaders were not permanent, impacting the sustainability of the project. This is the argumentative basis that has been used to create a new TVET system in Costa Rica called Sistema Nacional de la Educación y Formación Técnica Profesional (SINEFOTEP):

That since 2014 there is no evidence of SINETEC functioning, that the instances that should have the Decree in force were not created, in addition its objectives of execute mechanisms for horizontal articulation and vertical integration, coordination actions, to meet the needs of the productive sector, as well as the attraction of high-tech investments, the validation of credits, recognition of studies, are actions that SINETEC has not been able to bring to fruition, due to discontinuity, the outdated, decontextualization, the inactivity in which it is immersed, the lack of material operability that it has developed, coupled with an unmanageable structure for its functionality, which does not meet the

reality and real objectives of the current era in which the actors of TVET are immersed, from any field of action⁵⁵.

In 2020, a draft document was submitted for the creation of National System of Technical Vocational Education and Training (SINEFOTEP)⁵⁶, which would articulate the projects, programs, and objectives of TVET institutions in Costa Rica. However, for the purposes of this research, it has not been possible to determine whether this project was approved by the Presidency of the Republic of Costa Rica. In any case, what is important is to observe how the country continues to take important steps towards the conformation of a TVET system in which business participation is important.

8.3 Configuration of business subjectivity

Section 7.1 characterized and analyzed the historical framework in which entrepreneurs have been politically involved in TVET. Section 7.2 described and analyzed the concrete political actions that entrepreneurs have taken to modernize, reform, and adapt the TVET system to the structural framework presented. Section 7.3 will now analyze the entrepreneurial subjectivities that give meaning to the actions taken around TVET.

8.3.1 Between old and new business subjectivity: the social status of TVET since 1980

“TVET is now a real option for young people as long as we continue to attract more large companies willing to invest in Costa Rica.” (I1-UCCAEP, 2021)

The era of the welfare state (1950 to 1978), as described above, was characterized by the emergence of a national business sector that supplied goods to the foreign market, a commercial entrepreneur, and an agro-export sector of bananas and coffee that gradually diversified. At the same time, the foundations for the modern development of the TVET system were laid at that time, with the creation of INA, the expansion of MEP schools, and the creation of public and private universities.

The import substitution model implied a cultural logic that would be the basis for the accumulation of subjective, ideological, and ethical fields of business regarding TVET. One of these was that technical education was a second-class education within the social and business imaginary. This view is evidenced by the consensus among the interviewed that the INA was

⁵⁵ Author's translation

⁵⁶http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=96852&nValor3=129959&strTipM=TC

created as an institution responding to the need to qualify large masses of potential workers without formal studies; thus, for example, the entrance requirements for the INA were mostly only to know how to “read and write”. On the other hand, as indicated by the interviewees ((I1-UCCAEP, 2021; I2-IC, 2021), there was a social perception that people who studied in technical schools were “smarter than INA trainees”. This idea is well founded, since the INA was part of the policies to fight poverty, generating social stigmas about the social function of the INA. In other words, the INA was born to train Costa Rica's working class, which was associated with low educational levels. This type of socio-cultural association prevails today as a form of separation between academic and non-academic education. Although the INA's contribution in supplying workers to the labor market is widely recognized, it seems that the social value and the economic value do not always coincide, especially because the salaries that TVET students received before 1980 were not competitive: “the students of the technical colleges of the MEP knew that in order to achieve a better income they had to continue studying in higher education” (I2-IC, 2021).

In this regard, the representative of the Chamber of Industries points out:

In 1972 there was only one university, which was the University of Costa Rica. And anyone who did not pass the university entrance exam was sent by his parents to INA to learn a trade. So, going to INA was synonymous with being an idiot. In other words, I cannot put it any other way. That was the common opinion at that time (I2-IC, 2021).

This interviewee adds that national companies before 1980 were little concerned about contributing to training the labor force within the companies, since they usually obtained the necessary labor force for agricultural, livestock, industrial, tourism, and service development without needing to train beforehand. The demographic bonus, the strong state control in the direction of education, the good quality of the training institutions, and the active role of the state in industrial development explained why enterprises did not participate at the political level in the TVET policy, nor at the educational level in the learning process. Of course, the colonial heritage and the structures that characterized low and medium qualification in Costa Rica influenced the limited participation of enterprises and their subjectivity that TVET “is a matter of the state” (I14-SCIENT, 2021). In other words, during the era of the welfare state, the state had to supply the skilled labor force because the state was the main employer of the workers.

Capitalism based on coffee and agro-industrial development, in a context of Central American integration, did not really demand the development of a highly skilled labor force. Rather, Costa Rica's insertion into world capitalism, under negative terms of trade, made it possible for import substitution to create a strong national industry that was strongly criticized as inefficient and ineffective by some political groups (I14-SCIENT, 2021).

This could explain why in the Costa Rican business culture, it was difficult for work-based learning processes to have relevance. The direction of the state in TVET, the low cultural and social value of TVET, and a backward and underdeveloped capitalism generated limited interest from national companies in TVET. But all of this would slowly begin to change when Costa Rica's economic development model fell into a crisis of fiscal sustainability due to international economic crises and its own internal management dynamics in domestic production, terms of trade, and internal power politics.

This was the moment of division between that old subjectivity and a new process of accumulation of subjective meanings. It was not only an ideological and pragmatic shift in the sense of public policy, but in how TVET would be subject to various business interpretations, on the one hand, especially because the old business dynamics would not change overnight and because the liberal ideology that would fall on education and production could not be applied one hundred percent. Rather, TVET would enter into a series of educational and political contradictions and tensions regarding how to instrumentalize the learning of technical professions for the expansion of capitalism at the same time that the institutional and subjective structures of the state were trying to understand the new entrepreneurial subjectivities.

For the entrepreneurs interviewed, however, this rupture was positive in the sense that if wages were low before, now, under a sense of competitiveness and market order, then the social and economic value of TVET would grow:

Since Costa Rica began to bet on attracting investment, companies did not require university professionals, but technical workers. The law of supply and demand made salaries go up and it became a little more attractive to study a technical career (I2-IC, 2021).

The increase in social value among actors, especially among young people and entrepreneurs, was fundamental for organized political participation to gain relevance among business groups

that required an educational policy more in line with the future of work. The problem with this was that expectations were higher than what happened. Between 1980 and 2000, neither did transnational companies arrive in masse, nor did production processes require highly qualified workers, nor did the participation of TVET enrollment increase dramatically. The arrival of INTEL served as an ideological base and the promotion of subjective codes such as “development,” “first-world,” “progress towards development,” but there was still a long way to go before these “ideals” could materialize.

Efforts to adopt a TVET system under the needs of the business sector were also not known by employers, because the experience required was not developed between human resources offices and TVET institutions. This know-how would develop especially in the late 1990s. The interviewed CINDE representative indicates that the transition to a new development model implied that both entrepreneurs and public workers understood basic concepts about how companies work, their logics, and their needs: “This learning process consisted of teaching them what a back office is, what a call center is, that not only goods but also services are exported” (I4-CINDE, 2021). The CINDE representative also indicated that the learning process involved establishing the “ideal” mechanisms for designing a TVET offer that almost no one had heard of:

Costa Rica opted for a strategy of export diversification and investment attraction at all levels. Now Costa Rica is the country in the world that attracts more foreign investment per capita. Therefore, professionals were no longer needed as a priority, but rather TVET workers, but the process to become the country that attracts the most investment in the world has been full of complications and learning (I2-IC, 2021).

For all the entrepreneurs interviewed, political action taken to make the productive change since 1980 was the responsibility of entrepreneurs who had a vision inspired by the free market and perceived advantages of social peace and top-quality educational institutions in the Latin American context. These values, however, are contradictory among themselves, according to the academic expert:

The free market and the policies that supported the principles of the free market did little to foster the development of social peace and the quality of education, as conflicts between sectors grew, the dismantling of public institutions and social welfare programs through budget cuts also led to increases in poverty and inequality. That is why Costa Rica is today one of the most unequal countries in the world (I14-SCIENT, 2021).

According to the above, the accumulation of business subjective meanings has been characterized by contradictions and conflicts, mainly between the “promise” of bringing Costa Rica to first-world levels of productivity and achievement and the reality of an increase of social inequality, as evidenced in studies of Arias; Sanchez & Rodriguez (2020) and Arias (2021).

The country's economic growth pattern has been characterized by an asymmetric relationship between the center and the periphery. This is reflected in the main development indicators, with a high concentration of the population and of the most dynamic economic activities in the GAM. As we move away from the center, we find major structural problems of the productive apparatus in the peripheral regions. Hence the low productivity of these sectors, unstable labor markets, composed of low-skilled and low-paid labor. Difficulties in accessing quality goods and services are also critical, which has a negative impact on the levels of poverty and inequality in the most rural territories (Arias; Sanchez & Rodriguez, 2020, p. 19).

For Arias (2021), a factor associated with poverty and inequality is the inability of economic and employment policies to integrate people into the labor market, especially since 2008. Open unemployment went from 4.7% in 2008 to 12.42% in 2019 and, after the onset of the COVID-19 pandemic, stood at 19.98% in the last quarter of 2020. Informality has also increased, which has remained above 40% of the Economically Active Population since 2010. Arias shows how between 2010 and 2019, 86% of the net jobs created in the period were informal jobs, that is, almost nine out of ten. Arias concludes by saying that “the employment situation in Costa Rica is serious and does not reflect the employment promises of the neoliberal project, which has been one of its main banners” (Arias 2021, p 45).

Due to the poor development of social indicators, the business sector began to believe that one of TVET's functions was promoting the foundations for the development of entrepreneurship among young people. The ideological discourse sustaining entrepreneurship as a hegemonic subjectivity contends that each person is responsible for his or her own success. This new subjective code appears hand in hand with the idea of “tropicalization” (Láscarez & Schmees, 2021) of the international recipes called “good practices” or neoliberal economic recommendations of the large international organizations such as the World Bank or the International Monetary Fund, or the educational “good practices” emanating from the OECD, for example. Thus, the MEP has created the department of “technical education and

entrepreneurial skills” as well as the universities are filled with “business incubators” as an employment policy (Petry and Lebendiker 2010; Pittaway 2020; Bonilla and Mesén, 2013).

In the classic neoliberal conception, poverty is the result of excessive state intervention in private affairs. People should develop their own capacities without limitations, in order to manage their own enterprises. Welfarism generates dependence on the state and the fight against poverty becomes the worst policy to generate poverty (I1, UCCAEP, 2021).

Yet social policies and public spending on education have historically remained relatively stable, not without strong social conflicts between social actors. As Flores-Estrada (2021) points out,

Since Independence, three capitalist economic models closely linked to international trade have been developed in Costa Rica: the agro-export model (mainly coffee and bananas), the import substitution and promotion of the Central American Common Market – suggested by the Economic Commission for Latin America (ECLAC) between 1950 and 1974, also known as “inward development” or “protectionist” – as well as the stabilization and economic and financial opening since the crisis of the 1980s. All of them combined, to varying degrees, classical economic ideas with pragmatic decisions based on national problems. This makes it pertinent to recover the idea that countries always have the capacity for agency, they are not mere implementers of external instructions. Moreover, except in the case of a colonialist invasion, each country negotiates economic models both among its internal forces and with external forces. (Flores-Estrada 2021, p 70).

8.3.2 Political power and a new ethical perspective: business as a driver of social change

“We have business representation in more than 200 public institutions. We have been able to be well represented in the high political spheres of the last governments”. (I1-UCCAEP, 2018-2021)

Economic power and political power, although they have been linked during and after the colonial era (Madrigal 2013, 2020; Acuña and Molina 1986), they each acquire a new dimension during the administration of former President Arias Sánchez (1982 to 1986) and in the Rodríguez Echeverría administration (1998 to 2002) onwards (Morois, 2005, p. 110). During this period, the ideological foundations of transnational business with respect to economic orientations (through the Alliance for Progress, the Washington School, and the

influence of USAID in economic policy) were laid, as well as the foundations of the political power of the new transnational business sector (Morois 2005, p. 106).

A good example of the consolidation of economic and political subjectivity occurs in UCCAEP, according to an interviewee (I1-UCCAEP, 2021) since the creation of the organization in 1973, most presidents have hailed from sectors of the traditional economy (agriculture, commerce, and traditional industry), but since 2008, this “norm” was broken, and now, presidents come from the modern service sector (construction, Information and Communication Technologies, and free zones). In the Costa Rican productive sector, new leaders began to emerge as a function of the transformations of the country's productive structure. According to the UCCAEP representative, the organization itself underwent subjective changes because of new economic groups, with a different cultural base than earlier ones:

We went from being an economy that mainly exported raw materials or agricultural goods to an economy that began to diversify in the mid-80s, at the beginning of the 90s, and that even today this model of export diversification has been consolidated. We went from 12 business chambers in 1970 to more than 50 today (2021). In addition, our business leaders are representatives of the most dynamic sectors that have benefited the most from this productive change (I1-UCCAEP, 2021).

For the UCCAEP representative, this fact demonstrates that not only has Costa Rica's productive structure changed, but also reflects changes in the country's most important business organization. The fact that presidents are now representatives of the service sector means that the discourse of educational modernization has grown since 2008, since the labor supply in the service sector has also grown considerably. In other words, the ways of signifying entrepreneurial action change according to the framework of interpretation of tertiary representatives.

For the interviewee, UCCAEP's mission was to promote development and competition in Costa Rica, and they immediately identified that one of its most important functions was the promotion of competitiveness through proposals for legal changes in the commercial and educational spheres. This is where TVET becomes central, an important issue for the organization. On a moral level, the nationalist obligation to “fight for the country” and “defend” sectors that produce wealth was identified: “We are the political arm of the national productive sector. What we do is defend the private sector” (UCCAEP, 2021).

The UCCAEP representative's statement is manifested when he mentions that UCCAEP's most important historical milestone was when it became a central actor in the process of approval (by referendum) of the free trade agreement between the United States and Costa Rica. This political event marked the Costa Rican society between 2006-2010 because it was a trade agreement with the world's largest economic power. In this approval -discussion it must be said that the representatives of the business chambers that are part of this study also participated. Arias (2019, pp. 73-76) studies how from negotiations to the publicity process for approval, UCCAEP became a principal advisor to the United States and Costa Rican governments.

After the referendum victory in favor of the free trade agreement, UCCAEP created a Ten Principles that would serve as an ideological, moral, and ethical basis. The decalogue placed a central emphasis on technical education, which meant that, from 2006 onwards, TVET would be central to the agenda of trade liberalization, competitiveness, and liberalization.

For example, in the 2006 to 2008 Decalogue, the ninth most important measure mentioned is “to adapt technical education to the requirements of national production, in order to synchronize the new labor supply with the demand of companies and achieve the reduction of youth unemployment” (UCCAEP 2006, p. 17). Then, in the 2018 to 2020 Decalogue, UCCAEP indicated that one objective is to prepare the educational system “to respond comprehensively to the training of human talent demanded by the country, and to meet in time the demands of an open economy exposed to greater competition” (UCCAEP 2018, p. 5).

The UCCAEP interviewee directly linked to TVET policy in different technical commissions mentioned that the UCCAEP sees the issue of modernizing training structures as a strategic action because productive transformation requires the transformation of legal frameworks to facilitate the development of competencies to face the challenges of digitalization (I1-UCCAEP, 2021). For this reason, the UCCAEP is present in the board of directors of the INA and participates in representation of the employer sectors in the different spaces for the construction of TVET policy.

This interviewee also mentioned that the Training and Human Talent Commission of the UCCAEP was created to “coordinate the efforts of all the chambers, to promote the reforms required by our legal system if necessary, or the internal reforms of public institutions, in order to seek a continuous improvement of human talent” (I1-UCCAEP, 2021).

Because of these circumstances, UCCAEP has been the most active business organization in the TVET political sphere in recent decades, working for the reform and modernization of the

TVET system⁵⁷. Since the 1990s, it has actively participated in diversifying educational offerings and more recently has participated with active representation in the National Qualifications Framework for TVET. Moreover, it has proposed the first dual apprenticeships projects and has participated in the implementation of dual apprenticeship in Costa Rica.

When interviewing the UCCAEP representative on the INA board of directors, several important subjective elements were identified. According to (I8-INABUS, 2021) the reform of INA to outsource training processes is considered part of the package of transformations that have been sought since the early 2000s in Costa Rica. The UCCAEP's argument is that the "public-private partnership" is the solution that the market needs. The private sector can do things that the state does not do well or does not do at all.

The business representative on the INA board of directors criticizes the role of the teacher in acquiring job skills. Together with the representative of the Chamber of Industries, they were the only ones who positioned pedagogy as a critical element within the discussion on TVET. Although there is still an economistic reduction of TVET in the business discourse, there are elements of a didactic-pedagogical nature that are important to them.

That is the profile we need of the trainer, someone who is teaching things that really impact the productive sector and who also helps young people to be employed in the most in-demand careers. That is where I think we need to work more. We need to encourage more of this collaborative environment between academia and the business sector. We have to get our educators to be more entrepreneurial, to be people who are at the forefront of technology and who can at the same time create companies that can develop and integrate students in the innovation process. For example, when you see what is happening in Silicon Valley, you realize that there is a very strong interaction between academia and the business sector, the productive sector, which continuously generates new companies. I think they are being introduced to the business environment (I8-INABUS, 2021).

⁵⁷ The UCCAEP is the official organization recognized by the ILO as the representative of the Costa Rican business sector to discuss TVET (Láscares and Schmees, 2021). "The union of business chambers was created in 1973, in a completely different era than today, with a completely different productive apparatus than the one we have today in Costa Rica, where we had an intervening State" (I1-UCCAEP, 2021). The UCCAEP has 49 affiliated chambers and associations that account for about 50% of the total number of business chambers in Costa Rica.

The case of National Chamber of Tourism (CANATUR) is interesting. CANATUR participates in two important organizations at the political level: in the Liaison Committee with the Tourism Unit of the INA and in the National Commission of Tourism and Hotel Education, which was created in 1992 and oversees guiding, advising, recommending, and reviewing all curricular programs having to do with the education and training of human resources for the tourism industry. In this commission, CANATUR reviews, guides, and proposes the development of study programs at the technical level. This is a political aspect that represents a “good opportunity to influence” the TVET system. The Chamber also created the Liaison Committee with the Tourism Unit of the INA, the technical unit responsible for research, design, and evaluation of vocational training services in the tourism sector (I3-CANATUR, 2021). Thanks to the presence of a CANATUR representative in the INA, the chamber has been able to influence not only curricular decisions, but also policy decisions that focus on strengthening certain types of tourism, such as medium and high-income tourism.

Tourism and its business representatives have several nuances that differentiate them from the other chambers studied. One is the fact that CANATUR’s representative give high importance to the participation of the state and the national tourism sector. And another is the fact that national resources and an economic growth model that is environmentally sustainable and important for the further development of an industry that is central to activating the economy (Benavides 2020).

For example, territorial development based on a sustainable, community-based tourism perspective taking into account local cultural and social dynamics is prioritized by certain highly organized groups of companies in Costa Rica, not by transnational companies. These highly organized companies are organized within the CANATUR structures linked to ecotourism, environmental protection and specialized tourism: birdwatching, whale-watching, and the care and protection of flora and fauna such as turtles and other mammals. These companies require a skilled labor force at different levels, a second and even third language, quality customer service, specialized knowledge in flora and fauna, local history, and more. Unfortunately, this group of companies was not studied in depth in this research, which constitutes a weakness and at the same time an opportunity for future studies. From this point of view, the training processes, especially in the INA in the tourism sector remains highly diverse and complex (I3-CANATUR, 2021).

8.3.3 The idea of “investment attraction climate” and the development of national TVET policy

“The new economy forces us to think that the greatest public financial resources should be directed to educational institutions that promote STEAM careers, or at least resources should be provided under productivity and employability parameters. In this way, many careers that do not contribute to economic development would disappear and those that do contribute would be strengthened” (I7-AZOFRAS, 2021).

The subjective resignification of TVET since 1980 has several important expressions that can be synthesized in the concept of “investment attraction climate” used by CINDE, COMEX and PROCOMER (I4-CINDE, 2021; I9-MEP, 2021). The most important question has been since 1980 how to attract more foreign investment and how to consolidate an attractive system that would form the basis for Costa Rica's economic development. One of the central points of this discussion was on the “quality” of the Costa Rican labor force in terms of how well they corresponded to the needs large transnational corporations (Martínez and Hernández, 2012)

However, as described above, economic policy is focused on attracting investment, not on improving the development of local companies (micro-, small- and medium-sized) that supply the local market but represent 95% of all companies (INEC, 2021)⁵⁸.

In response to this, one of the MEP officials who applied important changes to the TVET system since 1990 stated that the TVET policy was a policy designed for the needs of large transnational companies, since workers could mobilize between companies in the same sector more easily if they were qualified according to the transnationals’ needs (I12-EXPERT1, 2021). Along the same lines, the business representatives of UCCAEP and CANATUR state to the following:

TVET policy should be oriented towards the more specialized and export-oriented sector of the economy, and not towards companies in the domestic market. The future workers who are qualified from the point of view of larger and more specialized companies will then be able to migrate to medium and small companies and generate processes of innovation and higher productivity. A kind of trickle-down of qualifications (I1-UCCAEP, 2018-2021).

⁵⁸ <https://inec.cr/es/tematicas/listado?topics=134%252C266&filtertext=empresas>

Students trained in large tourism, hotel, or restaurant chains will be able to innovate thanks to the highly specialized knowledge they can acquire, which is usually international in nature. In this way, students can work on their own projects or contribute knowledge in smaller companies (I3-CANATUR, 2021).

It should also be noted that of the companies interviewed, only CANATUR presented a subjectivity that positively recognizes the role of the state in tourism sector TVET policy, using the argument of productive linkages. It seems that the tourism sector is the only one with more capacity to link with small and medium economies through different processes, tour guides, restaurants, eco-tourism, souvenir sales, bars, and more. (Morales, 2010). CANATUR also recognizes that the state has played a central role in the training of tourism workers:

Companies and the state have invested a lot of time, resources, and infrastructure to train all the people in the tourism sector with that level of quality in tourism production and management as well as in the quality of customer service. I am not referring only to the person who serves you at a front desk, but to the quality of the chef in the restaurant, the quality of the tour guide and the number of languages he/she speaks to you, the depth with which he/she approaches you, the topics of guiding, the professionalization and education of the tourism transporter or in the place where you are (I3-CANATUR, 2021).

The subjective criteria that give meaning to the elaboration of national TVET policies respond to ideological criteria and a disconnection from the issue of poverty in the sense that the economy grows, but does not create jobs, since jobs are created in the national economy. This is the “double engine of the economy”, described by the UCCAEP representative when he said that Costa Rica has two economies: the export economy and the domestic market. The question entrepreneurs themselves raise is: How to develop a national TVET policy that considers the needs of all companies beyond the fact that the needs of the sector are represented by large transnational companies?

8.3.4 Business subjectivity and social conflict: anti-union and anti-state discourses

“Someone once told me that from the exterior Costa Rica is seen as a country that dialogues a lot. However, since Costa Rica decided to change its productive path, and then with the COVID pandemic, we realized that we cannot last long in dialogue. Projects have to be presented quickly so that they come out in the best possible way. The bureaucracy of public institutions is too big to wait for internal changes. Industry 4.0 waits for no one” (I2-IC, 2021).

One self-perception that is consistent in the business discourse is that business chambers are the engine of social change. While in previous eras, social movements, unions, and other political forces generated change, now it is entrepreneurs who are responsible for transforming, modernizing, or reforming society. To justify this subjectivity, they have developed at least two arguments. One is that unions do not produce or generate jobs, so they do not understand the labor dynamics or the problems that business face in the effort to sustain and grow their businesses; and two, state institutions tend to overgrow and abuse power through bureaucratic control.

According to the CAMTIC representative, for example, the State wasted an important initiative, created by the private sector, for the qualification of young people in Costa Rica. This reaffirms the idea that the state “deforms” good employment and labor insertion initiatives. For example, CAMTIC conducted an important study, together with the Latin American Faculty of Social Sciences (Herrera, et al. 2010), to determine the workforce needs in the field of information technologies. The study had a significant impact on TVET institutions and the media, as it determined that the country had a deficit of 4,000 jobs in the technology sector. Based on these results, the chamber created a national program called “CR specialist”, with four technical careers in computer science (web development, networking, technical support, and web programming) to promote the participation of young people in the jobs of the future through scholarships and the idea of a stable and well-paid job. The government wanted to replicate CAMTIC's experience, taking the “CR specialist” to the “Avanza y Avanza”⁵⁹ and then the Ministry of Labor turned it into the “Empléate” program. In the opinion of the president of the chamber, the original idea of “CR specialist” was to promote highly specialized technological careers among young people, an objective not fulfilled when the Ministry of Labor transformed it into “Empléate”⁶⁰ because it promoted low-skilled scholarships in saturated or unprofitable fields among young people (I6-CAMTIC, 2021).

It was disappointing how, from scientific data obtained, an excellent training program “CR specialist” could be created that was so successful that it ended up becoming a public policy called “Empleate”, but what we saw were young people working as pizza makers.

⁵⁹ There is no literal or official English translation of these programs. One could say that a translation would be: “Go ahead and move forward!”

⁶⁰ There is no literal or official English translation of these programs. One could say that a translation would be: “Get Employed”

We have nothing against pizza makers, but the idea was to train young people in areas of high demand and high remuneration (I6-CAMTIC, 2021).

In addition, during the over two-decades long discussions on the implementation of dual training in Costa Rica, the confrontation between unions representing primary and secondary school teachers, mainly, directly confronted the interests of employers for being considered cheap labor and for fear of losing teaching jobs.

The unions also acted out of ignorance. They thought that dual apprenticeships was exploitation of cheap labor. Here there was a very high social conflict that could have been avoided if the discussion was depoliticized (I5-AHK, 2021).

The anti-union discourse reveals the entrepreneurial subjectivity of business sectors. Labor flexibilization, the elimination of the minimum wage, and tax exemption for corporate social security have been part of the productive transformation agenda for a better investment climate. The role of TVET institutions in this context, according to companies, is to respond to market needs contrary to union interventionist interests.

8.3.5 Youth, entrepreneurial culture, and institutional change: between Costa Rica and Germany

“The cultural differences between Costa Rica and Germany are very large. While Costa Rican young people live with their parents until they get married, young people in Germany emancipate very early, so they need to generate income and learn at the same time. The families of young Costa Ricans do not imagine their 15, 16 or 17-year-old children working and studying. On the other hand, companies are unaware of the importance of investing in the qualification of young personnel”
(I5-AHK, 2021).

The interview with the chamber representatives highlighted the importance of the cultural differences between Costa Rica and Germany in the implementation of dual training. For example, they noted that the family and economic dynamics, as well as the expectations of young Costa Ricans, are very different from those in Germany. While Costa Ricans live with their parents until the age of 30 or even older, German youths often leave home before the age of 20. But young Germans know that the labor market can offer opportunities to make this emancipation materially possible. Whereas in Costa Rica, many young people work to provide a family income without being able to emancipate themselves financially.

Another relevant cultural element is that entrepreneurial participation also responds to the characteristics of family dynamics. Earning money and learning is not an ambition of young people, but a way to invest in future personnel and to keep the labor market highly competitive. Political actors' perceptions on dual model transfer regarding key elements such as apprentices' wages, labor rights, the role of trade unionism, and the role of TVET institutions are not only technical but also subjective and cultural discussions. How does culture influence the implementation of work-based learning processes? How does subjectivity influence the future of families, young people, and employers on the qualification process?

An important topic, part of the discussions among employers, is the orientation of the process of acquiring skills for work. The AHK played an important role in the discussions to approve the bill on dual training in Costa Rica and emphasized the fact that there are not only economic, labor, and legal differences between Costa Rica and Germany, but also cultural and subjective differences. The debate on work-based or school-based apprenticeship systems merits an important series of reforms and a “change of vision” that some entrepreneurs considered.

The AHK representative noted that the employers' lack of knowledge about young people, their interests, their cultural patterns, and the role played by families strongly influences the subjective decision-making process of both students and employers (I5-AHK, 2021).

It seems that the chamber's involvement helped balance a more cooperative and socially responsible German perspective with a Tico view that was more liberal and deregulated, one that rendered dual training more flexible in the workplace.

In terms of ethical and value codes, the tourism sector seems to feel there is greater information and awareness of the work-based learning process or of increasing the quality of school learning processes. This is reflected with respect to the discussion on dual training, “the tourism chamber is the only one that did not have problems with considering apprentices as workers and paying them a salary. We were more open to implementing a more German-style apprenticeship” (I3-CANATUR, 2021).

For this reason, there is no clear separation between the state and the private sector in the construction of subjective meanings. The interviewee (I5-AHK, 2021) also recognizes that the public sector is slower than the private sector, but she also knows that public institutionalism is complex and is not a problem of the institutions, but a historical-structural problem. She also mentioned that the COVID-19 pandemic greatly affected the tourism sector, so now it is necessary to think about workers acquiring skills that will allow them to be employable in contexts like that of the pandemic.

8.3.6 Vocational orientation and economic productivity

“I don't tell young people to study what they like, but to study what allows them to live well” (I2-IC, 2021)

To address supply and demand in TVET, several regulation mechanisms are proposed, which at a subjective level function as the categorization of what is useful and not useful with respect to the supply of training. It is considered by Industry Chamber's representative that universities are becoming less and less necessary, given the economic and productive requirements of the country, and the faculties related to the areas of basic mathematical sciences and engineering should be the only ones that exist at present: “There are careers that last five or six years and then young people do not find work or do not produce value to the development of the country” (I2-IC, 2021). It should also be noted that for Industry Chamber's representative it is the market that should decide which career is useful or not at present. He sees TVET as the best option for young people because of the possibility of being more productive.

This is stated by the chamber's representative: “I don't tell young people to study what they like, but to study what allows them to live well” (I2-IC, 2021).

You no longer have to go to some university for six years, you can practically enter a three-year technical career and finally you can already have experience. You can learn new competencies, new skills. And this is a fundamental point for which I do not accept, or I would not accept in the near future, to continue offering careers that are not needed (I2-IC, 2021).

In this way, the interviewee justifies the need to intervene at the political level in the general education system and in the TVET system. From this point of view, he considers that one of the most important political contributions is the struggle for the approval of a dual training system in Costa Rica. He believes that this is the natural mechanism to regulate supply and demand in the labor market, that it would order the functions of TVET institutions. The German model of vocational training was the basis of his argument.

When I joined the Chamber, I became aware of the educational possibilities available at the INA. One of those possibilities was dual apprenticeships. At the chamber, we saw that it was a good opportunity to establish public-private systems. But we also knew that there were many legal issues to be able to execute it with versatility. So, in 2011, the business sector presented our dual apprenticeships project to a group of members of parliament. The German Chamber cooperated mainly by explaining how the dual model works in Germany. They helped Costa Rican deputies and ministers to visit Germany to understand

how the model works. From there the German cooperation helped to make the social actors more aware of this type of education (I2-IC, 2021).

As a basis for the vision and interests of entrepreneurs in Costa Rica, the representative of the Chamber of Free Zones introduced the term “New Economy” (I7-AZOFRAS, 2021). The term “New Economy” refers to the transition from industrial capitalism, based on the production of goods, to the production of services in the context of the digital age. (Baldri et al. 2007).

For the interviewee (I7-AZOFRAS, 2021), the new economy is bringing about the fact that average salaries in the Free Trade Zone system are between 13 and 40 percent higher than the average salary in the private sector. In the free zone regime, 80% of the workers work as operators or technicians and 20% as clerical workers. Therefore, the space in the manufacturing industry for technicians is important and the service is today more of a large participation of people with average levels. Thus, this system employs many young people, almost 70 percent between 18 and 34 years old. It is a new economy for young people. So, precisely those who pursue dual apprenticeships or education that will be able to benefit more quickly from their job placement in these industries (I7-AZOFRAS, 2021).

Here the most complex part is how do we make the dual apprenticeship processes shorter in time, because if we have very long processes, the involvement of the companies starts to decrease, because for most companies they do not need training processes that have a time that exceeds one year" (I7-AZOFRAS, 2021).

8.3.7 Summary: entrepreneurs as social subjects

It could be said that not only do rules and norms shape subjects' decision-making processes, but subjectivity also intervenes – not reduced to an actor's individual conscience or point of view, nor a calculating intention, nor a normative imperative – but a process of meaning endowment mediated by power relations and permeated by different cultures, levels of reality, interests, moral and aesthetic components, where the cognitive is just one dimension along with others shaping the decision. In order to achieve more holistic explanations of human action, one should understand that as social subjects, people do not only generate economic meanings, but are also shaped by their subjectivity when interacting with different structures, irreducible to rules and norms or mental schemes. As Hernández (2006) points out, one cannot speak of subjectivity when it is determined by calculation, mental schemes, or normativity: Subjectivity implies freedom to decide and influence outcomes within certain limits.

As discussed in the theoretical framework, functionalist and institutionalist currents have overloaded the image of the entrepreneur as a rational subject because they are “entrepreneurs”.

And yet the idea of representing the entrepreneur and entrepreneurial organizations as social subjects with agency and social subjectivity (and the enterprise as a space for interaction and production of social relations beyond production relations) is central to understanding the development of the national TVET system in Costa Rica, because it allows for the integration of subjective and action elements to Costa Rica's historical-structural framework. In this way, human action is not reduced to resource maximization criteria: Instead, it could be argued that Costa Rican entrepreneurs have given meaning to their actions around TVET within the framework of cultural and historical codes (see table 19).

Table 19 Discourses, organized business action, effects, and challenges in Costa Rica 1980 to 2021

Time Period	Structural condition	Discourse argumentation	Organized political action around TVET
<p>Modernization of productive and educational structures (1980-1998)</p>	<ul style="list-style-type: none"> • A new group in power: the - politicians-entrepreneurs and the transnational bourgeoisie. • Structural Adjustment Program I (1985); II (1989) and III (1995) • Industrialization phase based on maquila, especially in free zones and industrial parks, agriculture for the export of non-traditional products. • Low social and cultural value of vocational training for the population. • International crisis - neoliberal ideas - increasing poverty and inequality: "The lost decade". 	<ul style="list-style-type: none"> • A transnational subjectivity, neoliberal ideology. • <i>"The state as producer of inequality, the market as producer of equality"</i>. • <i>"Free trade and flexible educational institutions create better conditions for institutional and economic development"</i>. • <i>"The crisis is overcome by the modernization of productive forces"</i>. 	<ul style="list-style-type: none"> • Foundation of Costa Rican Coalition of Development Initiatives (CINDE, 1982); The Costa Rican Agency for the Promotion of Foreign Trade (PROCOMER, 1996); Ministry of Foreign Trade (COMEX, 1996) • First bilateral meeting on the implementation of the dual training system in cooperation with Germany (1992). • First Osterholz-Scharm pilot project for dual training of automotive mechanics, supported by the vocational school beck 1995. • INTEL arrives in Costa Rica in 1998 • Taiwan's influence on curriculum design 1990-2005: "less broad, more deep" • Chambers of commerce concentrated more political power in government positions.

<p>Institutional reform of TVET and Improvement of the "investment climate" (1998-2010)</p>	<ul style="list-style-type: none"> • Various free trade agreements are signed and negotiated. • The value of exports as a percentage of GDP increased from 27% of GDP in 1985 to 49% in 2007. • Changes in the structure of employment and productive participation. • Economic indicators improved, but social indicators stagnated or worsened. • Functions and goals of TVET are questioned 	<ul style="list-style-type: none"> • Consolidating a normative subjectivity: efficiency in state administration. Private-public administration. • Businesses as engines of social change: They create wealth. • <i>“Attracting foreign investment should be the basis of development, but the state is a monster that limits growth”</i> • <i>“TVET institutions should be strengthened based on the needs of large enterprises”</i> 	<ul style="list-style-type: none"> • Establishment of SINETEC 1998: National Integrated Vocational Training System for Competitiveness • Establishment of the National Technical University • Creation of departments linking training institutions and companies. Business Relationship Department • A social conflict is emerging over a possible law on dual education. UCCAEP, Chamber of Industry and AHK are involved.
<p>Public-private partnerships as a strategy for the modernization of TVET and as an adaptation of industry 4.0 (2010- present)</p>	<ul style="list-style-type: none"> • The customer service center development strategy as a key development. • Poverty and youth unemployment are increasing (15-24 years at: 39.4%) • Informality is 45% of total employment • Costa Rica is one of the most unequal countries in the world. Dual Economy • Functions and objectives of the vocational training system are constantly questioned. 	<ul style="list-style-type: none"> • It reinforces normative, moral and ethical subjectivity about the role of young people and entrepreneurs in society and in training. Society has always had a structure and everyone has a role “not everyone must/needs to study” • <i>“Entrepreneurship as a strategy for overcoming poverty”</i>. • <i>“Unemployment problems are not solved by social dialogue”</i> • <i>“Inequality is not a problem”</i> • <i>“Industry 4.0 is the guide to development”</i> 	<ul style="list-style-type: none"> • Three bills proposed for dual apprenticeships. • Social conflict • Tripartite political dialogue • Dual apprenticeships law 2019 • Reform of the INA law 2021 • National qualification framework for TVET 2018 • Creation of the second national vocational education and training system: national TVET system (SINEFOTEP) 2021

Source: Author’s elaboration

9 Conclusion and Outlook

This chapter consists of three sections. Section 9.1 presents the main findings of the research; Section 9.2 discusses the theoretical and methodological developments of the research; and finally, Section 9.3 discusses possible projects that could complement and enhance this research perspective.

9.1 Main findings

This research was conceived to critique theoretical currents that have ignored the fact that social subjects have agency and a particular subjectivity not strictly determined by either structures or cognitive processes. As theoretical background, it established that in previous studies on TVET, the participation of entrepreneurs is usually analyzed from four perspectives: first, as part of the learning process or in curriculum design; second, as participation in the elaboration of TVET policies; third, as a political actor as part of collective bargaining processes or in social dialogue; and fourth, as an institution that participates in skills formation determined by the ways of managing capitalism, whether managed collectively or in a liberal manner.

But studies on entrepreneurial participation that consider the pressure of historical structures borne of certain subjectivities that exceed the schemes of rational action or as a functional adaptation of the subjects to the structures are not frequent. To solve this theoretical problem, I proposed approaching this study from the theoretical-methodological approach of Latin American configurationism, which is based on a critique of positivist reason and determinist positions. I posed the following research question: How has the political participation of entrepreneurs been configured in the construction of the TVET system in Costa Rica? My central unit of analysis was the organized political participation of business chambers and associations, taking the structures, actions, and subjectivities of these actors in TVET into account. Therefore, the conclusions I will present follow the analytical logic proposed under these three categories.

In terms of the historical-structural configuration, one of the main conclusions reached is that in post-1980 Costa Rica, a political-economic project was promoted and supported by a new transnational business group that emerged as a response to neoliberal capitalist dynamics and under the influence of international financial institutions that modeled a proposal for economic development based on liberalization and privatization. But this neoliberal economic recipe was not fully applied in Costa Rica, since both the structural adjustment programs and the programs of privatization of health, education, and energy were subjected to strong social conflicts between unions, students, political

parties, and social movements of workers, peasants, and indigenous people, among others. This means that although the country has followed a constant neoliberal path since 1980, social resistance against these dynamics has also been present. It is important to study scientifically what have been the educational counterproposals of the political resistance movements in the field of TVET. This is a topic not explored in this research that could be analyzed in the future. In simple words, in contrast to most Latin American countries, the neoliberal recipe was not literally applied, but has been a long process, influenced by social pressures and resistance.

In this structural framework, I explained how TVET in the early 1980s (but especially from 1990 onwards) was considered a strategic system to support the productive transformation process led by CINDE, PROCOMER, COMEX, UCCAEP, and other business chambers. However, despite many "reforms" and "modernization processes" such as the competency-based model, dual learning, INA reforms, the participation of entrepreneurs in the institutions' boards of directors and the creation of "business networking" departments, the reality shows that the results in reducing youth unemployment, reducing poverty and inequality have not been successful (Beirute, 2018; OECD 2017; INEC 2021).

Another relevant conclusion is that the pedagogical objectives of the political participation of employers have been unclear – one might even say contradictory. For example, the transfer of the German-style dual apprenticeships model since the 1990s entailed a series of important contradictions: while the German dual apprenticeship model assumed a strong cooperative organization, considering the apprentice as a worker, and a tripartite articulation between workers, companies and the state, the Costa Rican proposal does not articulate the cooperation of the actors, does not consider the apprentice a worker, and is bipartite in its organization. Apprentices do not have labor rights, do not receive salaries, and do not have a systematic on-the-job learning program. The liberal approach to education versus a cooperative approach resulted in an interesting phenomenon: companies wanted a dual apprenticeships law, but did not want to train students.

It can be concluded that the political participation of businesses around TVET has been subordinated to the economic project as a strategy to supply a certain labor force to transnational companies. This means that TVET has been subordinated to the political project, as it is an opportunity for entrepreneurs to participate in areas in which the state and teachers' unions have historically dominated. The struggle for the approval of the dual apprenticeships law in 2019 and the reform of the INA in 2020 are considered political or economic – not educational – victories for employers.

In the area of the configuration of business political actions, one of the main conclusions is that political action can be understood at two levels. The first level is the political action of public (state) organizations that respond to private (business) interests. This is the case of CINDE, COMEX and PROCOMER, state organizations founded by employers, who received foreign capital in the 1980s and 1990s to forge a political base in favor of the new economic and political project. These organizations developed the discourse of modernization, reform, and adaptation of TVET to globalization as a way to overcome the crisis and finally as a response to changes in the world of work in the framework of Industry 4.0. The second level for understanding political participation, moreover, is that of the business chambers and organizations, such as UCCAEP, AHK, the Chamber of Industries, the Chamber of Tourism, the Chamber of Technology, the Business Alliance for Development, the Chamber of Free Zones, and more. These business organizations participate on the boards of directors of TVET institutions such as INA, UTN, and MEP, and attempt to incorporate legal or institutional reforms, as happened with the reform of INA. They have permanent representation and are constantly representing the interests of the private sector.

Another form of political participation at this second level is related to law proposals, such as the dual apprenticeships law in the national qualifications framework, in the advisory commissions to implement dual apprenticeships. Also noteworthy is the political participation of employers in 1998, when they created the first national TVET system and more recently, since 2021, which marked the second attempt to create a national TVET system in an attempt to correct the mistakes of the first system.

In addition to the above, it can be concluded that the political decision-making processes of businessmen around TVET since 1980 should be understood in terms of the economic interests of the transnational sector of the economy, and not in terms of the interests of the domestic economy. It is for this reason that recent TVET policymaking processes respond to the need to improve the “investment attraction climate” rather than to a policy combating unemployment or social inequality. This last point is central: There is no logical relationship between an investment attraction policy via TVET reform and an anti-unemployment policy via TVET modernization. This conclusion is analyzed at length in Chapter 8, regarding the paradox of economic growth but increasing unemployment and inequality in Costa Rica. Indeed, the dual apprenticeships law can be understood more as a subsidy to transnational capital than as a true TVET policy that considers pedagogical and productive aspects, linked to a territorial development policy in the medium and long term.

From the perspective of TVET institutions such as UTN, INA and MEP, strategies were created to link with entrepreneurs, in order to improve the educational offerings according to the qualification needs of the companies. The TVET institutions began to create departments of “business networking” and “entrepreneurial skills”, and the “Regional Council for Business and Community Networking (CORVEC)” in the INA not only the board of directors is composed of business representatives of UCCAEP but all the careers have a business representative. In the UTN, there is a business representative in the highest political body of the university. Companies have also begun to create “human talent” departments to link with TVET institutions. These strategies are considered by the business chambers to oversee the good functioning of the institutions. This aspect of monitoring is a political mechanism that participates in TVET.

This institutional change came about thanks to the direct demands of companies such as Intel and other large transnational corporations, around which virtually all TVET policy has revolved since the 1980s. However, the introduction of “modernization” or “reform” measures has not been satisfactorily implemented, such as the National System of Technical Education and Vocational Training (SINETEC), the dual learning model, the competency-based model, and attempts to reform the MEP to streamline the processes of updating, creating technical careers, recruiting teachers, and financing education, among others.

Another important conclusion is that political participation is not disconnected from historical-structural events. For example, it is interesting to observe how business chambers transformed their political participation just after the last financial crises. It was thanks to the crisis of the late 1970s that entrepreneurs implemented a new development model in which the TVET was assigned a different role. Then, with the 2008 crisis, the business leadership of UCCAEP began to experience changes in the economic sectors that would occupy the presidency of the organization. Since 2008, presidents of UCCAEP have represented the economy’s nontraditional sectors, such as the service sector, free trade zones, exports, and more. This means that business leaders have also suffered from subjective changes, such as this vision of the “new economy.”

In sum, the political participation of Costa Rican business organizations in TVET has been pressured by the economic structures that they themselves have created based on a transnationalist subjectivity, one visualized through organized actions in the political sphere. The effectiveness of these actions remains not clear to the interviewees, due to the resistance of other actors and subjectivities (union,

state, academic) regarding the ideal role of TVET at economic, political, cultural, and social levels in Costa Rica.

If one considers that 50% of Costa Rican companies are not part of a business organization, such as a Chamber or Business Association (I1-UCCAEP, 2021), and that the informal economy comprises about 46% of the total (Mora, 2020; INEC 2021), and if one adds the problem of the dual economy (Hernández, 2016; OECD, 2020), then it can be stated that the Costa Rican business sector is highly fragmented in terms of its organization and its ability to effectively influence TVET policies. It seems that only the large transnational companies through the politically strongest business chambers, such as UCCAEP, CINDE, the Chamber of Industries, and the Chamber of Tourism have been able to influence aspects of TVET.

If before 1980, we could speak of a national subjectivity of the medium agroexporting enterprise around TVET, after 1980, a transnational subjectivity of TVET was created, based fundamentally on the flexibilization and liberalization of the TVET system, but designed according to the needs of a very specific transnational sector: free trade zones, call centers, medical centers, and the manufacture and services. With this point clarified, it can be said that one of the conclusions of this research is that the configuration of political participation, the process of giving meaning to organized political action, that is, the process of business decision-making, has been based on the application of neoliberal economic measures that are based on the attraction of foreign direct investment and the liberalization of the economy. The fundamental premise of employers is that the supply of TVET should be based on the qualification needs of transnational companies so that small and medium-sized companies with national capital can benefit from a high qualified labor force. For this reason, it has been CINDE, PROCOMER, and UCCAEP as well as the business chambers that have been affected by the displacement of the manufacturing industry to services that have tried the most to influence changes in the management of TVET in Costa Rica. TVET institutions, according to interviewees, should respond to business interests. The role of the state should be reduced as much as possible in training the workforce. For the interviewees, three-year training programs are too long, and they consider ideal programs of six months to one year, in which soft skills and a good command of English are developed. Then, companies themselves will be able to train young workers with “hard” skills.

For the entrepreneurs interviewed, good citizens are those who have jobs. This statement has several critical points. One is that for the businesspeople, “employability” and “productivity” should be the criteria for organizing all educational institutions. Neither the social sciences, nor philosophy, which

are saturated in the market, should be financed with public funds. Only STEM careers (Science, Technology, Engineering and Mathematics) ought to receive funding. Another critical element raised by the entrepreneurs is that the idea of “good citizenship”, “peace”, and “stable democracy” depend on many other factors beyond productivity or employability. Indeed, entrepreneurs stated that quality of employment, labor rights, the quality of educational, cultural, and recreational institutions, the quality of political culture, equality, and access to opportunities are essential for social development. However, the political and economic practices applied since 1980 contradict this discourse, as they reflect poor social and employment indicators.

The world vision established by the business chambers and by CINDE, PROCOMER, and COMEX is that the ideal situation for Costa Rica would be to be a large free trade zone, that is, a zone in which transnational companies come to settle under beneficial tax schemes. Under this idea, TVET would provide educational services to companies, working not primarily as a social actor for the cultural, political, and social development of the country. The subjective charge of this statement by businesses reflects the vision they have of TVET in terms of its functions, its objectives, and its possibilities for social cohesion.

This point reveals that, although theoretically TVET can integrate young people into quality markets, allowing them to participate in economic life and receive wages that allow them to live with dignity, it has not been possible to assign a structure and a solid base, through the actions and through the transnational subjectivities of entrepreneurs. A better analysis of the problems of youth unemployment and its relation to TVET is probably needed. It would also be necessary to analyze how the general education system is contributing to the integration of youth into the quality labor market.

9.2 Theoretical and methodological developments

In Latin America, there is no discipline on scientific studies of TVET. As discussed in the literature review, sociology, history, economics and, more recently, psychology have undertaken research in TVET. From an epistemological point of view, the development and accumulation of theoretical knowledge in Latin America is incipient in comparison with its advancement in German-speaking countries.

Despite the limited development of a TVET discipline, the Latin American social sciences have developed valuable theoretical contributions to the study of social reality. The sociology of work has developed theoretical proposals, such as configurationism, as a response to the eurocentric, positivist,

functionalist, and uncritical theoretical approaches that are written and “thought” from international organizations such as the OECD, ILO, and UNESCO.

In this sense, this work offers also a theoretical and methodological contribution that adds to other more consolidated proposals strongly debated in the European and Latin American context, such as hermeneutic approaches, neo-institutionalist, and systems theories. The main contribution visualized in this research from configurationism is an emphasis on the relationship between structures, actions, and subjectivities. Thus, history and economic, political, and cultural structures are not a backdrop, not “the context” of the study, but active elements that participate in the construction of scientific categories and economic structures – playing a role in the subjectivity of entrepreneurs. The history, economic, political, and cultural structures also influence their actions, which do not always respond rationally and logically to the structures. Configurationism recovers the agency capacity of subjects and sees beyond norms, rules, and institutions to reveal broad and deep social relations.

Through the theoretical-methodological proposal, it is possible to understand what kind of TVET system the entrepreneurs who belong to the top management of business organizations want. It is possible to understand the business worldview, why this worldview exists, and whether the business organizations’ actions respond to these worldviews.

This research attempts to overcome previous theoretical conceptions that consider entrepreneurs as rational subjects, isolated from culture, subjectivity, valuative, moral, and ideological values. The configurationist approach makes it possible to recover these elements in a scientific explanation of capitalist dynamics and social relations in the world of work, which includes TVET institutions. This is especially relevant in Costa Rica, where TVET research is often reduced to diagnoses of companies’ qualification needs.

This last point leads me to reflect on an important methodological aspect. Historically, it has not been easy to study the business world, entrepreneurs, and their subjectivities. Access to the business world is usually difficult for social and educational scientists. This criticism was raised by Laura Nader in 1988, when she analyzed the problem of access to business actors and raised the ethical problem of sensitive information obtained, as well as the difficulty of objective analysis. From this point of view, qualitative studies are more difficult to carry out than quantitative ones. For this reason, subsequent studies will have to implement relationships of trust and collaboration with business groups without losing sight of the critical stances that characterize scientific work. For example, ethnographic studies,

the application of focus groups, or access to industrial plants or offices pose major methodological challenges in contexts where there is a significant absence of reliable information.

Notwithstanding the theoretical benefits of configurationism for empirical research, I believe that one of its limitations can be found in the absence of theoretical debates in the context of the study, especially at the historical level, at the level of the actors, of the functions of TVET, on the philosophical, pedagogical bases of TVET structures, and on capitalism and its influence on the organization and development of TVET. Medium-range theory that explains the relationships between social actors needs to be further developed in order to better understand the actors' social actions and subjectivities.

I do not know if developing a scientific discipline of TVET in Costa Rica and Latin America is possible, but I do believe that establishing a strong line of TVET research in universities, forums, congresses, and scientific journals is possible. For this, it is necessary to begin to identify the contributions of other disciplines and debates in other contexts, but with a critical eye. The epistemological concerns that weigh on this research are still unresolved and should be nurtured and reinforced with more debates and critiques.

9.3 Desiderata

The results of this research open various possibilities for scientific investigation in the field of TVET. For example, in transnational research, it would be possible to study the construction of actions and subjectivities not only of the entrepreneurs, but also of actors involved in building the national TVET policy, as well as actors involved in the teaching-learning processes in the training schools and in the enterprises.

By providing an explanatory basis for the behavior of business groups, this study introduces the possibility of comparative studies with other business groups, for example, with business groups in the domestic economy, the traditional economy, and the "old economy." It would also be interesting to compare the actions, subjectivities, and structures in the TVET policy of entrepreneurs in other countries.

Furtherore, there could be additional studies around the TVET policy transfers in the Central American or Latin American context. One of this research's more important results is how TVET policies in the United States, Taiwan, Germany, and international organizations such as the OECD have influenced the construction of TVET policies in Costa Rica at different times. The influence of cooperation

agencies and organizations also responds to a historical and structural context, and to a series of very specific subjectivities, ideologies, and interests. The idea of “good practices” should be studied by broadening the possibilities of scientific reasoning from the emitting agencies to the economic, political, and social configuration of the recipient countries. It should be remembered that local actors have agency capacity and are able to modify transfer processes, as occurred in Costa Rica with the dual apprenticeships project or in the competency-based model financed by Taiwan.

A gap left by this work, which should be resolved soon, is the need to integrate the visions of educational actors on the role of entrepreneurs in the last 40 years. Although experts representing institutions were interviewed, I recognize that it is necessary to know more about how educational actors feel about the role and participation of business in TVET.

It should also be recognized that it was necessary to investigate not only political participation as a central category, but also pedagogical participation, a political act in the sense of its constructing and reproducing entrepreneurial subjectivities (such as their ideologies and values) during the learning process. That is: How do actions and subjectivities become didactic-pedagogical practices in the learning process? For example, though the ideological influence of entrepreneurship as a pedagogical principle was included in the analysis, other elements were left out, such as participation in the dual apprenticeships processes, in the construction of national qualification standards, and in the design of the curriculum.

Another topic that remained unresolved in the research is the relationship between supply and demand in TVET. I would venture to say that this is a false dichotomy. Normally, institutional and business actors justify their participation in TVET around the “mismatch” between supply and demand for skilled labor, but demand is not a rational construction, nor is it previously determined by the subjects (the entrepreneurs). Moreover, supply is a construction that passes through a series of social, bureaucratic, and subjective relationships involving philosophical and pedagogical principles, as well as a specific vision of the public and the private. In this sense, supply will always be to some degree “mismatched” if demand is understood strictly as economic need. Demand should be considered from its broad social dimension. This hypothesis will have to be addressed and studied scientifically with regard to the discourse around TVET.

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Annexes

Annex 1. Chambers and business associations that are members of UCCAEP

#	Chambers and business associations that are members of UCCAEP	
1	Asociación Alianza Empresarial para el comercio Seguro	Business Alliance for Secure Commerce Association
2	Asociación Bancaria Costarricense	Costa Rican Banking Association
3	Asociación Cámara Costarricense de la Construcción	Costa Rican Chamber of Construction Association
4	Asociación Costarricense de Transportistas Unitarios	Costa Rican Association of Unitary Carriers
5	Asociación Cámara de Infocomunicación y Tecnología	Costa Rican Chamber of Infocommunication and Technology Association
6	Asociación Comunidad de Empresas de Comunicación Comercial de Costa Rica	Costa Rican Association of Commercial Communication Companies Community Association
7	Asociación Costarricense de Agencia de Carga y Logística Internacional	Costa Rican Association of Freight Forwarders and International Logistics Agency
8	Asociación Costarricense de Facultades y Escuelas de Medicina	Costa Rican Association of Medical Schools and Colleges
9	Asociación Costarricense de Grandes Consumidores de Energía	Costa Rican Association of Large Energy Consumers
10	Asociación Costarricense de la Industria del Plástico	Costa Rican Association of the Plastics Industry
11	Asociación Costarricense de Productores de Energía	Costa Rican Association of Energy Producers
12	Asociación de Aseguradas Privadas de Costa Rica	Association of Private Insurance Companies of Costa Rica
13	Asociación de Centros Educativos Privados	Association of Private Educational Centers
14	Asociaciones de Empresarios Colombianos en Costa Rica	Association of Colombian Businessmen in Costa Rica
15	Asociación de Empresas de Zonas Francas de Costa Rica	Association of Free Trade Zone Companies of Costa Rica
16	Asociación de Importaciones de Vehículos y Maquinaria	Association of Vehicle and Machinery Imports
17	Asociación Nacional de Exportaciones de la Industria Textil	National Association of Textile Industry Exports

18	Asociación Unidad de Rectores de las Universidades Privadas de Costa Rica	Costa Rican Association of Rectors of Private Universities of Costa Rica
19	Cámara Costarricense de Corredores de Bienes Raíces	Costa Rican Chamber of Real Estate Brokers
20	Cámara Costarricense de Empresas de Factoreo	Costa Rican Chamber of Factoring Companies
21	Cámara Costarricense de Hoteles	Costa Rican Chamber of Hotels
22	Cámara Costarricense de Importaciones de Graneles	Costa Rican Chamber of Bulk Importers
23	Cámara Costarricense de la Industria Alimentaria	Costa Rican Chamber of the Food Industry
24	Cámara Costarricense de la Salud	Costa Rican Chamber of Health
25	Cámara Costarricense de Navieros	Costa Rican Chamber of Shipping Companies
26	Cámara Costarricense de Porcicultores	Costa Rican Chamber of Pork Producers
27	Cámara Costarricense de Restaurantes y Afines	Costa Rican Chamber of Restaurants and Allied Industries
28	Cámara Costarricense de Tecnología de Información y Comunicación	Costa Rican Chamber of Information Technology and Communications
29	Cámara Costarricense Norteamericana de Comercio	Costa Rican Chamber of Commerce of North America
30	Cámara de Azucareros	Chamber of Sugar Producers
31	Cámara de Comercio Exterior de Costa Rica y de Representantes de Casas Extranjeras	Costa Rican Chamber of Foreign Commerce and Representatives of Foreign Companies
32	Cámara de Empresarios del Combustible	Chamber of Fuel Entrepreneurs
33	Cámara de Industrias de Costa Rica	Costa Rican Chamber of Industries
34	Cámara de Propietarios de Bienes Inmuebles de Costa Rica	Costa Rican Chamber of Real Estate Owners
35	Cámara de Publicidad Exterior	Chamber of Foreign Advertising
36	Cámara Nacional de Agricultura y Agroindustria	National Chamber of Agriculture and Agribusiness
37	Cámara Nacional de Avicultores de Costa Rica	National Chamber of Poultry Farmers of Costa Rica
38	Cámara Nacional de Bananeros	National Chamber of Banana Growers

39	Cámara Nacional de Cafetaleros	National Chamber of Coffee Growers
40	Cámara Nacional de Comerciantes Detallistas y Afines	National Chamber of Retailers and Allied Merchants
41	Cámara Nacional de la Educación Privada	National Chamber of Private Education
42	Cámara Nacional de Radiodifusión	National Chamber of Radio Broadcasting
43	Cámara Nacional de Transportes	National Chamber of Transportation
44	Cámara Nacional de Transportes de Carga	National Chamber of Transportation
45	Cámara Nacional de Turismo	National Chamber of Tourism
46	Cámara Textil Costarricense	Costa Rican Textile Chamber
47	Consejo de Desarrollo Inmobiliario	Real Estate Development Council
48	Federación Centroamericana de Laboratorios Farmacéuticos	Central American Federation of Pharmaceutical Laboratories
49	Federación de Cámaras del Caribe	Federation of Chambers of the Caribbean

Source: Own elaboration with data from the UCCAEP web page.

Annex 2 Bachelor's and Master's theses identified on TVET in Costa Rica

Bachelor's degree research

	Título	Autores y año
1.	Plan piloto para la enseñanza de la astronomía en el Colegio Técnico Agustiniano de la Ciudad de los Niños	Pineda-Lizano, Juan José (Instituto Tecnológico de Costa Rica, 2020)
2.	Caracterización de la población de Pacayas en el Cantón de Alvarado para gestionar una propuesta de capacitación enfocada a promover una cultura de emprendimiento e innovación por medio del Colegio Técnico Profesional de Pacayas	Esquivel-Alfaro, María Daniela (Instituto Tecnológico de Costa Rica, 2018)
3.	Estrategias de formación permanente de las competencias docentes requeridas en la Especialidad de Turismo en Hotelería y Eventos Especiales de colegios técnicos mediante una propuesta de plan formativo	Miranda-Valverde, Dayanna (Instituto Tecnológico de Costa Rica, 2019)
4.	Competencias matemáticas que deben fortalecer los estudiantes de 11° año en la especialidad de Dibujo Arquitectónico del Colegio Técnico Profesional de Oreamuno, para la elaboración de presupuestos de obras civiles	Guerrero-Luna, Ana Beatriz (Instituto Tecnológico de Costa Rica, 2019)
5.	Análisis de los servicios de extensión comunitario que ofrece la Cooperativa Educativa del Colegio Técnico Profesional de Piedades Sur, San Ramón, Alajuela	Carvajal-Salas, Alexander; Roldan-Quirós, Walter Andrés (Instituto Tecnológico de Costa Rica, 2019)
6.	Propuesta de guía didáctica con estrategias pedagógicas para fortalecer las competencias de empleabilidad en los estudiantes con necesidades educativas especiales (NEE) del Colegio Técnico Profesional (CTP) San Agustín, Ciudad de los Niños de Cartago	Molina-Chacón, Ana Isabel (Instituto Tecnológico de Costa Rica, 2019)
7.	Propuesta Modelo de Universidad Corporativa para la capacitación del área operativa de Compañía de Galletas Pozuelo de Costa Rica S.A.	Bolaños-Arce, Mariana; Quesada-Sandí, Fabiola María (Instituto Tecnológico de Costa Rica, 2019)

8.	Factores sociales, educativos y personales que se asocian con la deserción de los estudiantes de séptimo nivel del Liceo Francisco Amiguetti Herrera, circuito 03, de la Región Huetar Norte, durante el curso lectivo 2012	González-Kopper, Natalia María (Instituto Tecnológico de Costa Rica, 2013)
9.	Propuesta programática para el curso libre "Diseño Web", que el Instituto Profesional de Educación Comunitaria (IPEC) de Santa Bárbara de Heredia puede ofrecer a la población adulta	Ferreto-Rodríguez, María de los Ángeles (Instituto Tecnológico de Costa Rica, 2016)
10.	Estudio sobre aspectos sociales, educativos y económicos relevantes ante un posible cambio de la modalidad académica a técnica del Liceo Carrillos de Poás de Alajuela.	González-Rodríguez, Loyda; Guerrero-Segura, Rocío (Instituto Tecnológico de Costa Rica, 2015)
11.	Estudio del plan de sesión en la ejecución de los servicios de capacitación y formación profesional y su relación con la evaluación técnico-metodológica de la persona docente del núcleo de turismo del Instituto Nacional de Aprendizaje.	Mora-Cerdas, Geisel; Mendoza-Angulo, Ericka (Instituto Tecnológico de Costa Rica, 2016)
12.	Formulación de alternativas, hacia la implementación de proyectos ambientales, eficiencia energética y desarrollo sostenible, de Educación Técnica Profesional, para el Ministerio de Educación Pública, a nivel Nacional.	Pérez-Moraga, Johannes Alejo (Instituto Tecnológico de Costa Rica, 2016)
13.	Estrategia metodológica para el desarrollo de las habilidades blandas para los estudiantes de secundaria	Sánchez-Redondo, Inés (Instituto Tecnológico de Costa Rica, 2016)
14.	Estudio para el desarrollo de la propuesta que apoye la Gestión Ambiental del Instituto Nacional de Aprendizaje desde el Centro Regional Polivalente de Naranjo y la Finca Didáctica mediante la Gestión del Conocimiento.	Méndez-Abarca, Norma María; Zúñiga-Sánchez, Jimmy Omar; Chacón-Zúñiga, Luis Ángel (Instituto Tecnológico de Costa Rica, 2016)
15.	Diagnóstico de clima organizacional de la sección técnica nocturna del Colegio Técnico profesional de Cartagena, Circuito 03 de la de la Dirección Regional de Educación de Santa Cruz.	Obando-Medrano, Nathalie; Rodríguez-Molina, Erica; Villareal-Rodríguez, Jorge (Instituto Tecnológico de Costa Rica, 2017)
16.	Factores que dan lugar a la incertidumbre que sienten los docentes de los colegios técnicos,	Montero-Sánchez, Luz Marina (Instituto Tecnológico de Costa Rica, 2016)

	respecto a la posible implementación de la educación dual en el sistema educativo costarricense.	
17.	Competencias demandadas por los centros de servicio compartido de los de los colegios técnicos profesionales en la especialidad de contabilidad y finanzas en contraste con las que se contemplan en el plan de estudio del Ministerio de Educación Pública.	Villalta-Salazar, Grettel María (Instituto Tecnológico de Costa Rica, 2015)
18.	Análisis del proceso de evaluación de los servicios educativos que administra FUNDATEC, en función del mejoramiento de calidad.	Mata-Solano, Danilo (Instituto Tecnológico de Costa Rica, 2015)
19.	Estudio de la perspectiva de las habilidades blandas y su importancia por parte de los profesores y los estudiantes del área de Informática Empresarial del Colegio Técnico Profesional de Cartagena	Sánchez-Alfaro, Daniela; Núñez-López, Yarlieth (Instituto Tecnológico de Costa Rica, 2016)
20.	Propuesta de aprendizaje en línea para estudiantes de undécimo año de los Colegios Técnicos Profesionales de la Región Huetar Norte	Oreamuno-Torres, Rosey; Artavia-Galeano, Marco Antonio (Instituto Tecnológico de Costa Rica, 2016)
21.	Creación de una comunidad virtual para el trabajo colaborativo, que permita la producción de material didáctico en el núcleo de Industria Gráfica del INA	Segura-Mesén, Manuel Emilio (Instituto Tecnológico de Costa Rica, 2017)
22.	Utilización de las redes sociales como apoyo metodológico en el entorno educativo.	Chaves-Rojas, Kricia (Instituto Tecnológico de Costa Rica, 2017)
23.	Propuesta de adaptación del Programa de Estudio de Artes Plásticas de secundaria para el III Ciclo Vocacional.	Montenegro-Flores, Elisa (Instituto Tecnológico de Costa Rica, 2016)
24.	Estudio de empleabilidad de los egresados en el año 2015, del Programa de Formación Bartender y Salonero/a Profesional, en las modalidades de formación dual y formación presencial, en la Unidad Regional Chorotega del Instituto Nacional de Aprendizaje	Villalobos-Fernández, Carolina (Instituto Tecnológico de Costa Rica, 2016)

25.	Análisis del dominio del idioma inglés adquirido por los egresados, de la especialidad de turismo en hotelería y eventos especiales, del Colegio Técnico Profesional de Venecia, San Carlos, en los años 2014 y 2015	Rosales-Leal, Francisca Odilie (Instituto Tecnológico de Costa Rica, 2017)
26.	Propuesta para la mejora del portafolio de evidencias en el Colegio Técnico Profesional Padre Roberto Evans Saunders, Sección Nocturna, curso lectivo 2017	Barrias-Fallas, Ariel Mauricio; Cruz-Solano, Luis Eduardo; Guevara-Líos, Carlos Eduardo (Instituto Tecnológico de Costa Rica, 2017)
27.	Uso de las Tecnologías de Información y Comunicación en el proceso de enseñanza-aprendizaje, en los estudiantes del Liceo Sonafluca, CINDEA San Isidro de Peñas Blancas y Colegio Técnico Profesional La Fortuna	Castro-Morales, Grettel Patricia; Rodríguez-Rodríguez, Luis Kendall (Instituto Tecnológico de Costa Rica, 2017)
28.	Determinación de los factores individuales, familiares e institucionales que intervienen en la deserción estudiantil de décimo nivel, de la educación diversificada, del Colegio Técnico Profesional de Pococí, del circuito 01 de la Dirección Regional Educativa de Guápiles, en el curso lectivo 2012	López, Sergio Denis; Pérez-Gómez, Kenia María (Instituto Tecnológico de Costa Rica, 2013)
29.	Análisis de los factores personales, familiares y pedagógicos que inciden en la repitencia en el séptimo año en el Liceo San Carlos: una propuesta para mejorar el rendimiento académico	Zúñiga-Espinoza, Marco Eugenio (Instituto Tecnológico de Costa Rica, 2013)
30.	Diagnóstico para determinar las estrategias metodológicas que poseen los docentes de los Colegios Técnicos Profesionales de San Carlos según la Ley N°7600, 2016	Valerio-Mora, Eugenia (Instituto Tecnológico de Costa Rica, 2018)
31.	Propuesta didáctica para motivar, el uso de las Tics, dentro del proceso de enseñanza aprendizaje de los docentes de las Especialidades Técnicas del C.T.P. de Cartagena Sección Nocturna. Circuito03, Dirección Regional Santa Cruz.	Vallejos-Briceño, Sheirys (Instituto Tecnológico de Costa Rica, 2017)

Master's degree research

	Titulo	Autor y año
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32.	Propuesta tecnológica para la toma de decisiones dentro del proceso de selección de una especialidad técnica en las personas estudiantes de noveno año del Colegio Técnico Profesional Dos Cercas, Circuito 01, Dirección Regional de Educación de Desamparados	Villalobos-Chacón, Bernal (Instituto Tecnológico de Costa Rica, 2020)
33.	Tomo I: Capacitación para docentes de especialidades técnicas industriales del COVAO Diurno en la enseñanza de habilidades blandas mediante herramientas virtuales, Cartago. Tomo II: Programa de Capacitación docente para la enseñanza de habilidades blandas mediante herramientas virtuales en la educación técnica profesional.	Arce-Rivera, Gilberto; Benavides-Vargas, Andrés; Delgado-Calvo, Josué; Loria-Ramírez, Víctor; Montero-Ulloa, Diana (Instituto Tecnológico de Costa Rica, 2020)
34.	Programa de capacitación para docentes de especialidades técnicas sobre la implementación de estrategias pedagógicas para fomentar la Educación para el Desarrollo Sostenible	Blanco-Brenes, Ana Carolina; Granados-Araya, Carolina; Murillo-Masís, Rodrigo; Navarro-Ceciliano, Jesús; Ortega-Madriz, Alejandra; Rojas-Delgado, Mariana (Instituto Tecnológico de Costa Rica, 2020)
35.	Propuesta de un planeamiento didáctico inclusivo para el curso de Manipulación de Alimentos, por medio del M-Learning	Barquero-Quesada, Georgina; Coto-Pereira, Joseline; Leiva-Obando, José Alberto; Quesada- Mora, Thais (Instituto Tecnológico de Costa Rica, 2020)
36.	Análisis del uso de las redes sociales como recurso pedagógico de los estudiantes y profesores del Área de Dibujo Arquitectónico en el Subárea de Dibujo Urbanístico del CTP de Aserrí para la propuesta de un manual de estrategias didácticas que fortalezca los procesos de enseñanza y aprendizaje	Álvarez-Mattei, Kattia Violeta; Barboza-Ortega, Siyyid; Moreno-Briceño, Zahyra (Instituto Tecnológico de Costa Rica, 2020)
37.	Propuesta de diseño curricular virtual para el Programa de Apoyo Empresarial BN Pyme/Mujer del Departamento de Banca para el Desarrollo, Banco Nacional de Costa Rica.	Arroyo-Chacón, Angeliet; Mata-Chacón, Gabriela; Mendoza-Zúñiga, Hazel; Cruz-Salgado, Yaribel; Obando-Rodríguez, Gil; Pizarro-Mendoza, Steiger (Instituto Tecnológico de Costa Rica, 2020)
38.	Estudio de competencias pedagógicas de los docentes para el desarrollo de una propuesta de capacitación que fortalezca la atención de estudiantes del Colegio Nocturno Miguel	Chinchilla-Córdoba, Álvaro; Cisneros-Viquez, Carlos; Gutiérrez-Leitón, Viviana; Gutiérrez-Solórzano,

	Obregón Lizano con necesidades educativas especiales.	Andrea (Instituto Tecnológico de Costa Rica, 2020)
39.	Propuesta de una herramienta tecnológica interactiva de divulgación y promoción sobre los Consejos Regionales de Vinculación con la Empresa y la Comunidad (CORVEC), para los actores vinculados con la Educación Técnica Profesional del CORVEC Puriscal Unido.	Martínez-Meza., Belkis; Retana-Mena, Stephanny; Salazar-Castro, Gustavo (Instituto Tecnológico de Costa Rica, 2020)
40.	Análisis de la gestión de la salud y seguridad en el trabajo en proyectos de construcción	Casasola-Herrera, Nabid (Instituto Tecnológico de Costa Rica, 2019)
41.	Propuesta de talleres en temas de contabilidad básica dirigidos a la Cooperativa de Productores Agropecuarios de La Estrella del Guarco R.L.	Arias-Rodríguez, Ana Verónica; Calderón-Cordero, Keylin María; Mora-Lezcano, Verónica Isabel (Instituto Tecnológico de Costa Rica, 2019)
42.	Propuesta de una estrategia didáctica no presencial para la inducción de participantes en los cursos virtuales de la Unidad de Capacitación y Formación del Instituto de Fomento y Asesoría Municipal para el año 2020	Sánchez-Calderón, Michael (Instituto Tecnológico de Costa Rica, 2019)
43.	Elaboración de una propuesta curricular para implementar la unidad de estudio de Mercadeo Digital al sub-área Gestión Empresarial, del nivel de undécimo año, al programa de estudios de la especialidad de Secretariado Ejecutivo en Educación Técnica secundaria en los Colegios Técnicos Profesionales de Puntarenas y Vocacional de Artes y Oficios de Cartago nocturno en el año 2019	Zeledón-Soto, Ana María (Instituto Tecnológico de Costa Rica, 2019)
44.	Plan de capacitación de habilidades blandas para mejorar la inserción laboral de la especialidad de Informática en Desarrollo de Software del Colegio Técnico Profesional Mario Quirós Sasso	Madriz-Granados, Daniel; Serrano-Calderón, Anthony (Instituto Tecnológico de Costa Rica, 2019)
45.	Propuesta Didáctica para el estudio de la Metodología BIM en la Especialidad de Dibujo Arquitectónico del Colegio	Quirós-Coto, Carlos Andrés (Instituto Tecnológico de Costa Rica, 2019)

	Profesional de Artes y Oficios Nocturno de Cartago	
46.	Diagnóstico de los procedimientos de recopilación, análisis y evaluación de datos en la feria institucional de Expoingeniería del Colegio Técnico San Agustín, Ciudad de los Niños	Barquero-Chaves, Jeffry; Gutiérrez-Agüero, Leonardo (Instituto Tecnológico de Costa Rica, 2019)
47.	Análisis de la incorporación e implementación de habilidades en la formación de estudiantes universitarios en una carrera de ingeniería industrial para un curso de Mecánica y Electromecánica	Solís-Ramírez, Cristhian (Instituto Tecnológico de Costa Rica, 2019)
48.	Arquitaller en el Centro de Capacitación Casa Cinco del Colegio de Arquitectos de Costa Rica (CACR)	Rodríguez-Rojas, Josué (Instituto Tecnológico de Costa Rica, 2019)