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Dedications

To my beloved Maa

To Khalida with love

To Rachad and Rawand with affection

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Acronyms

- AODA Accessibility for Ontarians with Disabilities Act
- ARWU Academic Ranking of World Universities
- CAUT Canadian Association of University Teachers
- CD Canadian Dollar
- CEGE Collège D'Enseignement Général Et Professionnel
- CETM Continuing Education and Training Masterplan
- CFI Canadian Foundation for Innovation
- CIF Canadian Foundation for Innovation
- CMSF Canada Millennium Scholarship Foundation
- CRC Canada Research Chairs
- CSLP Canada Student Loans Program
- CST Canada Social Transfer

CVMA Canadian Vehicle Manufacturers Association

- GDP Gross Domestic Product
- H E Higher Education Institutions
- HEEACT Higher Education Evaluation Accreditation Council Taiwan
- HEQCO Higher Education Quality Council of Ontario
- ICE International College of Economics and Finance
- ITE Institute of Technical Education
- NAFTA North American Free Trade Agreement
- NCCT The National Council of University Teachers
- NCCU National Conference of Canadian Universities
- NSERC Natural Sciences and Engineering Research Council
- OECD Organization for Economic Cooperation and Development
- OSAP Ontario Student Assistance Program
- PISA Program for International Student Assessment
- PSE Post-Secondary Education
- PSI Student Assistance Program
- QS Quacquarelli Symonds

- R&D Research and Development
- RESP Registered Education Savings Program
- RESP Registered Education Savings Plan
- SME Small and Medium Enterprises
- SSHRC Social Sciences and Humanities Research Council
- STEM Sciences and Technology Engineering and Mathematics
- TRC Truth and Reconciliation Commission
- TVE Technical Vocational Education

Abstract

The transition towards a post-industrial society has been a major global phenomenon, marked by the decline of traditional manufacturing-industries and the rise of service economy based on knowledge-based economy. In Canada, higher education stands as the thinking-brain and the powerful engine in this transition by providing citizens with the knowledge and skills needed to face the challenges in the new economy. This dissertation examines the contribution of higher education in shaping and accompanying the transition towards post-industrial society, focusing on the ways in which universities and colleges have reformed to develop programs and courses that are specifically designed to equip students with the skills and knowledge needed to succeed in the new economy. The review of the literature and qualitative data are collected to showcase the situation in Ontario and Quebec. The official statistics provided by the Canadian government used to analysis the current situation of the Canadian society and economy. The findings suggest that higher education is central in shaping post- industrial society in Canada, by training individuals with the knowledge and skills needed to succeed in the new economy. Furthermore, higher education has been instrumental in promoting social and economic flexibility, which helped to create a more or less equitable society. However, the findings also highlight some of the challenges that higher education faces in adapting to the changing needs of the post-industrial economy such as the inadequacies of the programs, the regional and social disparities, and the neo-liberal conception of HE which left many apart.

Key Words: Canadian Higher Education, Human Capital, Knowledge-Economy, Neoliberalism, Post-industrial Society, Service-Based Economy,

ملخص

الانتقال نحو مجتمع ما بعد الصناعة ظاهرة عالمية، تميزت بتراجع الصناعات التقليدية و التحول إلى اقتصاد مبني على الخدمات و المعرفة. في كندا يلعب التعليم العالي دور العقل المفكر و المحرك القوي في الانتقال و ذلك من خلال تزويد المواطنين بالمعرفة و المهارات اللازمة. تبحث هذه الأطروحة مساهمة التعليم العالي في تشكيل و مرافقة الانتقال في هذا الاقتصاد الجديد مع التركيز على الطرق التي قامت بها الجامعات و الكليات بإجراء إصلاحات لتطوير برامج مصممة خصيصا لتزويد الطلبة بالمهارات و المعرفة اللازمة.

يتم في هذا البحث استعراض الأدبيات و جمع البيانات النوعية لعرض الوضع في أونتاريو و كيبيك كما يتم الاعتماد على الإحصاءات الرسمية التي توفرها الحكومة الكندية. تشير النتائج إلى أن التعليم العالي يلعب دورا محوريا في تشكيل مجتمع ما بعد الصناعة و ذلك من خلال تدريب الأفراد على اقتصاد المعرفة. علاوة على ذلك كان التعليم العالي أداة فاعلة في تعزيز المرونة الاجتماعية و الاقتصادية مما ساهم في خلق مجتمع أكثر إنصافا و مع ذلك تسلط النتائج الضوء أيضا على بعض التحديات التي يواجهها التعليم العالي في التكيف مع الاحتياجات المتغيرة للاقتصاد مما بعد الصناعة مثل عدم كفاية البرامج و التفاوتات الإقليمية و الاجتماعية، بالإضافة إلى التصور النيوليبيرالي للتعليم العالي الذي أدى إلى تهميش العديد من الأفراد.

الكلمات المفتحاية: التعليم العالي الكندي، رأس المال البشري، اقتصاد المعرفة. النيوليبرالية. مجتمع ما بعد الصناعة و اقتصاد الخدمات

Résumé en français

La transition vers une société postindustrielle est un phénomène mondial majeur, marqué par le déclin des industries manufacturières traditionnelles et l'essor d'une économie de services fondée sur l'économie du savoir. Au Canada, l'enseignement supérieur constitue le cerveau pensant et le puissant moteur de cette transition en fournissant aux citoyens les connaissances et les compétences nécessaires pour faire face aux défis de la nouvelle économie. Cette thèse examine la contribution de l'enseignement supérieur et de l'investissement sur le facteur humain, à la conception et à l'accompagnement de cette transition, en se concentrant sur la manière dont les institutions de formation supérieur se sont réformées pour développer des programmes et des cours spécifiquement conçus pour doter les étudiants des compétences et des connaissances nécessaires pour réussir dans la nouvelle économie. S'appuyant sur une revue de la littérature et des données qualitatives recueillies au moyen d'études de cas en Ontario et au Québec, cette thèse explore les différentes façons dont l'enseignement supérieur a contribué au développement de la société postindustrielle au Canada. Les statistiques officielles fournies par le gouvernement canadien ont été utilisées pour analyser la situation actuelle de la société et de l'économie canadiennes. Les résultats de l'étude suggèrent que l'enseignement supérieur joue un rôle central dans la société postindustrielle au Canada, en permettant aux individus d'acquérir les connaissances et les compétences nécessaires pour réussir dans la nouvelle économie. De plus, l'enseignement supérieur a joué un rôle déterminant dans la promotion de la flexibilité sociale et économique, ce qui a contribué à créer une société plus ou moins équitable. Cependant, les résultats mettent également en évidence certains des défis auxquels l'enseignement supérieur est confronté pour s'adapter aux besoins changeants de l'économie tertiaire, tels que les insuffisances des programmes, les disparités régionales et sociales et la conception néolibérale de l'enseignement supérieur qui a laissé de nombreux laissés-pour-compte.

Mots clés : Société Postindustrielle, Capital Humain, l'économie du savoir, l'économie de service, néo-libéralisme

General Introduction

In the last quarter of the twentieth century, many western industrialized countries witnessed a transition to Post-industrialism which is a shift from economies dominated by manufacturing and industrial production to those increasingly focused on information, technology, and services. This transition, described by sociologist Daniel Bell in his seminal work "The Coming of Post-Industrial Society" (1973), reflects a fundamental transformation in economic and social structures, labour markets leading to the appearance of new norms and values. The main argument is being that post-industrial societies are characterized by a reliance on knowledge and service sectors, where the role of education becomes pivotal in preparing individuals for a new labor market. This theoretical framework sets the stage for understanding how higher education institutions need to adjust to these changing demands in Canada.

The selection of Canada as a case study has primarily been encouraged by its historical subjugation to the British imperialism, which influenced its economic development trajectory. Specifically, English mercantilism, capitalism, industrialization, and expansionism had direct repercussions on Canada. Today, although Canada enjoys independence from Great Britain and is an active member of the Commonwealth, the interconnections between Western economies (globalization) and the Canadian economy remain strong and palpable. Additionally, Canada's proximity to the United States—the world's strongest economy for the last eighty years—provides further justification for studying the economic and social transformations of this country. We should clarify that one of the impacts studied is the shift in focus from manufacturing to knowledge-based industries.

In this research work an attempt has been made to investigate the development of higher education in Canada and its implications on society and economy. HE in Canada has been ,extensively, studied and documented by scholars, underlining a historical trajectory marked by both growth and challenges. According to recent researches, the Canadian higher education system has evolved to satisfy diverse population while maintaining high standards of quality and accessibility. It is argues that this evolution was influenced by historical, social, and economic factors that have shaped Canada's unique educational approach, characterized

by a strong public funding model and substantial governmental oversight. As a result, Canadian universities have been able to provide a wide range of educational opportunities without sacrificing the quality of education. This model has been pivotal in promoting social mobility and economic development, making Canadian higher education a model for other nations.

Nevertheless, the landscape of higher education in Canada is not without its criticisms and challenges. In fact, the increasing pressures on Canadian universities to commercialize research and accommodate to the needs of the private sector, a trend that has raised concerns about the potential erosion of traditional academic values. This shift towards market-driven education has been accelerated by globalization and technological advancements, posing challenges in maintaining the balance between economic development and educational integrity.

Additionally, this shift has led to a devaluation of liberal arts and a rise in vocationalism, which may undermine the broader educational mission of higher education institution traditional ancestral role which fosters critical thinking and civic engagement. These discussions stress the need to initiate debates within the academic community about the future direction of higher education in Canada. This assumption as detailed by Giroux (2014) in "Neoliberalism's War on Higher Education, pinpoints that the market-driven approach to education undermines the broader educational mission of fostering critical thinking and intellectual inquiry. In fact, this reflection assumes that targeting vocational training at the expense of art and humanities education reflects the neoliberal scheme which would like to prioritize economic efficiency on the expense of intellectual development of students and citizens.

Moreover, the uniqueness of the post-secondary education system in Canada, and education in general, lies in its decentralized nature; it lacks a central body such as a Ministry of Higher Education or a central organization to manage, direct, and assess institutions. This structure is due to the Constitutional Act of 1867, which grants autonomy to educational institutions at all levels across all provinces. The situation represents an anomaly for a group of scholars, while it is and a 'virtue' for others. Consequently, the issue of funding becomes crucial as it raises questions about who is responsible for financing higher education in Canada.

The transformation challenges traditional educational paradigms, pushing higher education institutions to adapt their curricula and strategic more priorities to the post-industrial dimensions in the world. Therefore a growing emphasis on human capital accentuates the need for advanced skills and knowledge to meet the demands of a new evolving job market. As such, Canadian higher education institutions find themselves at a critical point where the inter-connections of educational practices with economic necessities are not just beneficial but essential for the society as a whole.

Respectively, the main problematic of this research work will be to determine the dynamics and the interplay of higher education and a knowledge-based economy, and to understand the strategies that have enhanced the responsiveness of educational systems to economic and societal needs in Canada.

To address the mentioned problematic, this research will explore several key questions articulated around the following research questions: the first one being related to investigate in which way Canadian higher education institutions adjusted their curricular and institutional structures to align with the demands of a post-industrial society. The second one is related to know the role of human capital implementation in shaping the strategic priorities of higher education institutions in the post-industrial era. Furthermore, it should focus on how effective are these adaptations of the resulting shifts in meeting the needs of the current and future job markets. Then, we shall investigate the implications of these shifts for educational equity and access in Canada. Lastly, a focus will be put on the way these shifts influence the broader economic landscape, particularly in terms of innovation and economic development.

Referring to the research questions and relying on the existing literature, one may hypotheses that higher education institutions in Canada having integrated technology and practical skills training into their curricula are better aligned with the labour market demands of a post-industrial society. Secondly, the shift toward a focus on human capital development in Canadian higher education has led to enhanced economic outcomes, particularly in the fields of technology and innovation. On one hand, despite the advancements in aligning education with market needs, disparities in access to these enhanced educational opportunities remain a challenge, exacerbating socioeconomic inequalities. On the other hand, institutions that have proactively adapted to post-industrial educational demands demonstrate higher rates of student employability and satisfaction.

In response to the settled research questions and hypothesis, the present research employs research will employ a mixed-methods approach, providing a comprehensive analysis of the impact of post-industrial changes on Canadian higher education. The quantitative approach takes its resources from the National Statistics of Canada website concerning a systematic functioning of the phenomenon under investigation. However, in the qualitative approach brings data from educational and economic official reports provided by different commissions and organizations in Canada, especially to test the hypotheses related to the institutional alignment with labour market demands and economic outcomes. This data are particularly feeding the educational situation of the universities of Ontario and Quebec which are the two most focalised research areas in the present study, as they are the most populated Canadian provinces having a high economic integration .

Accordingly, the present research work dictates four chapters. The first of which exposes a theoretical framework of post-industrialism and human capital. It seeks a comprehension of transition to a post-industrial society which necessitates a re-evaluation of educational frameworks to better align with evolving societal needs. Hence, the theoretical part of this research work centres on the interaction between post-industrialism and human capital, grounded in three sociological key theories: functionalism, conflict theory, and symbolic interactionism. It first details the functionalist view of education as a critical mechanism for maintaining societal stability and facilitating necessary skills and knowledge. This perspective suggests that higher education institutions adapt their curricula to meet the evolving needs of the workforce, thus maintaining the societal equilibrium.

Secondly, Conflict theory offers a contrasting view by focusing on how education can perpetuate social inequalities. It argues that access to higher education and the benefits derived from it are often in favour of more privileged groups, thereby reinforcing existing class structures. Thirdly, symbolic interactionism provides a micro-level analysis of daily interactions and experiences within educational institutions, highlighting how individual identities and societal expectations influence educational outcomes and vice- versa.

All in all, these theories provide conceptual and theoretical foundations for understanding the dynamic changes occurring in higher education as it responds to the demands of a post-industrial society. By integrating them, this research work seeks to uncover how educational

institutions not only react to external economic pressures but also shape the social network of the economy through the cultivation of human capital.

The second chapter presents a comprehensive overview of historical and current landscape of Canadian higher education, detailing its past functioning and development during the different historical phases of the constitution of modern Canadian nation. Besides, it depicts the structures, priorities, and challenges faced by institutions in the past and nowadays. It is noteworthy to add that over the last few decades, Canadian universities and colleges have experienced transformations and reforms to meet the needs and the demands of a knowledge-based economy. These changes include curriculum revisions to include more pragmatic fields needed in the new model of the economy; such as STEM (Science, Technology, Engineering, and Mathematics) which have been given the lion's share because of an increased interest on. research and development to respond the company's needs (mainly the private sector) However, since these changes and reforms have been initiated by the neo-liberal doctrine, the situation did not go without challenge. Besides, two coupled factors: changing demographics, and increasing international competition, accentuated pressure on students and faculty members. Additionally, an increasing debate about the relevance of traditional degree programs in the face of rapid technological change was raised by policy-makers. This chapter examines the way Canadian institutions are dealing with these challenges while also benefit from new opportunities to enhance their educational system and research abilities in the regional context and worldwide.

The third chapter tends to explore the interplay or the interconnections between HE and the Canadian economy; it deals with the inter-relation between higher education and economic factors as a 'two-way-traffic' to highlight its pivotal role to understanding the educational institutions in a country's development mainly in the economic dynamism. This part of the research work examines how Canadian higher education institutions contribute to economic development and innovation. In fact, it is important to say that universities in Canada as elsewhere, they are not only centres of learning and research; they are also economic engines that generate revenue through research grants, patents, and the formation of new companies such as start-ups. Moreover, higher education institutions are the cornerstone in regional economic development, supplying a skilled workforce, fostering entrepreneurial ventures, and collaborating with industry and government on various projects. This section focalises the

Ontario province case, through the analysis of respective data from the Statistics of Canada to explore the impact of evolving dynamics on the Canadian economy.

The last chapter is a synthesis of the research findings across different aspects of the study. It attempts to provide a coherent picture of the current state and future directions of Canadian higher education. It offers a critical point of view about the way the reforms are undertaken, and it introduces the conception of Neo-Liberalism conception which might be dangerous for the higher educational sector.

Furthermore, this chapter discusses broader implications for the future of higher education in Canada, considering ongoing trends such as digital transformation, internationalization, and the increasing importance of lifelong learning. The discussion aims to provoke thoughtful consideration of how Canadian higher education can continue to evolve to meet the needs of a changing world, ensuring its pivotal contribution to societal and economic well-being.

Chapter One : Human Capital and Post-Industrial Society Theoretical Aspects

Introduction

In this chapter, a focus will be put on the two important theories in the domains of economics and sociology: Human Capital theory (Becker 1964, Schultz 1961) and post-industrial theory (Bell, 1973), investigating their interactions and clarifying their points of intersection, and overlapping. In the same token, the chapter treats the consequences of their alliance in the contemporary socio-economic environment in the Canadian higher education context.

According to the American sociologist Daniel Bell, post-industrial theory clarifies the change in economy from manufacturing-based to service-oriented. Bell (1973) contended that "*the primary sector of the economy is no more manufacturing, but services*", therefore signifying a major change in labour markets and economic institutions. This idea stands as the key driver of the economic activity in the post-industrial countries ,wherein knowledge, information, and services are having a growing in relevance. In other words Bell's approach emphasizes the shift from a manufacturing-based economy to a one stressing knowledge, technology, and services. Ultimately, this new situation has brought major changes to the nature and conception of knowledge and skills required by the 'new' workforce, there by lining to situational education and specialized training.

As far as the Human Capital theory is concerned, it holds the idea of investments in health, training, and educations to increase individual and economic values and ensure a better output. Scholars (sociologists and economists) among whom Gary Becker, Theodore Schultz and others, who maintained that human capital is a major determinant of economic development and growth, notably advanced this notion. Indeed, Becker (1964) proclaimed that *"Investment in human capital by education and training can increase productivity, leading to higher earnings and economic growth".*[1] Whereas, Schultz (1961)underlined that education is an "investment in human capital" that yields returns in the form of higher productivity and economic output, so people and societies should view training and education as major investments with financial benefits.[2].

A post-industrial society is then an economic and social system that moves from manufacturing to service industries because of the huge changes in information and

[1] Gary Becker, Human Capital A Theoretical And Empirical Analysis, With Special Reference To Education Third Edition, The University Of Chicago Press,1993.
[2] Theodore W Schultz , Investing In People The Economics Of Population Quality , University Of California Press,1980.

communication technology that occurred in the mid-twentieth century. This change mostly characterizes leading countries in economy, society, and culture, including : USA, Japan and western European countries, shifting to post-industrial societies and growing faster in computer sciences and advanced technological models. Therefore ,it is very important to basically look at post-industrial society on a global scale to subsequently utilize functionalism, conflict theory (Marxism), and symbolic interactionism in the study of HE issues[3].In point of fact, these theoretical frameworks are crucial for the study of society and human relations. Therefore, they provide insights to understanding core aspects of groups, institutions, and organizations. In other words, these theories will be visualized in post-industrial Canadian society with implications on human capital, employment, and education.

Accordingly, this reflection is primordial when looking at issues like human capital, globalisation, and under-representation of marginalised groups (inequalities)[4]. Hence, the impact of the service-based economy on the workforce population and the socio-political discourse meanings of post-industrial society need to be discussed to understand the societal evolution in Canada. In this respect, scholars like Neil Smelser and Edward Soja use functionalism in their analysis of post-industrial society. While Henri Lefebvre, David Harvey, and Manuel Castells focus on uneven development, in contrast to Cathy Davidson who uses social constructivism and digital literacy for symbolic interactionism analysis.

1.1Theories and Implications in the Canadian Context

At first, according to Durkheim (1915), functionalism views society as a system of interdependent parts. It analyses contributions to social order and stability, while larger educational institutions foster cohesion and solidarity, producing shared beliefs. Under the same umbrella, schools are institutions that promote social conformity; they could be classified according to their sizes, which play a role in shaping and preparing education for job placements[5].

[3] David Rooney, Greg Hearn, Abraham Ninan, Handbook on the Knowledge Economy, Edward Elgar Cheltenham, UK, 2005, pp.120-38.
[4] Ibid.
[5] Edgar F. Borgatta, Rhonda J. V. Montgomery ,Encyclopedia of Sociology Second Edition, Macmillan Reference USA,2000,pp.1029-35.

The second approach is the Conflict theory Marx (1869); it highlights social divisions and struggles between groups. It emphasizes economics, the impact of capitalism on industrial society, and education as a "*malleable tool for the ruling classes"*. Schools are then viewed as mechanisms to reproduce class inequality. Thus, education becomes a contest to maintain class privileges based on inherited power[6].

Thirdly, Symbolic Interactionism explains how people create and shape their social worlds through everyday social interactions. Education institutions are active agents in creating and responding to demands for developing and shaping identities and behaviour. Correspondingly, the decentralized and disconnected system of laws and regulation in education allows emerging issues to grow unchecked, transforms meaning; resources; and control.[7]

Eventually, education and human capital are subjects of similar interpretations across the three approaches. Accordingly, the three frameworks (functionalism, conflict theory, and symbolic interactionism) are to be discussed to understand the post-industrial society and their implications within the social institution of higher education and the related or opposed phenomenon of human capital (Hunter and McClelland 2020)[8].

According to the functionalist sociological theory, institutions exist to meet particular demands inside society Ormerod (2020), so they must meet different needs to keep equilibrium. In other words, the lesser acute needs are, the more they will cause institutions to fade, and the more intense needs are, the more they will help them expand. Although functionalism is sometimes misinterpreted as referring to individual forms, it really explains how institutions are built depending on need and growth, resulting from their incapacity to satisfy a rising demand[9].

Functionalism is a sociological paradigm that focuses on the purpose of a particular activity. It was first introduced by social thinkers like Herbert Spencer, Émile Durkheim, Talcott Parsons, and Robert K. Merton in the late nineteenthth and early twentieth century. Functionalism assumes that society is a system of parts each fulfilling a particular function,

[6] Ibid.,pp.414-17.
[7] Ibid.,pp.3095-105.
[8] Hunter, Chris, and Kent McClelland. "Theoretical Perspectives in Sociology." Mapping the Social Landscape: Readings in Sociology ,2020,p. 31.
[9] Ormerod, R. "The history and ideas of sociological functionalism: Talcott Parsons, modern sociological theory, and the relevance for OR." Journal of the Operational Research Society, 2020. academia.edu.

besides, preserving social equilibrium and structure. Hence, understanding a society's structures implies its understanding of its functions under social survival.

A subdominant viewpoint of functionalism questions 'social evolution' which suggests that society structures change from simple to complex. Importantly, Functionalism clarifies the stability of a society structure as it adapts to its surroundings. In the same vein, it was influenced by August Comte's "social statics" and Parsons' attempt to use modern biology to explain the position of functionalism in sociology. However, Durkheim's study of social solidarity standards further differentiated society development from species evolution and natural selection mechanisms[10]. Durkheim's position will then be used to analyse higher education institutions in Canada, their role at mapping the national cohesion and social inclusiveness, and at ensuring economic development.

While functionalism emphasises the social structure as a whole, conflict theory offers a different way to grasp social structure. It holds that scarcity drives people (especially elites)to fight for limited resources that provide power: economic, political, intellectual, cultural, religious, and financial. It not only relies on financial resources, but also on political struggle and control over non-economic realms, such as politics and (higher) education. The leader of this approach, Marx, contends that since control of wealth shapes an individual social existence, it should be the most important dimension. Conflict theory then holds that stratification and dominance make up social structure: rich vs poor, employers vs workers, strong vs weak, literacy vs illiteracy, and degree holders vs non-graduates; all of these fit the same framework. It is, therefore, needful to examine the societal causes of the rising demand for higher education. This viewpoint also challenges functionalism, human capital and the post-industrial society[11].

Moreover, it is important for governments to understand how access to and progress in higher education function so that they can participate in the democratization of HE. In respect to that, and for the sake of ensuring the representation of all social groups in higher education, 'widening participation' has become more important[12]. In other words, people consider possible integration to higher education as a fair way to progress in society, but also possibly

[10] Ormerod, R. "The history and ideas of sociological functionalism: Talcott Parsons, modern sociological theory, and the relevance for OR." Journal of the Operational Research Society, 2020. academia.edu.
[11] Bole, David, *et al.*. "Clash of Two Identities: What Happens to Industrial Identity in a Post-Industrial Society?." Societies 12.2 ,2022, p.49.
[12] David Rooney *et al.*, pp.200-65.

as an opportunity for the elites to maintain differences between different social classes via "gatekeeping systems"[13]. The idea swings towards societies that are no longer industrialised, in which functionalism detects that increasing HE involvement is a way to ascertain that all social classes are fairly represented in this sector. However, the conflict theory considers HE involvement as a means for the establishment to keep control[14].Thus, conflict theory may result in the integration of all segments of a society in the process of life betterment, social progression, and individual emancipation.

Unlike the other two theories previously discussed, symbolic interactionism focuses on the individual to understand social structures, instead of seeing society as separate entity acting upon individuals[15]. In this way, it looks more closely at the inner workings of society rather than the societal functions and conflicts visible within society. Similarly, Mead refers to society as '*socially constructed rather than existing in a naturally objective reality'* [16]. According to him, meaning, for example, was built within social interactions and transactions between the individual and its immediate social environment. It is, therefore, always at least twofold and not purely intellectual in a cognitive sense. Being an interlocutor, an individual or a cultural group, they always enact meaning from their own socialized positions.

According to Mead cited in Beckert, and Suckert, 2021, "*reality is always socially constructed; there cannot be a natural, 'realistic' grasp on reality; there cannot be pure detached objectivity as in a camera-like transfer of knowledge*[17]*"*. Therefore, post-industrial society, with its speed, depth, and devaluation of material cultural goods, is *de facto* post-methodological with extensive dangers for the symbolic interactionist definition of communication[18]. All arise social dilemmas that are difficult, if not impossible, to solve on a collective level.

[13] Bole, David, *et al.*, p.52.
[14] Marginson, Simon. "Elite, mass, and high-participation higher education." The International Encyclopedia of Higher Education Systems and Institutions. Dordrecht: Springer Netherlands, 2020. 370-377.
[15] Edgar F. Borgatta *et al., pp.*3028-40.
[16] Chen, Renee Rui, Robert M. Davison, and Carol Xiaojuan Ou. "A symbolic interactionism perspective of using social media for personal and business communication." International Journal of Information Management 51 (2020): 102022.
[17] Beckert, J. and Suckert, L. "The future as a social fact. The analysis of perceptions of the future in sociology." Poetics, 2021.
[18] Ibid.

1.2 Post-Industrial Theory and Human Capital Theory

To start with, the very idea of Human Capital theory could be perceived as old as the laissez-faire theory since it was developed in the eighteenth century by philosopher Adam Smith[19]. In fact, Adam Smith's influential book, *An Inquiry into the Nature and Causes of the Wealth of Nations* (1776), presents key concepts that form the basis of Human Capital theory. Smith's analysis of the division of labour, the implication of education, and the impact of skills on economic production are crucial for comprehending the subsequent development of Human Capital theory by economists like Gary Becker and Theodore Schultz in the late twentieth century.

According to Adam Smith, education was crucial to raising workers' output. He thought that funding education would produce better-trained employees capable of more efficient participation in the economic development. He wrote: *"A man educated at the expense of much labour and time to any of those employments which require extraordinary dexterity and skill, may be compared to one of those expensive machines.*" (Smith, 1776). Moreover Smith perception of labour should not be neglected as it is at the centre of the wealth of any nation , he assumed: "*The annual labour of every nation is the fund which originally supplies it with all the necessaries and conveniences of life which it annually consumes."* (Smith, 1776, Introduction).

Furthermore, for A. Smith the division of labour enhances productivity by allowing workers to specialize in specific tasks with specific skills. This specialization leads to greater efficiency and skill development, which in turn increases the overall wealth of a nation (society). According to him: "*The greatest improvements in the productive powers of labour, and the greater part of the skill, dexterity, and judgment with which it is anywhere directed or applied, seem to have been the effects of the division of labour".* (Smith, 1776). Adam Smith's insights set the philosophical foundation for Human Capital theory of the twentieth century-century development. The idea has been explored and developed by Gary Becker and Theodore Schultz who underlined economic profits in educational investment, training, and health to produce a more ordered theory of human capital.

[19] Adam Smith, An Inquiry into the Nature and Causes of the Wealth of Nations , Edition: 11, 2002.

Respectively, the centricity of post-industrialism consists of knowledge-based economy, a position that could not be reached without emphasizing the role of training, knowledge and innovation. Gary Becker puts it as follows:

> Human capital analysis assumes that schooling raises earnings and productivity mainly by providing knowledge, skills, and a way of analysing problems. An alternative view, however, denies that schooling does much to improve productivity, and instead it stresses "credentialism"-that degrees and education convey information about the underlying abilities, persistence, and other valuable traits of people. Becker:1964, p.20

In this quote Becker focuses on the fact that schooling has the double effect of raising both earnings and productivity, and directly impacts the economy. Thus, according to Becker, Human Capital theory, learning, training and knowledge have a natural relationship since they stress the need of education and skills in contemporary economies. So, human capital becomes more important as economies move from industrial to post-industrial phases. In post-industrial countries, where knowledge and services prevail, the demand for a highly educated and talented workforce increases. In the same opus, Becker asserts: "*the expansion of scientific and technical knowledge that raises the productivity of labour and other inputs in production. The systematic application of scientific knowledge to production of goods has greatly increased the value of education, technical schooling, and on-the-job training as the growth of knowledge has become embodied in people-in scientists, scholars, technicians, managers, and other contributors to output*" Becker p24(1964). Thus, according to Becker, there is a mutual symbiotic relationship between knowledge and productivity.

Opposing to the above assertion, according to Reich (1991) the increase in the knowledge-based economy greatly contribute to the emergence of a reshaped economy and society. He states: '*the rise of the knowledge-based economy stresses the critical importance of investing in human capital'*.[20] This 'congruence' implies that human capital offers a fundamental basis for the necessary educational and training expenditures in industrial and post-industrial countries. It is essential to understand human capital ideas that guide the changes to a service-oriented economy toward constant learning and skill development.

[20] Robert B. Reich, The Work Of Nations Preparing Ourselves To 21"-Century Capitalism, Simon Schuster Ltd London, 1991.

Besides, Schultz (1961) defined human capital as the skills, knowledge, and abilities possessed by individuals that can be enhanced through investment. He argued that human capital is "analogous" to physical capital in that it requires investment and yields returns over time. He put it as such: *"By investing in themselves, people can enlarge the range of choice available to them. It is this aspect of human capital formation that gives it its key role in economic development.*" (Schultz, 1961). He, also, emphasized the importance of education as a form of investment. Put clearly, expenditures on education should be viewed as investments in human capital, similar to investments in physical capital like machinery and infrastructure. These investments lead to higher productivity and economic growth. He wrote: "*Education is an investment in human capital that yields returns in the form of higher productivity, increased earnings, and improved economic performance."* (Schultz, 1961). Schultz demonstrated in his book that investments in human capital are a source of high income and benefit. He provided empirical evidence showing that individuals with higher levels of education and training tend to have higher earnings and better economic outcomes. He came with the following conclusion: *"The returns to investments in human capital, particularly education, are substantial and contribute significantly to economic growth and development." (Schultz, 1961).* He then focused on the beneficial links of the investment in the education sector and the economic one: *"Economic growth is closely linked to the accumulation of human capital. Countries that invest heavily in education and training are more likely to experience sustained economic growth."*. For Reich (1991), the value of a worker (any) could change according to the experience and knowledge acquired (life experience and training) , he sustained the following :

> But human capital operates according to a different principle. Because people learn through practice, the value of what they do usually increases as they gain experience. This system is not self-correcting, in the sense that those who first gain the experience eventually lose whatever premium price they command in the market when others catch up with them. To the contrary, people fortunate enough to have had an excellent education followed by on-the-job experience doing complex things can become steadily more valuable over time, making it difficult for others ever to catch up. In fact, their increasing advantage may extend beyond to a global economy premised on high-value skills rather than on routine labour or capital. (Reich, 1991: pp1-2)

According to Reich the workforce should be categorized into three distinct groups: routine production workers, in-person service workers, and symbolic analysts. His point of view concerning human capital focuses on the last group (symbolic analysts) which plays a crucial role in driving economic growth and innovation. 'Symbolic analysts', according to Reich (1991), are individuals who engage in problem-solving, strategic thinking, and innovation. They include professions such as scientists, engineers, consultants, and managers who work with information and symbols. The success of these individuals is heavily dependent on their education, skills, and ability to adapt to new technologies. He wrote: "*Symbolic analysts—people who solve, identify, and broker problems by manipulating symbols—are the key players in the global economy. Their work relies on creativity, analytic thinking, and the ability to synthesize complex information.*" (Reich, 1991: p. 178).

Furthermore, Reich stressed the fact that globalization should be impacted by the virtue of human capital as a reconfiguration of labour market because production becomes more automated and routine tasks are outsourced, and the demand for symbolic analysts and highly skilled workers increases. This shift underscores the need for robust investments in human capital development. He said: *"In the global economy, the ability to add value through knowledge, creativity, and innovation becomes the primary source of economic wealth. Nations must invest in their human capital to compete effectively."* (Reich, 1991: p. 45)

He asserted, also, that the economic value of human capital is contingent upon the level of education and the quality of skills that individuals possess. In the competitive global market, advanced education and continuous skill development are essential for maintaining a productive and innovative workforce. He states: *"The comparative advantage of nations no longer depends on natural resources or cheap labour but on the quality of education and the capacity to generate new ideas and technologies.*" (Reich, 1991, p. 229). At the last point, Reich advocated policies that contribute to life-long education and training. He declared*: "To prepare for the future, we must create systems of education and training that are flexible, inclusive, and capable of equipping people with the skills needed to thrive in a rapidly changing world.*" (Reich, 1991: p. 297).

In the same sense, Porter (1990) noted: "*competitive advantage in advanced economies increasingly comes from the ability to create, disseminate, and exploit knowledge*."[21] In other

[21] Cited in Reich 1991.

words, the productivity gains achieved through knowledge activities fuel economic growth and may enhance living standards (the case of information technology, biotechnology, innovation, and finance).

The role of the human factor, particularly the enhancement of human capital through education and skills development, becomes paramount in this 'new paradigm', as qualified by Drucker in 'Post Capitalist Society' (1993); he argues: *"knowledge has become the key economic resource and the dominant—and perhaps even the only—source of competitive advantage.*" So, knowledge and the different sources of knowledge (schooling system, learning/teaching, training, innovation, technologies and sciences) should be put at the centre of any economic policies. Drucker (1993:p38) observes and puts it as follows:

> Now there is practically no access to middle class income without a formal degree which certifies to the acquisition of knowledge that can only be obtained systematically and in a school. The change in the meaning of knowledge that began 250 years ago has transformed society and economy. Formal knowledge is seen as both the key personal resource and the key economic resource. Knowledge is the only meaningful resource today. The traditional 'factors of production' – land (i.e. natural resources), labour and capital – have not disappeared.[22]

According to the above passage, Drucker asserts that knowledge reshaped the essence of economy and society, but it does not replace the other segments of western economies defined as traditional; it rather becomes an added resource not a competitive element. Drucker (1993: p40) is more accurate when he refers to knowledge: "*That knowledge has become the resource, rather than a resource is what makes our society 'post-capitalist'. It changes, and fundamentally, the structure of society. It creates new social dynamics. It creates new politics."* Ducker's assumption is that it is not possible to quantify or measure knowledge (as any asset), but it could be valued according to the outcomes generated via the human factor or "human capital".

[22] Peter Drucker, Post Capitalist Society , Routledge Taylor & Francis Group London, New York,1993.

More recently, exploring the theory of human capital, in Joop Hartog and Henriette Maassen van den Brink's book entitled: Human Capital: Advances in Theory and Evidence, the authors gave comprehensive exploration of Human Capital theory, examining its theoretical foundations and empirical evidence. They assert that human capital moved to be the focal element of any economic growth and, by ricochet, wages and personal welfare; they put it as follows: "*Human capital is a key driver of economic growth, as it enhances the capacity for innovation and technological advancement, leading to sustained improvements in productivity and economic performance."*[23] (2007:p14). As for the correlation between the investment and human capital, especially in terms of training, the authors confirm Becker's assumption. They put it as follows:

> wedge between productivity and wages gives firms the possibility of earning back training costs. As a consequence, investment incentives for the employer are (partially) restored, and the scope for underinvestment in training because of liquidity constraints on the side of the employee is reduced.(Hartog & Maassen, 2007:p40)

The above passage denotes the responsibility of firms to organise trainings (life-long training) as a form of investment to ensure rise in productivity, better wages, and encourage employees to develop their skills and abilities in companies.

In the same perspective, Dunning (2000: p. 309) confirms the correlation of the companies with the human capital investment, he asserts the following: "*….similar argument applies to the new growth models. The rise of the knowledge-based economy seems likely to intensify precisely those features (e.g. externalities associated with R&D and human capital, increasing returns internal to firms, complementarities between industries and between firms, factors associated with the creation of new goods) which generate geographic concentration and divergent outcomes between economies in new growth models.*" Wuttaphan[24]. In the same sense, Mcconnel (2009:85) sustains: *"more educated, better-trained person is capable of supplying a larger amount of useful productive effort than one with less education and training"*[25].Thus, Human Capital theory is generally agreed upon as having a great value for improving organizational performance, as an organization depends mostly on the skill,

[23] Joop Hartog And Henriette Maassen Van Den Brink, Human Capital: Advances In Theory And Evidence, Cambridge University Press 2007.
[24] Naphat Wuttaphan, *Human Capital theory: The Theory Of Human Resource development,* Rajabhat J. Sci. Humanit. Soc. Sci. 18 (2): 240-253, 2017 Implications, And Future.
[25] Cited In Wuttaphan, Op.,Cit.,pp.242-3.

knowledge, ability of its employees in order to create value. For McNamee and Muller (2009), investment in human capital could lead to a meritocratic society and it could be assimilated to a capitalist factor that should not be neglected, as it is clearly explained in the following quotation:

> Human-capital factors are often included in the "merit" formula for success. Human capital refers to whatever acquired skills, knowledge, or experience workers possess that they can exchange for income in open markets. Clearly, having acquired capacity is not the same as being inherently made of the right stuff because opportunities to acquire skills and experience are independent of the inherent capacity to do things. In human-capital theory, wage labourer scan "invest" in themselves through the accumulation of education and training, thus increasing their skills and presumably their productive capacities. (MacNamee and Muller 2009:p.42-3)

Accordingly, the two authors focus on the fact that human capital should enhance the promotion of merit or 'meritocracy' in modern societies.

To start with we should focus on the opus that Bell authored in 1973 that foresees substantial shifts that are on the horizon for western culture. In his extensive study on social transformations, he predicted the rise of a new society that would be founded on new standards that were distinct from the industrialized perspective of the world. The book highlights the approaching changes that would take place in the structures of industrialized nations and the introduction of new paradigms in the sociology of 'industrialized societies'. Also, sociologist Alain Touraine, contemporary to Bell, was one of the scholars who anticipated the emergence of post-industrial society. However, it is essential to keep in mind that neither of the two was a 'soothsayer'; rather, they relied on the precise data and the objective analysis supplied by science in order to conduct their research on industrialized societies and on the various courses of action for social reform. In point of fact, they explored the many aspects of the economy, such as the labour force, the expansion of cities, the development of newly industrialized nations, and the influence that these nations have on the process of globalization. They did this by relying on a new trend in knowledge that emerged at that time and was termed 'Futurology'[26]. The science is interested in empirical studies of socio-economic factors in the western world during the industrialized era.

[26] the study of social, political, and technical developments in order to understand what may happen in the future,https://dictionary.cambridge.org/fr/dictionnaire/anglais/futurologyretrieved on 12/08/19.

Given that Bell is a North American intellectual and sociologist, that his body of work is entirely devoted to the study of the transformation and progress of North American societies, and given that Canada is a country that is located in North America, the scope of this research should mainly concentrate on D. Bell's body of work instead of Alain Touraine's[27]. Moreover, D. Bell's corpus[28] of work primarily focuses on knowledge and the economy of knowledge rather than on other forms of economic activity, as proclaimed: "*The coming of the post-industrial society means more than the mere advent of new technologies; it is a change in the social framework itself.*" Bell:1976,p. 41.

Less liberal, Touraine based his work on the basis of the economic revolution that took place in Europe in the aftermath of World War II. His conception of post-industrialism was based on the social movement in Europe, mainly France. His work is qualified as 'left-winged post-industrialism', as he penned that "*the post-industrial society is therefore not defined by the nature of its production system, but by the social control of the production system.*"(1971:3).

The idea is well evidenced by Wilson who assumes that Touraine belongs to left-winged thinkers, in the following:

> (….)Inspired by new social movements and pessimistic about class based change, the post-industrial left has looked not to employment and the class structure but to civil society for alternative ways of organising a diverse society. The post-industrial left's key thinkers – Claus Offe, André Gorz, and Alain Touraine – have not claimed that work will disappear in any literal sense. But they abandon their Marxist past when they claim that work has lost its central function in the social structure and its driving force in politics and society.[29] (Wilson 2004:p1-2)

[27] Touraine defined sociology as "the science of social action. In 1973 he wrote a book in which he conceptualized Post Industrial society.https://biography.yourdictionary.com/alain-touraine retrieved on 01/11/2019.
[28] The concept of Post-Industrial society was first used by Daniel Bell in 1959.
[29] Wilson, Shaun, The Struggle Over Work 'The End of Work' and employment Alternative for Post-Industrial Society, Routledge frontiers of political economy, New York, 2004.

1.3 Intersection of Theoretical Framework and Post-industrial Society

Despite their divergent views on and distinct epistemological positions concerning stability versus conflict in society, the paradigms representing functionalism, conflict theory, and symbolic interactionism are widely viewed as complementary perspectives in this research work. Their complementarity favours the synthesis and the integration of these parameters in the understanding of social phenomena, including post-industrialism in Canada. Three sets of opposing areas in the field of scientific inquiry are important for this synthesis: seeing society as a place of cooperation vs. conflict, seeing society as stable vs. changing; and looking at society from the point of view of macro-systems vs. micro-systems.[30] Therefore, understanding the interplay between these different perspectives in relation to post-industrial society and the implication of policy-makers in Canada are elementary dimensions to face the new paradigms.

The several models of post-industrial society developed within each paradigm offer insights supplementing each other on this complex issue. Importantly, a paradigmatic synthesis of these three theoretical perspectives is sought to illustrate how an integration of insights from the three paradigmatic models cultivates a better understanding of post-industrialism as a phenomenon in Canada. Thus, each contributes in its own way to urge the Canadian policy-makers to adequate decision making, concerning service economy in general, and post- secondary education in particular.

1.4 Clarification of the De-Industrialization Process and Post-Industrialization

In this part of the research work, it is of major importance to clarify apparently confusing and interchangeable terms to non-initiated persons: ‘de-industrialization and post-industrialization’. Firstly, de-industrialization is characterized by the fall in industrial activity within a given area or nation, mainly in industrialized regions. It is symbolized by reduced manufacturing jobs, closed factories, and a rise in the unemployment rate among ‘blue collar’. Since the mid-twentieth century, this phenomenon has been noted in several developed

[30] Rimban, Dr Erwin, *et al.*. "SM Nazmuz Sakib's Toxic Comparative Theory: Analyzing the Psychiatric Consequences of Sakibphobia in Sociological Evaluation using Structural Functionalism, Symbolic Interactionism, and Conflict Perspective Frameworks." Symbolic Interactionism, and Conflict Perspective Frameworks (December 29, 2023)

nations; two main causes are observed by economists and sociologists: the relocation of manufactured goods (globalization), and the acceleration of the automation process (robotics). Rodrik (2011) notes the following :"*Globalization has led to the offshoring of many manufacturing jobs to countries where labour is cheaper, contributing to deindustrialization in developed economies*."[31]. According to Brynjolfsson & McAfee, (2014), in manufacturing, automation has not only lowered the employment count but also changed the nature of work, calling for more specialized labour and, therefore, diminishing prospects for low-skilled workers.[32] It is obvious that de-industrialization should not be limited to the two aforementioned factors (combined or not) causing its existence, but there are many others among which the wrongly adopted policies and their misleading favouring the acceleration of the de-industrial process, as it happened in some regions in the United Kingdom, Mired, (2012)[33].

As for the consequences and the economic and social effects, the regions impacted are characterised by job losses, a decline in wages, and economic regress, in addition to their pauperisation (Rowthorn & Ramaswamy,1999)[34] . Moreover, according to High (2003) : "*The social impacts of deindustrialization are far-reaching, leading to increased unemployment, social instability, and the disintegration of communities built around industrial employment*." [35] Another impact that should not be neglected- according to Inglehart and Norris (2016)- is the rise of populism and the extremist political movements like the far-right and the far-left; the authors observed the following: "*The political consequences of deindustrialization include the rise of populism and protectionist policies, as affected populations seek to address the economic challenges they face.*"[36]

Be that as it may, we shall demonstrate the difference between the two concepts in this work, however, it should be highlighted that de-industrialization is a sudden unplanned process

[31] Rodrik, D. The Globalization Paradox: Democracy and the Future of the World Economy. W. W. Norton & Company. 2011.
[32] Brynjolfsson, E., & McAfee, A. (2014). The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies. W. W. Norton & Company.
[33] Mired, Houari, « Empowering the English Regions : Assessing New Labour's Institutional Arsenal », Observatoire de la société britannique [En ligne], 10 | 2011, URL : http://journals.openedition.org/osb/1143 ; DOI : https://doi.org/10.4000/osb.1143 retrieved on august 07th, 2024.
[34] Rowthorn, R., and Ramaswamy, R. Growth, Trade, and Deindustrialization. IMF Staff Papers, 46(1), 18-41.1999.
[35] High, S. Industrial Sunset: The Making of North America's Rust Belt, 1969-1984. University of Toronto Press. 2003.
[36] Inglehart, R., and Norris, P. Trump, Brexit, and the Rise of Populism: Economic Have-Nots and Cultural Backlash. Harvard Kennedy School, 2016.

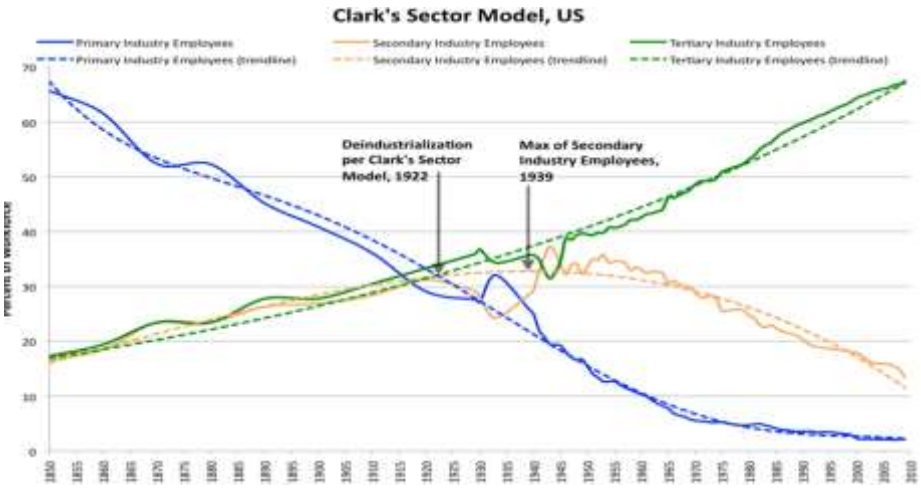
which envisages no perspective. Therefore, it is rather based on poorly-planned policies-under emergency- to curb the phenomenon, often resulting in financial difficulty in the impacted areas.

Post-industrialization, on the other hand, marks a more general change toward service and knowledge-based economy, generating both new possibilities with in-depth analysis by the policy makers who have the duty to accompany the phenomenon with the preservation of the manufacturing sector in one way or another.

It is agreed upon by scholars that both processes create important changes in society and culture. While post-industrialization promotes new societal values- based on knowledge, information, and individualism- de-industrialization may bring about social unrest and communal deterioration.

While working as a sociologist in the United States, Bell came up with the theory that is presented as revolutionary for modern societies. As an observer of the American society during the post-war era, he analysed the tendency of decline in industrialization and an

Figure 1The Increase in of the Tertiary Sector: Clark's Model



Source :

https://upload.wikimedia.org/wikipedia/commons/b/bb/Clark%27s_Sector_model.png

Clark's model reveals a decline in the industrial sector and a rise in the service sector, particularly after World War II. Clearly put, scrutinizing the degree of industrialization reached during that particular era, is the main approach to distinguish three economic periods in the history of North America: pre-industrial, industrial, and post-industrial.

Since the 1970s, there has been a lot of written material meant to define the post-industrial society. The majority of this work has been logically done by academics from the Western hemisphere, given that post-industrialization would have an impact on many countries located in Europe and North America. These countries have been reputed the cradle of industry. According to Bell's theory, the process of transformation would radically modify not only the structure of western societies, but also the manner in which they would make progress and carry out their transformation in the future. Evidently, because the general orientation of industrialized society evolves in reaction to the conditions of the time, it is important to conduct an in-depth analysis of both the process of change and the shift that it produces. This is true because revolutions in the political, social, intellectual, and cultural spheres should give birth to a brand-new society.

According to Settler (2014), the 'revolutionary' process occurred as an action of the knowledge development paradigm. He has noted that the centricity of post-industrial society is rooted in knowledge and knowledge production; these act as vehicles of the post-industrial society; he states that the concept of the post-industrial "knowledge society", introduced by Daniel Bell in the 1970s and 1980s, has become "a key focus" in the sociology of knowledge. In fact, nowadays, knowledge is widely recognized as a "vital resource" that drives economic productivity, informs political decision-making, and helps people in their daily lives. He also, mentioned sociologist like Mayntz who emphasizes that knowledge functions as a form of "capital" in society. This means that economic success depends on effectively valuing and utilizing this knowledge. As a result, innovative and new forms of businesses play a crucial role in shaping the knowledge society, as they rely on "knowledge work" to transform and move beyond the structures of the industrial era. In essence, the ability to harness knowledge is central to progress in modern world.

In Bell's vein, P. Drucker highlighted the transition towards an economy and culture centred on knowledge: "*The last twenty years the base of the American economy shifted from manual to knowledge work, and the centre of gravity of our social expenditure from goods to knowledge."* (Drucker, 1969:p.269). He, also, assumes that knowledge would transform the economy and society. Additionally, Kumar (1979) assumes that the industrialized western cultures needed to adapt to a new type of society that was characterised by new norms; focused on knowledge, services, and technologies. According to him, this shift determines the emergence of a post-modern society (Kumar, 1979).

Furthermore, Bell believes that in the society that emerges as a result of the post- industrial 'revolution', information and knowledge would take the place of all other types of commodities and goods as the primary source income. He states that "*knowledge is becoming an increasingly valuable resource*", and assumes that "*the intellectual growth of people and the professionalization of the work they do are the two most essential variables in the progression of civilisation in a post-industrial society*". Bell defines the 'creative class' or the 'class of professionals' as highly skilled workers, experts, and 'technocrats'. In the year 1990, Alvin Toffler[37] (1971:p30) coined the term 'cognitive' to refer to this class in order to picture professionals as the majority of the population in a post-industrial society.

D. Bell, stresses a number of traits that distinguish the 'old' industrial society from the 'new' post-industrial one in his attempt to explain the genesis of the new society. In his examination, he highlights seven key issues that, in his opinion, warrant more investigation and discussion. In accordance with the criteria that are given in the following, he advocated the essentials of a society that would exist after the industrial revolution:

Firstly, he started by explaining that the development of products to the provision of services, Bell (1973) utilized the circumstance that existed in the United States of America as a case study in order to explain the argument that was being made. During the decades that followed World War II, the number of people employed in the field of industry in the United States saw

[37] Alvin Eugene Toffler (October 4, 1928 – June 27, 2016) was an American writer, futurist, and businessman known for his works discussing modern technologies, including the digital revolution and the communication revolution, with emphasis on their effects on cultures worldwide. He is regarded as one of the world's outstanding futurists. Toffler was an associate editor of Fortune magazine. In his early works he focused on technology and its impact, which he termed "information overload." In 1970, his first major book about the future, Future Shock, became a worldwide best- seller and has sold over 6 million copies.

a considerable decline (Clark's Model figure 1), leading to a workforce that was significantly smaller.

In point of fact, the percentage of workers employed in industries (manufacturing) comprised 15% of the entire workforce in the middle of the 1970s, which was lower than the percentage of people employed in industries (manufacturing) in the beginning of the 1950s, which was 26%. Bell uses the shift that occurred from polluted 'smoke-stack' manufacturers to cleaned 'sterile -rooms' of computer chops and electronic complex components used in automation and other developed technological industries (jet, air- planes, robotics, pharmaceuticals, computing, Nano-technologies)

Bell, also, focused on the occupational change. He kept the same society as sample; it is the group that might be extrapolated to other industrialized nations since there has been an *'extraordinary rise of professional and technical employees in the United States of America*'. This rise can be attributed to the fact that the United States of America is the homeland of the most advanced economy in the world.

The other point he analysed was the one concerning the standing among the community. According to Bell's theory, a person's social position throughout the decades and centuries was the fruit of either inheritance (property, money, business, privileges, etc.); or entrepreneurship (a family business, or personal innovation). However, nowadays, shifts towards knowledge-based economy assigned education a ladder position to social emancipation and the crux of any social progression. In other words, education became the key to any social progression. Bell put it as follows:

> Seventy years ago, one could still 'read' law in lawyer's office and take the bar examination without college degree and accrediting. Today, in medicine, law, accounting, and dozen other professions through examination, by legally sanctioned committees of the professions, before one can practice one's art. (Bell, 1973:p409)

Besides, technology and intellectual technology are two elements that should be referred too. In fact, post-industrial theorists refer to this point as the advancement in computer and algorithmic technology beside their rising presence in the design, management, and conception. In fact, in the 1960s and 70s, there was a transition away from perceiving technology as being limited to machinery and mechanical tools. In order to successfully usher

in the 'new age', it has become imperative that highly qualified individuals who are masters in 'high technology' should take control over society. (Bell,1973)

As for infrastructure, the post-industrial theorists pointed out the transition from the transport infrastructures needed in industrial society to carry goods, raw materials, semi- manufactured elements, and so on (ports, railroads, highways, and airports), to the infrastructure of post-industrial society represented by communication (satellites, cable, optic-fibre, broadband, digital TV, and the internet). On top of that, the demand for skyscrapers and towers to house office workers rather than factory workers is becoming an increasingly popular architectural trend that can be found all over the world. This tendency can then be seen in many different parts of the world.

Besides, in D. Bell's view, the origin of any 'invention and innovation' is knowledge. In addition to this, it is recognized as a 'collective good' in our modern society. This suggests that the roles of scientific knowledge as well as the approaches to education and learning that are utilized in post- industrial cultures need to be re-examined and praised.

Human Capital, in contrast to Financial Capital are to be studied to illustrate their connection and their differences. To start with, it is a historical dogma that, for millennia, people thought of financial capital as the focal point to any economic progress, and as the cornerstone of any economic development. However, the idea that human capital is more important than financial capital is a relatively recent phenomenon. A new study, on the other hand, has demonstrated that human capital is actually of greater significance. Primarily, money, land, gold, and many other precious minerals and metals were barometers that were used to gauge any economic growth or regression, and the value and quantity that were accumulated were the norms.

On the other hand, in the extensive research that Schultz and Becker have undertaken, the human capital is called 'essential' when assessing the growth and economic progress of any nation. Paul Romer - who describes human capital and technology as being merged 'into endogamous feature of growth'[38] - has also questioned and speculated the prospect of 'redefining money as the exclusive source and vehicle of capital'.

[38] Jones , Charles I., Scandinavian Journal of Economics July2019 Vol. 121 Issue 3 Pages 859-883.

Therefore, in light of what has been mentioned, it is important to assess and explore the seven subjects that Bell brought up in light in the research. These aspects are the criteria that are used for evaluating and ranking the post-industrial society as a whole. These points made a substantial contribution toward the formulation of the general view, and they also made a contribution toward the definition of the idea as offered by the theorists of the post-industrial society. The theoretical element that should be associated with this research is the role of human capital as a key contributor to the knowledge society and knowledge economy.

It is essential to understand that economists and sociologists classify the three main eras of economic development—pre-industrial, industrial, and post-industrial—in respect to the Canadian context. These periods are arranged in chronological sequence of relevance to clarify the character of the Canadian society in this study and provide an insight to the problematic. Littek (2001) confirms that the pre-industrial society was agricultural, simple, and conventional, and characterized by families labour whose work had been inherited over the years from one generation to the next. He expressed his view on the matter as follows:

> Agrarian societies, also known as pre-industrial societies, can be recognized by the fact that the great majority of productive activity is completed in agricultural fields and in the self-provisioning of the household. This distinguishing characteristic allows agrarian cultures[39] (Littek, 2001)

This implies that agriculture has been the major means of subsistence for humans for the entirety of human history. In point of fact, agriculture was the only means of financial support for millions of people, whereas industry essentially comprised things that were created at home and crafted by hand. Moreover, farming, in its broadest sense, was a source of contention as well due to the fact that cultivatable lands and soils were the fundamental to individuals. Obviously, research into the past enables one to demonstrate the veracity of these assertions.

In the following phase - post-Renaissance period- the commercial sector adopted a role that was important in the Western world. It eventually became a source of strife and was used as a vehicle for the expansionist policies of Europe. This resulted in wars between European states starting from the sixteenth century to dominate the world.

[39] https://www.sciencedirect.com/science/article/abs/pii/B0080430767019082 retrieved on25/05/2022.

Furthermore, mercantilism produced an increasing source of income since geographical 'discoveries' and merchants' freedom. Merchants were allowed in different degrees all around continents to trade. It is also essential to stress the fact that certain 'sub-services,' such as banking and insurance systems were developed as a result of mercantilism. The wealth that was amassed by merchants and the profits they made was invested in the purchase of land. Moreover, the development of technologies and the production of machines accelerated the process of investment by the beginning of the eighteenth century in Europe and the nineteenth century in North America. Respectively, these manifestations represent the beginning of the industrial age.

In the nineteenth century, the industrial revolution brought major upheavals in the economies of North America and Europe. These disruptions directly followed the globalization of manufacturing. Actually, the century saw the rise of businesses and experienced changes in every facet of society. This meant that the social, economic, and cultural spheres of the society would also be open for change. Among the academics who investigated, examined, and published on these social developments, Henri de Saint-Simon, the first to use the phrase '*industrialisation of the society*'. Actually, Saint-Simon generated a sociological study spanning the early Nineteenth century and offered a descriptive image of the society. Alexis de Tocqueville, Karl Marx, and Jacob Burckhardt, among some of the most well-known intellectuals of the Nineteenth century also studied and analysed industrial society. In this sense, we will give a brief summary of the above cited scholars.

First, French philosopher Alexis de Tocqueville (1805–1859) foresaw- in his works *Democracy in America* (1835) and *Memoir on Pauperism Journeys to England and Ireland* (1835)- poverty and the predominance of machines over man. As a romantic thinker, Tocqueville saw industrialization as a prolongation of class division and enslavement rather than as a benefit. De Tocqueville also contended that industrialization would challenge democracy. So, he separated himself from and disregarded the effects of industrialization on society. He carried out this because he thought industrialization would endanger democracy[40].

The second scholar Karl Marx, in his four-volume classic: The Capital (1867–1883), Karl Marx (1818–1883) saw industrialization as a way for workers to be emancipated by the

[40] Edgar F. Borgatta, Rhonda J. V. Montgomery - Encyclopedia of Sociology . Volume 5-Macmillan Reference USA (2000).pdf, pp.3227-28.

control of product tools and the escape from the capitalist system. He believed that capitalism was the engine underlying industrialization. This idea broke new ground since it acknowledged the power of a nation's economy to affect other spheres of its existence, including politics, education, and social structure; therefore, impacting its culture. The working class was supposed to seize control so that socialism could be carried out, therefore, improving living conditions and increasing democratic participation in society. Marxists believed that the most crucial feature of history was the struggle among classes. To put it in another way, he advocated conflict to achieve equality and justice in the society[41].

The third prominent sociologist and scholar that Bell referred to in his work (1973) is the Swiss historian, Jacob Burkhardt (1818–1897), who first used the phrase '*military society*' to characterize the change from rural to industrial society. Everyone in this society, he thought, would be obliged to wear a uniform and work in a factory from dawn till evening. Burkhardt claims that the mechanisation of society results in ignorance among people; so, the ultimate stage would be distinguished by the development of a new economic model instead of a new social class and the expected class conflict[42].

To confirm the previous assertions one should refer to Bell's analysis of the US changing patterns in the realm of economy. Some graphs and charts from Bell's work would then be of high importance to demonstrate the shift from manufacturing to service- based economy.

Figure 2 Labour Distribution in the USA (1870-1940)

	1870	1900	1920	1940
Total	12,900	29,000	41,600	49,860
Goods-producing total	10,630	19,620	23,600	25,610
Agriculture, forestry, and fishing	7,450	10,900	11,400	9,100
Manufacturing	2,250	6,300	10,800	11,900
Mining	180	760	1,230	1,100
Construction	750	1,660	2,170	3,510
Service-producing total	2,990	9,020	15,490	24,250
Trade, finance, and real estate	830	2,760	4,800	8,700
Transportation and utilities	640	2,100	4,190	4,150
Professional service	230	1,150	2,250	4,000
Domestic and personal service	1,190	2,710	3,330	5,710
Government (Not elsewhere classified)	100	300	920	1,690

[41] Ibid,p.2953.
[42] Ibid.

Source: Daniel Bell :1973

The above figure demonstrates the changing in the American society workforce from the nineteenth century to the mid-twentieth century.

Figure 3 Occupation by Groups of workforce

MAJOR OCCUPATION GROUP	1900	1910	1920	1930	1940	1950	1960
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
White-collar workers	17.6	21.3	24.9	29.4	31.1	36.6	42.0
Professional and technical	4.3	4.7	5.4	6.8	7.5	8.6	10.8
Managers, officials, and proprietors	5.8	6.6	6.6	7.4	7.3	8.7	10.2
Clerical and kindred	3.0	5.3	8.0	8.9	9.6	12.3	14.5
Sales workers	4.5	4.7	4.9	6.3	6.7	7.0	6.5
Manual workers	35.8	38.2	40.2	39.6	39.8	41.1	37.5
Craftsmen and foremen	10.5	11.6	13.0	12.8	12.0	14.1	12.9
Operatives	12.8	14.6	15.6	15.8	18.4	20.4	18.6
Laborers, except farm and mine	12.5	12.0	11.6	11.0	9.4	6.6	6.0
Service workers	9.0	9.6	7.8	9.8	11.7	10.5	12.6
Private household workers	5.4	5.0	3.3	4.1	4.7	2.6	3.3
Service, except private household	3.6	4.6	4.5	5.7	7.1	7.9	9.3
Farm workers	37.5	30.9	27.0	21.2	17.4	11.8	7.9
Farmers and farm managers	19.9	16.5	15.3	12.4	10.4	7.4	4.0
Farm laborers and foremen	17.7	14.4	11.7	8.8	7.0	4.4	3.9

Source BELL (1973)

The figure given by Bell demonstrates the increase in the service sector during the sixty year of the twentieth century in the US economy.

Figure 4 Union Membership by Occupation

YEAR	TOTAL UNION MEMBERSHIP (THOUSANDS)	TOTAL LABOR FORCE: NUMBER (THOUSANDS)	TOTAL LABOR FORCE: PERCENTAGE UNION MEMBERS	EMPLOYEES IN NON-AGRICULTURAL ESTABLISHMENTS: NUMBER (THOUSANDS)	EMPLOYEES IN NON-AGRICULTURAL ESTABLISHMENTS: PERCENTAGE UNION MEMBERS
1947	13,782	60,168	22.9	43,438	31.7
1952	15,805	62,966	23.7	48,306	30.9
1956	17,490	69,409	25.2	52,408	33.4
1960	17,049	72,142	23.6	54,234	31.4
1964	16,841	75,830	22.2	58,332	28.9
1968	18,916	82,272	23.0	67,860	27.9
1970	19,381	85,903	22.6	70,644	27.4

Source : BELL (1973)

Bell, also offered the statistics about the number of workers who included the unionism and their progression according to the sector of activity.

Figure 5 Progression of Number of workforce by Sector in the USA (1958-80)

OCCUPATIONAL GROUP	1958 NUMBERS (THOUSANDS)	1958 PERCENTAGE	1974 NUMBERS (THOUSANDS)	1974 PERCENTAGE	1974 OVER 1958 PERCENTAGE INCREASE	1980 NUMBERS (THOUSANDS)	1980 PERCENTAGE
Total	63,000	100	85,935	100	36.4	95,000	100
White-collar workers	26,835	42.6	41,740	48.6	55.5	48,300	50.8
Professional and Technical	6,950	11	12,340	14.4	77.5	15,500	16.3
Managers and Officials	6,785	10.7	8,940	10.4	31.8	9,500	10
Clerical	9,115	14.5	15,000	17.5	64.6	17,300	18.2
Sales	3,985	6.3	5,400	6.3	35.5	6,000	6
Blue-collar workers	23,350	37.1	29,775	34.9	27.5	31,100	32.7
Craftsmen and foremen	8,460	13.4	11,470	13.4	35.5	12,200	12.8
Operatives (semi-skilled)	11,400	18.1	13,920	16.2	22.1	15,400	16.2
Laborers (unskilled)	3,485	5.5	4,380	5.1	25.6	3,500	3.7
Service Workers	7,490	11.9	11,370	13.2	51.8	13,100	13.8
Private Household	1,975	3.1	1,230	1.4	(37.7)		
Others	5,500	8.7	10,140	11.8	84.3		
Farm Workers	5,360	8.5	3,050	3.5	(43.1)	2,600	2.7
Farmers and Farm Managers	3,070	4.8	1,640	1.9	(46.6)		
Farm Laborers	2,180	3.6	1,400	1.6	(38.6)		

Source: D. BELL (1958)

In the fourth figure, we may observe an acceleration of job occupation in the US post-world war II according to the statistics given by the US government and reported by Bell .

Figure 6 Stucture and Problems between different Segment of Economy

AXIAL PRINCIPLE:	THE CENTRALITY OF AND CODIFICATION OF THEORETICAL KNOWLEDGE
Primary institutions:	University Academy institutes Research corporations
Economic ground:	Science-based industries
Primary resource:	Human capital
Political problem:	Science policy Education policy
Structural problem:	Balance of private and public sectors
Stratification: Base—	Skill
Access—	Education
Theoretical issue:	Cohesiveness of "new class"
Sociological reactions:	The resistance to bureaucratization The adversary culture

Source:BELL (1973)

The charter above represents the explanation given by Bell to the problems that may occur in studying the post-industrial society.

To conclude, knowledge in the different stages has always been important and nuanced. In the pre-industrial era, it was the vehicle that managed farming via the norms and values inherited. Whereas, in the mercantile period, it took another dimension since it was necessary and central to geographical discoveries and the mapping of the world, aiming to realize economic and political expansionism. In the industrial phase, the major transformation in economy and mechanization was not possible without innovation and invention. It is in fact with the post-industrial period that knowledge took its full dimension being 'capitalized'.

1.5 Human Capital in Canada

The integration of human capital within the higher education sector in Canada presents a series of challenges and opportunities. One of the key challenges is the underutilization of human capital, particularly among recent immigrants, due to issues such as language barriers and the recognition of foreign credentials (Murray and Sharpe, 1970). This highlights the need for policies and initiatives aiming at addressing these barriers to ensure the effective utilization of human capital in educational and economic pursuits. Additionally, the integration of human capital emphasizes the economic mobility, indicating that investments in education and job skills are crucial for enhancing individuals' income and overall economic well-being (Robert and Habibov, 2012). Therefore, the integration of human capital in higher education not only benefits individuals, but also contributes to the economic prosperity of Canada.

Furthermore, boosting graduate education, particularly at the PhD level, can be a pathway to prosperity for provinces. This underscores the opportunities associated with enhancing the quality and quantity of graduate programs to maximize the potential of human capital in driving economic growth and productivity. Therefore, addressing the challenges and capitalizing on these opportunities is essential for optimizing the interface between human capital and higher education in Canada.

Over the past four decades, Canada has evolved into a knowledge-based economy, centring on human capital's pivotal role in shaping its economic and social landscape. Policymakers in Canada have recognized the importance of investing in education, skills development, life-

long learning and innovation as key drivers of economic growth and social well-being. This section will analyse how Canadian policymakers have implemented human capital policies.

In the 1980s and 1990s, Canada began to shift its focus towards building a knowledge-based economy. During this time, there were substantial investments made in education and skills development with the goal of equipping the workforce to meet the challenges of a fast evolving global economy. The federal government's dedication to human capital was demonstrated via the implementation of initiatives such as the Canada Student Loans Program and the nationwide development of Community Colleges.

In a 1984 speech, the Prime Minister Brian Mulroney emphasized the need for a skilled workforce: "To compete in the global economy, we must invest in our people—our most valuable resource. Education and training are the foundations of a prosperous future for all Canadians."[43]

The general trend was to believe that the turn of the new millennium marked a new phase in Canada's human capital strategy, with a strong emphasis on innovation and lifelong learning. The government introduced the Innovation Strategy in 2002, which aimed to foster research and development (R&D) and enhance the capacity for innovation. Additionally, the Canada Learning Bond and the Registered Education Savings Plan (RESP) were introduced to encourage savings for post-secondary education, ensuring that more Canadians had access to higher education.

In a 2001 address, Prime Minister Jean Chrétien highlighted the importance of innovation: "*Innovation is the engine of economic growth. By investing in research and education, we are equipping Canadians with the skills and knowledge they need to succeed in the 21st century*." (Speech from the Throne, 2001)[44].In recent years, Canadian policymakers have focused on adapting to the challenges and opportunities presented by the digital age. Then they initiated the Skills for Success program, in 2020, which aims to help Canadians develop the foundational and digital skills necessary to thrive in a rapidly evolving economy.

[43] https://www.poltext.org/sites/poltext.org/files/plateformesV2/Canada/CAN_PL_1984_PC_en.pdf...
[44] https://epe.lac-bac.gc.ca/100/205/301/prime_minister-ef/jean_chretien/2003-12-08/stagingpm_3a8080/default.asp@language=e&page=newsroom&sub=factsheets&doc=innovation.20020212_e.htm.

Moreover, the government's commitment to inclusive growth is reflected in policies such as the Canada Training Benefit, which supports continuous learning and skills upgrading for all workers, including those in precarious employment. Prime Minister Justin Trudeau, in a 2021 speech, emphasized the need for a resilient and inclusive workforce: "*Our economy is changing, and so are the skills that Canadians need to succeed. We are committed to providing every Canadian with the tools and opportunities they need to adapt and thrive in this new economy.*" (Prime Minister's Office, 2021).

Canada's investment in education and innovation has positioned it as a leader in sectors such as information technology, biotechnology, and clean energy. The emphasis on skills development has also helped Canada maintain a high level of labour productivity, which is essential for sustaining economic growth in a knowledge-based economy.

Although both models stress the need of knowledge and abilities, their emphasis and consequences differ. Human Capital theory mostly focuses on the personal and society financial gains from training and educational expenditures. By contrast, Post-Industrial Theory emphasizes the more general structural and economic changes that go along with the move toward a service-based economy. Policy and practice are impacted from this difference. According to Human Capital theory, theorists focused on education and training investments that would improve personal output and economic growth by means of targeted interventions. Conversely, post-industrial theory suggests a more general change in economic policies and institutions meant to facilitate the shift to a knowledge-based economy. This includes encouraging technical growth, creativity, and the building of information systems.

Finally, Human Capital theory and Post-Industrial theory have a common focus on the need of education and skills in contemporary economies, which define their interaction. They meet in their appreciation of the value of human capital, but they focus and imply differently. Policymakers, teachers, and economic strategists negotiating the complexity of modern economic and social environments depend on an understanding of this link. Combining the ideas from both theories can help society be more ready for the possibilities and problems of a fast changing global economy. However, it must be noted in this research work that both theories have their shortcomings and they are subjected to tremendous criticism since they proved their limitations. So, alternative theories emerged to counterbalance them.

First, Human Capital theory, while influential in economics and education, has faced criticism from various scholars. These critiques focus on its narrow economic perspective, neglect of social and cultural capital, overemphasis on individual responsibility, and insufficient attention to job quality. Michael Apple[45] (1979) argues the following: "*Human Capital theory reduces education to a mere instrument for economic productivity, ignoring its broader social and democratic purposes.*" (Apple,1979: p.54). Whereas for Pierre Bourdieu[46], Human Capital theory does not take into account the social and cultural capital in determining labour market. While cultural capital is the information, skills, and education that enable social mobility; social capital is the networks and relationships people may access. He put it as such: "*The forms of capital—economic, cultural, and social—are interlinked, and neglecting any form, particularly cultural and social capital, provides an incomplete understanding of social dynamics.*" (Bourdieu, 1986: p02). For Henry Giroux (2009) "*The commodification of education under Human Capital theory reduces education to a mere economic tool, thereby undermining its broader societal and democratic purposes."*[47]. A. Giroux considers that Human Capital theory adopts a market-oriented perspective that treats education primarily as a means of increasing economic productivity, rather than as a public good that promotes overall well-being and social equity.

Other scholars think that the Human Capital theory consists on the fact that it assumes that higher education and training lead to better job quality and security. However, this theory often fails to address the '*mismatch between education and the labour market'*, where over-qualification and underemployment can occur. Respectively, Philip Brown and Hugh Lauder[48] assert: "*The relationship between education and job quality is not straightforward, as global economic changes can lead to precarious employment conditions even for highly educated individuals.*" (Brown & Lauder, 2001: p220).

On the other hand, some Sociologists believe that areas where the rise of post-industrial society is obvious should be studied. In fact, these places (located in the Western hemisphere) have seen changes in their proportions, patterns, populations, and shapes.

[45] Apple, M. W. (1979). Ideology and Curriculum. Routledge.
[46] Bourdieu, P. (1986). "The Forms of Capital." In Handbook of Theory and Research for the Sociology of Education, edited by J. Richardson, 241-258. Greenwood.
[47] Giroux, H. A. (2009). Youth in a Suspect Society: Democracy or Disposability?. Palgrave Macmillan.
[48] Brown, P., & Lauder, H. (2001). Capitalism and Social Progress: The Future of Society in a Global Economy. Palgrave Macmillan.

Bell's critique of Marx's Formational Theory is particularly based on the fact that Marx's prediction that socialism would prevail in developed industrial nations did not come to reality, and that instead socialism prevailed in 'backward' nations[49]. Bell's assumptions attempted to demonstrate that there was no class conflict and that the growth of capitalism was unaffected by any crises by looking at the experiences of more developed nations in the Western hemisphere[50].The second aspect is the one concerning Marx's theory that turns around the proletariat (working class) being the central force for revolutionary change. Bell argued that the nature of work and the class structure were to be submitted to fundamental changes, with professional and technical classes becoming more crucial in post-industrial societies[51].

The degree of a society's creative powers is to be used to determine the stage of that society's historical progression, in accordance with the concept of the post-industrial society. To simplify Bell's stance it means; if the first pre-industrial stage of human history is defined by a low level of productive forces, or their absence, then the second industrial stage is marked by the growth of productive forces that reduce the need for heavy physical labour. This is due to the fact that the development of productive forces made it possible to transition away from the use of heavy physical labour to their changing role. The continuous increase of productive forces ought to lead to the creation of a nuanced post-industrial stage, which would represent the 'summit' of human evolution, in theory.

The lessons that are being taught by Bell do not throw any insight on the social factors that were the driving force behind the historical movement since he focused on economic factors only. He assumes that one particular group of professionals would come to rule the other categories in the future. This class took power by virtue of newly developed productive powers, i.e. without the support of the professional class, and displaced the capitalist class, which had previously governed the industrial society. The absence of the assistance of the professional class, the technocratic class succeeded in seizing power[52]. When he talks about stratification, Bell, mainly, breaks up society into several segments according to a number of

[49] Bell, 1973, pp.476-7.
[50] Ibid.
[51] Ibid., p.478.
[52] Bell (1973),op.cit.,p.289-90.

different characteristics. Instead of taking place at the level of investment, the process of domination occurs at the level of knowledge. As a consequence of this, he positions knowledge as the primary vehicle of domination and the process of decision making and taking as the core components of his theory[53].He puts it as follows to explain the process:

> When one uses the phrase the 'social responsabilty' of the corporation, one is not indulging in rhetoric(though many corporation, officials are), or thinking of nobles oblige(which fewer corporate officials do), or assuming that some subversive doctrine is being smuggled into society (as some laissez-faire economists suggest), but simply accepting a cardinal socio-psychological fact about human attachments. Unless one assumes that loyalty and identification are simply monetary transactions , or that employment is simply a limited service-for-payment, then the corporation is a social world, with social obligation to its members, as well as an economizing instrument competitively providing goods at least cost to an economic world of consumers.(Bell, 1973: 289)

The reason behind is that Bell does not divide between 'hostile classes'(Conflict theory) but rather believes in educational and professional development, the transition to the desired post-industrial era must be explained with the assistance of creativity, knowledge, the sciences, and the spirit of entrepreneurship in order to satisfy the needs of the new model (Functionalism). Post-industrial society theorists, in contrast to the philosophers associated with Marxism (Conflict theory), have well proven that there is no class struggle. They argue that the class struggle has achieved its natural end while at the same time dividing different social groups according to a variety of criteria that have nothing to do with the progression of historical events (as was indicated earlier). They believe that Marxism necessitates engaging in class warfare. Because of this, they are not seeking for the internal conflicts or the societal forces that contributed to the historical movement. The social processes that went along with the increase of the productive forces are not taken into consideration.

It is believed that post-industrial societies share several characteristics, the most prominent of which are the predominance of professionals, a "*detachment from commercial pursuits*"[54] and the centring of all of societies' forces on human growth, knowledge, and professionalism, which emerge as a result of the human and social capital (s). In fact, the productive forces are

[53] Ibid.
[54] Bell, op. cit.,p.45.

developing at a rapid rate; this can largely be seen in terms of the formation of new economic sectors as well as innovations in existing fields of endeavour.

As a result of industrialization, the conditions necessary for an individual intellectual development were not created. Furthermore, they believe that there were not any reductions in the degree to which a person was economically dependent on others. It could be said that interpersonal ties are the base upon which the post-industrial society, which lays an emphasis on people's intellectual growth, is created[55].

According to Bell, production relations are additional '*equally significant criterion in the formation theo*ry' (Bell, 1973). Marx and Engels believed industrial relations '*have major impacts in both the current state of circumstances and the path of history*' [56](Bell, 1973).

In accordance with Bell's theory, the traits of a post-industrial society and the characteristics of a communist society are, to a certain extent, analogous to one another to a certain degree. As they are developed and when they are scrutinized-because the importance of an individual education, professionalism, and social relationships- and they are not based on the '*predatory extraction of profit*' (Marxism vision) from everything that is possible, but rather on the educational background of people[57]. It means that equality should be put at the educational and knowledge acquisition level. On the other hand, as one may observe, that the author (Bell) anticipates the advent of post-industrial society rather than evaluating it.

Regardless of the specifics, post-industrial society theory reveals '*emptiness*'[58] in terms of social and economic norms as argued by Lefevre, Soja and Scott cited in Luger and Schwartz. It is no longer possible for class conflict to serve as a criterion for production relations, as it did in the past. Therefore, it is not possible to understand the reasons why the post- industrial society with all of its characteristics does not exist, despite the stringent presence of the maximum industrial growth (the key condition). The theorists of post-industrial society have come up with the concept that post-industrial society is a civilisation of silence. In other words, it is a mass that contributes in a non-active manner to the expansion of industrialization without ever having any say in the process, and it is content to be obedient to

[55] Bell, Ibid.
[56]Ibid., p. 55.
[57]Ibid., p.57.
[58] Tilman Schwarze, Jason Leaving post-industrial urban studies behind? article use guidelines:sagepub.com/journals-permissions DOI: 10.1177/27541258241230058 journals.sagepub.com/home/.

capitalism and to live under its domination[59]. Post-industrial theorists, rather than engaging in confrontation with capitalists, backed the assumption that capitalism had already secured triumph. When one becomes familiar with this concept, one can get the sense that proponents of post-industrial societies want to discredit the Marxist theory of social development and label it as 'obsolete'.

Finally, despite the fact that a significant section of the working class is motivated by the goals of the information society (Bell, 1977), they must nevertheless contend with social relations that are built on the preponderance of private property. On the other hand, this particular facet is specifically what separates the idea of a post-industrial society from Marxist theory. The transition from one society to another should not, in point of fact, be overlooked because the elements that drive societies vary from one model society to another, and the dominance of one economic component might change the way in which a society runs.

According to the post-industrial theory, the components of the transition can be found in the features of the goods production and the sectors, as well as in the relationships, interactions, and mutual dependence that exist between them. The ways in which we think about the economy as a whole are shaped by each of these components. According to Bell and other bourgeois sociologists, the development of a need for services was made feasible by the rise of the industrial society. In the paragraphs that follow, we will focus on the factors that played a role in bringing about this alteration.

Not only have all of these elements been vital in the transformation, but they have also been important in attracting the attention and concentration of sociologists. The following passage, which was written by Saskia Sassan, a social geographer at the University of Chicago, and was quoted in Bell:1999 foreword, provides an explanation as to why there is such a significant degree of interest in the investigation of Bell's theory: "*The transformational feature of global cities in the post-industrial economy is the growth of the producer services sector*,".

It is, also, of a high importance to highlight the significant growth has been seen in producer services such as business, financial, technical, and professional services as a result of huge expansions in trade, banking, and investment, as well as the emergence of post-industrial

[59] Bell, Op.cit., pp. 297-8.

employment. These factors have all contributed to the rise in post-industrial employment. This is a consequence of the effect that computer technology and advances in communication have had on the economy. Both neoclassical economics and Keynesian economics have, for a very long time, neglected to make any distinction between the production of goods and that of services, leaving the manufacturing industry mostly unaffected. However, the expansion of producer services is the factor that can be credited with causing the most substantial changes in metropolitan centers.

Accordingly, the general observation from which the construction of post-industrial society would come is from the cities of industrialized nations. Cities, as a matter of fact, are the social embodiment of the changes that are brought about as a result of the economic patterns that are produced in urban centres, and Canadian cities are no exception, this is why most of the work on post-industrial society and especially knowledge economy is concentrated around big cities in the corridor stretching from the Great Lakes region to Quebec mainly Ontario province.

It should come as no surprise that the diagnoses and projections presented here are centred around the provinces of Ontario, Quebec and British Columbia. The argument also lessens the possibility that many developing nations, who have a substantial quantity of underdeveloped raw material resources, will also create some significant new centers for basic industries, based on advantages in logistical operations. If the investments in infrastructure in these cities are effectively selected and directed, they may have enormously large beneficial effects on the economic development of the nation. Almost by definition, several sorts of cities will form in economies that are still in the process of emerging; investments in infrastructure in these cities will emerge.

1.6International Examples of Human Capital Implementation

As seen previously in this chapter, knowledge-based economies drive the change from an industrial to a post-industrial society, and human capital is likely to be the reason for development. The degree of success of this change depends on each country capacity to strategically invest on its citizens for " *producing a trained and flexible workforce fit for driving innovation and maintaining economic competitiveness"*[60]. In this section, four

[60] G. Becker (1964).

nations- having 'successfully' supported human capital as the pillar of their national policies for economic development- will be analyzed. These are: Singapore, South Korea, Finland, and Rwanda.

Firstly, from a small commercial port with only few resources, Singapore has developed into a worldwide financial centre with a competitive economy. Second, rising from a devastating 'civil war', known as the Korean War, South Korea gave human capital development the first priority by means of extensive educational research and changes. Third, Finland- being distinguished by its dedication to social equality and first-rate education- has used citizens' capacity to promote economic resilience and social cohesiveness in a hostile environment. Lastly, Rwanda, Africa- one of the most emerging economies in the world- stands as an impressive model of development based of human capital investment.

First of all, Singapore's rise from a developing country to a worldwide economic 'powerhouse' is evidence of the strategic human capital investment in that country. Following its 1965 independence, it had had great difficulties to construct a nation-state, being one of the smallest (in size) countries in the world. Additionally, it suffered from low natural resources, small home market, and high unemployment rate. However, under Lee Kuan Yew's innovative leadership (1959-1990), Singapore started a fast development path with an eye towards creating a strong and flexible workforce as the cornerstone of its economic plan. In its early years, it witnessed an economy driven by low-cost manufacturing and trade[61]. Thus, the government prioritized education and skill development for economic growth, establishing a comprehensive education system that emphasizes academic excellence and professional and vocational training for businesses. Henceforth, education became the cornerstone of Singapore's development strategy. Moreover, the government introduced a rigorous curriculum, with a strong emphasis on science, technology, engineering, and mathematics (STEM)[62]. This focus was not only limited to formal education, as adult education and lifelong learning were also prioritized. Further, the establishment of institutions such as the Institute of Technical Education (ITE) and polytechnics gave people the chance to learn new

[61] Tan, C., The Role of Education in Economic Development: Singapore's Experience. Journal of Education Policy, (2017) ,32(3), 307-326.
[62] C.Tan, op.cit., pp.307-10.

skills and improve the ones they already had. This kept the workforce competitive and able to adapt to changes in the economy[63].

To deal with the competitiveness of the south eastern Asia, several important policies have been put in place by the Singaporean government to promote human capital among which the "Skills Future" project. Initiated in 2015, this project is a national effort meant to permit Singaporeans to become responsible for their learning path[64].

Thus to implement such policy, the government settled four major urgent decisions, in the first one, every Singaporean aged 25 and above receives an opening credit of S$500 which can be used to fund skills-related courses. This empowers individuals to pursue lifelong learning and remain relevant in job market. Skills Future Earn and Learn Programme was the second major decision; this "*work-study program*" provides fresh graduates from polytechnics and the ITE with opportunities to work and gain industry-relevant qualifications at the same time. In fact, these two programs offer students the opportunity to gain work experience while studying for a degree, thus enhancing their employability. Thirdly, Skills Future for Enterprises: This initiative encourages businesses to invest in the skills development of their employees, ensuring that the workforce evolves with industry demands[65].

In addition to that, Singapore has, also, implemented other policies to support human capital development such as Continuing Education and Training Masterplan which was launched in 2008, the CETM aims to provide a structured and sustainable system for continuous education and training for the workforce. The last one is the Productivity and Innovation Credit Scheme which was introduced to encourage businesses to invest in innovation and productivity improvements, including employee training[66].

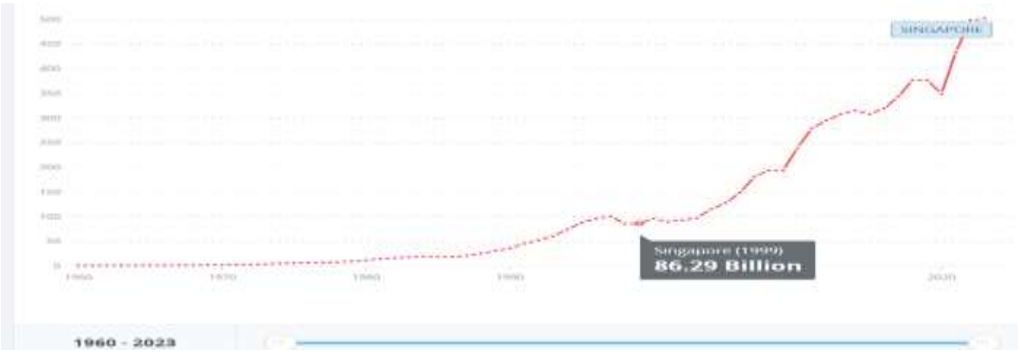
Singapore consistently ranked among the top countries in terms of GDP per capita since the launch of Skills Future and related measures (see figure 04). The emphasis on skill

[63] Asher, M. G., & Nandy, A. ,SkillsFuture and Lifelong Learning in Singapore: Successes, Challenges, and Future Directions. Asia Pacific Journal of Education, 2020 ,40(2), 178-194.
[64] Singapore Ministry of Education. (2015). SkillsFuture: A National Movement to Provide Singaporeans with the Opportunities to Develop their Full Potential. Singapore: MOE https://www.skillsfuture.gov.sg/aboutskillsfuture.
[65] Ibid.
[66] Asher, M. G., & Nandy, A. (2020). SkillsFuture and Lifelong Learning in Singapore: Successes, Challenges, and Future Directions. Asia Pacific Journal of Education, 40(2), 178-194.

development has led to an increase in labour productivity, a key driver of national economic development in a nation with limited natural resources[67]. Singapore's highly educated workforce often ranks among the top economies in the Global Competitiveness Report issued by World Economic Forum[68].

Eventually, Singapore's human capital investments have also had social impacts, creating a culture of constant learning, reducing long-term unemployment and social inequality threats. Moreover, skill development opportunities have improved social mobility, enabling people from diverse backgrounds to improve their financial situation and to permit the Singaporeans to have the highest personal and family income in the world. The administration has created a more fair society by providing access to education, training, healthcare, transportation and the most developed infrastructure in the world[69].

Figure 7 tHe increase in the GDP in Singapore Pre and Post Human Capital



Source: https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=SG

Therefore, Singapore economic success is attributed to its emphasis on education and lifelong learning. The Skills Future initiative aligns with workforce development, ensuring a competitive and adaptable labour market. Constant skill development maintains high production and creativity, drawing foreign capital and transforming Singapore from "*labour-intensive to knowledge-based sectors*," ensuring its economic attractiveness and making the country one of the leading global economic competitiveness.

[67] World Bank website.
[68] https://www.weforum.org/agenda/2019/10/competitiveness-economy-best-top-first-singapore-secret-consistency/.
[69] Organisation for Economic Co-operation and Development (OECD). (2019). Human Capital and Economic Growth: A Comparative Study. Paris: OECD Publishing.

Additionally, in the case of South Korea, the country's emphasis on education and creativity helps explain its development from an impoverished nation, following the Korean War, to a developed economy. South Korea focused on strategic human capital development—especially in research and development (R&D), and education—leading it to a technologically advanced, high-income country.

A brief historical overview could help at understanding the South Korean 'miracle'. In the immediate aftermath of the Korean War, the country faced severe challenges, such as poverty, lack of infrastructure, and a high illiteracy rate. The government, led by President Park Chung-hee (1963-1979), recognized that the key to overcoming these challenges lay in building a highly educated and skilled workforce.

Education was then prioritized as the cornerstone of South Korea's development strategy. The government implemented a series of educational reforms aiming at universalizing primary education, expanding secondary education, and enhancing higher education. Additionally, the government invested heavily in research and development, establishing research institutions and promoting innovation across various sectors. This dual focus on education and innovation became the driving force behind South Korea's economic miracle, under which South Korea has implemented several key policies to foster human capital development with the Korean New Deal, being one of the most significant initiatives in recent years.

Respectively, an explanation of the Korean New Deal is of major importance to understand the implementation of HC policies in the country. First, the Five-Year Economic Development Plans (1962-1996), initiated in the 60s, focused on industrialization and technological advancement, with massive investments in education, research and development. These plans laid the groundwork for South Korea's transition from an agrarian feudal economy to an industrial one.

The situation was then inclined towards educational reforms to develop the country. Hence, the Education Reform Act issued in 1995, introduced a more "*flexible and diversified education system",* promoting creativity, critical thinking, and lifelong learning. It also strengthened the link between education and industry needs[70]. It was followed by Science and Technology Basic Plan (2008-2012) which emphasized the importance of research and

[70] Lee, J.-W. (2016). Economic Growth and Human Capital in South Korea. Journal of Development Economics, 117(2), 240-254.

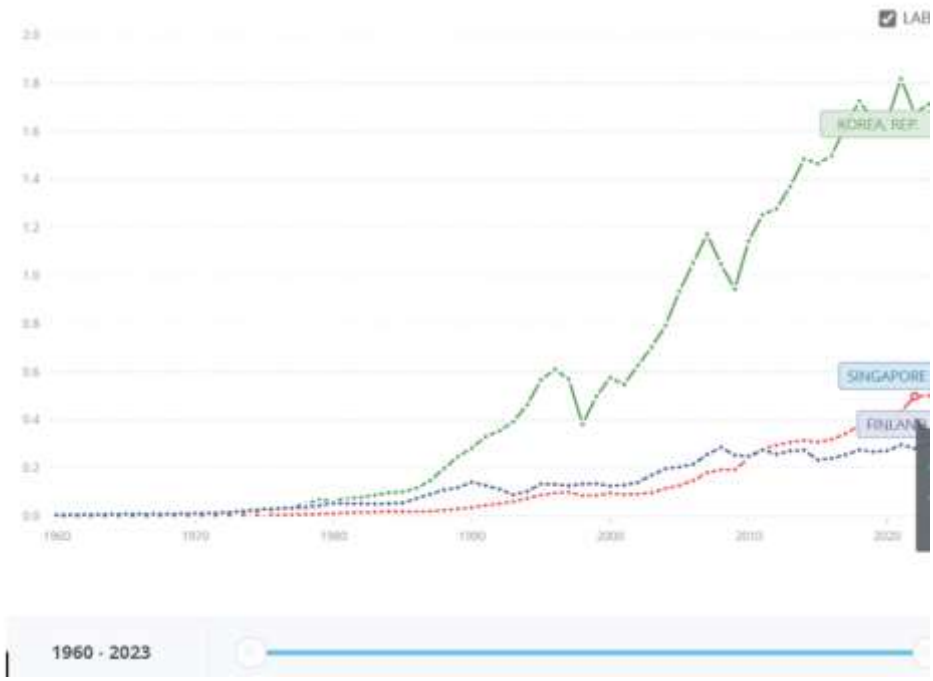
development and aimed to position South Korea as a global leader in science and technology[71]. The investment in education and research and development has subsequently led to a high level of productivity and innovation, particularly in high-tech industries such as electronics, automotive, and information technology[72].

Furthermore, South Korea's strong GDP growth (see figure 8, p.47) is also attributed to export-oriented businesses and technical advancements thanks to which the country's emphasis on human capital has maintained its economic competitiveness.

Importantly, the World Economic Forum's Global Competitiveness Report demonstrates South Korea's high macroeconomic stability, infrastructure, and innovation capacity[73]. Advantageously, education and innovation spending have also had societal impacts, reducing wealth disparity, increasing social mobility, and improving the standard of living. In the same vein, the commitment of policy-makers to education has helped people from various socioeconomic backgrounds to succeed and contribute to the nation's growth, creating new businesses and employment opportunities and diversifying the economy. This societal flourishment was then and also importantly fuelled by advanced health conditions strategies which heightened life expectancy rate in South Korea[74].

[71] Ibid.
[72] Ministry of Education, Science and Technology (MEST). (2012). Science and Technology Basic Plan 2008-2012. Seoul: MEST.
[73] Organisation for Economic Co-operation and Development (OECD). (2021). OECD Economic Surveys: Korea 2021. Paris: OECD Publishing.
OECD. (2020). Education in Korea: A Country Note. Paris: OECD Publishing.
[74] Ibid.

Figure 8 Progression in the GDP, South Korea, Singapore and Finland



Source https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=SG[75]

The third example is a European model: Finland, which is often cited as a champion for its high-quality educational system, central to the country's national policy and economic success. As early as the 60s, Finnish government recognized that investing in human capital, particularly through education, was essential for a country which was largely agrarian. The Finnish government introduced reforms that emphasized teacher quality, equitable access, and the development of a curriculum to ensure the transformation to a knowledge-based economy[76]. In fact, Finland's approach to education is characterized by several key policies that have shaped the country's human capital development; as a matter of fact, one of the pillars of Finland's education system is the emphasis on teacher quality. This could be done via a series of measures that could be listed as follows: Firstly, a selective and rigorous

[75] https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=SG.

[76] Eklöf, Tom, How Have Changes in Human CapitalInvestment Impacted the Development of the National Economy of Finland?, Helsinki Metropolia University of Applied Sciences Bachelor of Business Administrstion EBA,Thesis25.05.2018,https://www.theseus.fi/bitstream/handle/10024/148722/Eklof_Tom_thesis_EBA_25052018.pdf?sequence=1.

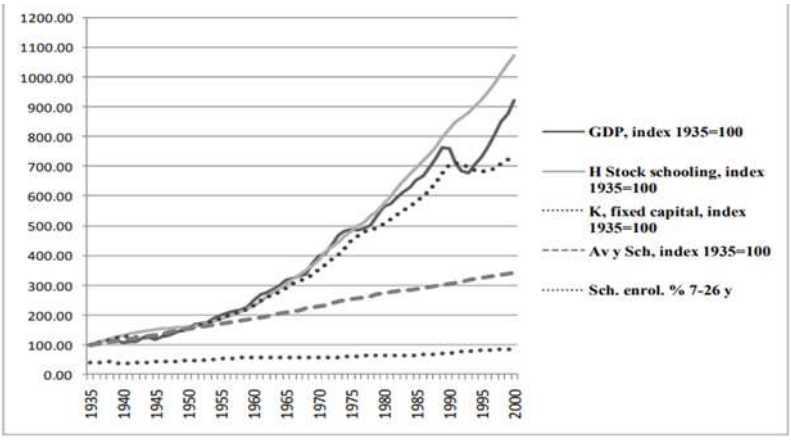
process ensures that the most capable and motivated individuals to teach become teachers[77]. Besides, these teachers are assigned autonomy and trust; they are allowed to tailor their teaching methods according to the needs and circumstances at all teaching levels[78]. The other pillar of Finland education system is "*to provide equitable access to education for all citizens, regardless of their socio-economic background"*[79]. This social right is especially meant to avoid discriminations related to social classes and special needs, ensuring free and inclusive education to all children by removing financial constraints. Moreover, Finland places a strong emphasis on early childhood education to develop cognitive and social skills at early age[80].

Eventually, Finland's educational system is having a direct impact on its social fabric and economic competitiveness. In other words, the focus on teacher quality and fair access to education has led to a highly trained workforce, ensuring economic growth in a knowledge-based economy, and building a fair society[81]. Education is then seen as a uniting factor, promoting national identity and community[82].

Henceforth, the country consistently ranks highly in international assessments of education and economic competitiveness, making it an attractive destination for foreign investment due to its innovative environment and high-quality talent[83].

[77] Ibid.
[78] Lähdemäki, Jenna, Case Study: The Finnish National Curriculum 2016—A Co-created National Education Policy,https://www.researchgate.net/publication/327730326_Case_Study_The_Finnish_National_Curriculum_2016-A_Co-created_National_Education_Policy , 10.1007/978-3-319-78580-6_13.
[79] Ibid.
[80] Ibid.
[81] European Union Agency for Fundamental Rights (FRA). (2018). Equity in Education: Finland's Approach. Vienna: FRA.
[82] Ibid.
[83] Organisation for Economic Co-operation and Development (OECD). (2019). OECD Reviews of School Resources: Finland 2019. Paris: OECD Publishing.

Figure 9 Economic and Social Index related to Human Capital in Finland



Source :https://unece.org/fileadmin/DAM/stats/documents/ece/ces/2011/25.e.pdf[84]

In the fourth example, a shining illustration of the human capital model is from Africa: Rwanda. The country aimed at turning its economy knowledge-based; it has made large investments in education, healthcare, and skill development since the late 1990s[85]. These initiatives coincide with the ideas of the human capital model, which stresses the need of investments for the expansion of the economy. With the Twelve-Year Basic Education program, free education for elementary and secondary schools, and emphasis on vocational training, education has been a main concern[86]. Increased literacy rates and a better educated workforce resulting from these initiatives help to support economic resilience. Another vital element of human capital is health. Rwanda's initiatives in community-based health insurance programs and universal health care are boosting accessibility and output.

The policy-makers also initiated programs like the Kigali Innovation City [87]and digital literacy, meant to produce a technologically knowledgeable workforce capable of supporting a knowledge-based economy[88]. A Comparative study with other African countries reveals Rwanda's original approach to human capital development, offering lessons and possible long-term advantages for other countries around Africa. Ultimately, Rwanda's application of

[84] https://unece.org/fileadmin/DAM/stats/documents/ece/ces/2011/25.e.pdf.
[85] https://www.worldbank.org/en/news/feature/2023/12/03/a-strong-commitment-to-human-capital-is-an-investment-in-rwanda-future.
[86] https://thedocs.worldbank.org/en/doc/64e578cbeaa522631f08f0cafba8960e-0140062023/related/HCI-AM23-RWA.pdf.
[87] https://www.africa.engineering.cmu.edu/about-french/living-in-rwanda/kigali-innovation-city.html.
[88] Ibid.

the human capital model clarifies the achievements and difficulties of using this theory in a fast growing environment[89].

[89] World Bank Reports: The World Bank frequently publishes reports on Rwanda, examining various aspects of its economic development, including education and health investments. These reports often contain detailed data and analyses. https://documents1.worldbank.org/curated/en/485501608433311280/pdf/Rwanda-First-Programmatic-Human-Capital-for-Inclusive-Growth-Development-Policy-Financing.pdf.

Conclusion

This chapter has explored the theoretical foundations necessary for understanding the transition to a post-industrial society in Canada. Fundamental to our research was Daniel Bell's seminal theory, which postulates that post-industrial societies are characterized by the pre-eminence of the service sector and a reliance on theoretical knowledge. Bell's insights have provided a foundational framework for analysing the shift from traditional manufacturing- based economy to knowledge-based industries, which is particularly relevant to the Canadian context where service industries dominate the economy.

The centricity of human capital has been another focal point of this first chapter. In a post-industrial society, the value of human knowledge competencies and skills increase, becoming 'tangible' assets for national development. The discussion stressed that investments in human capital—through education and training—are vital for fostering innovation and maintaining economic competitiveness. This perspective supports the views of functionalism, which suggests that a well-educated workforce is essential for a society's stability and function. However, for some scholars it remains a source of conflict since knowledge became tangible and shifted to knowledge economy or 'knowledge capital'.

In opposition, conflict theory provided a critical lens to view human capital, arguing that the benefits of post-industrial transformations are not equally distributed. This theory highlights the disparities that can arise from unequal access to education and training, suggesting that without government intervention, post-industrial societies might exacerbate social inequalities. On the other hand, Symbolic Interactionism attempts to add depth to this analysis by emphasizing the subjective experiences of each individual as they may be submitted to the changing landscape of work and education in a post-industrial age.

Finally, the chapter also reviewed international examples of human capital implementation in Singapore, Finland, South Korea, and Rwanda. Each of these countries has successfully, according to their economic and social performance, reformed their educational systems to boost economic growth and societal development, albeit through different strategies. Singapore's focus on technical excellence, Finland's emphasis on inclusive and comprehensive education, South Korea's rigorous educational standards, and Rwanda's rapid educational reforms to rebuild its economy, are examples to be exposed to the varied

approaches, strategies and methods that could be employed to connect human capital in support of post-industrial growth.

All in all, the theoretical framework discussed in this chapter provides an analytic lens for examining the post-industrial society in Canada. An attempt was made to integrate insights from Bell's theory with the dynamics of human capital and the theoretical perspectives of functionalism, conflict theory, and symbolic interactionism. In conclusion, the present research approach has gained a nuanced understanding of the challenges and opportunities that lie ahead.

Chapter Two Canadian Higher Education: The State of the Art

Introduction

The objective of this chapter is to present a historical description of higher education in Canada, along with its progression, transition, and development during history to nowadays events. Post-secondary education is not an exception to the rule; it is clear that the linguistic dichotomy that exists in Canada is reflected in the various societal challenges that exist there. It is of the utmost importance to differentiate between the 'French' Canada and the 'English' one since the formation and evaluation of the two Canadas occurred at distinct times and was not held to the same standards. Since of this, it is imperative that the 'French' Canada be distinguished from the 'English' Canada. When examined in this perspective, it was feasible to draw the conclusion that the growth of universities in Canada happened during specific historical eras. It is then conforming to the processes that the Canadian institutions used to move forward and continue with the process throughout its entirety. Moreover, the historical context of Canadian higher education is crucial in understanding its role in economic shifts from industrialization to post-industrialization. Canadian higher education has evolved, mirroring the economic transformations in the country. As industrialization took hold in the nineteenth century and early twentieth century centuries, Canadian universities primarily focused on technical and vocational training to meet the demands of the industrial economy. This emphasis on practical skills and applied knowledge was reflective of the economic priorities of the time [90](Yu, 2019).

As Canada transitioned to a post-industrial economy, characterized by a shift towards service-based industries and knowledge-intensive sectors, higher education institutions adapted their offerings to include a broader range of disciplines such as business, information technology, and social sciences. This shift in focus was a response to the changing economic landscape, indicating the symbiotic relationship between Canadian higher education and economic transformations. Ultimately, understanding this historical context is vital for comprehending the current state of Canadian higher education and its relevance to the country's economic evolution.

[90] Yu, S. "A Comparative Study Of Internationalization Policies In Chinese And Canadian Higher Education." 2019.

Four possible time periods are the focus of this section: the French colonial era, the British control era, the federation era, and the post-World War II era.

2.1The Development of Education in Canada from the Origins to World War II

There is evidence from the past that Amerindians inhabited the land that would later become Canada for thousands of years before Champlain built Quebec in 1608[91]. In 1628, there were just 65 French people residing in the town of Quebec, which was the first permanent colonial settlement established by Europeans in North America. Even when there were more concentrated efforts made toward expansion, the population had only expanded to 6,705 by that point[92]. Education, as demonstrated by D. Creighton, had primarily focused on 'civilizing' the autochthones through literacy and religious conversion to press locals to accept the values, traditions, and habits of Western Europe. Because they were responsible for founding the schools, the Jesuits were involved in the process[93]. Thus the first inhabitants received a religious education. In this respect, S.D Clarck (1942) wrote: "*the Roman Catholic Church was accountable for education in all of its guises during the period of time when France was a colonial power"*[94]. Most historians of Canada agreed upon the fact that education in all its forms was exclusively limited to a number of inhabitants. Therefore, university created a classical studies course especially for high school students[95].

It should be added that the conquest of Quebec by the British in 1760 practically brought an end to the French regime. The Treaty of Paris, which was signed in 1763, formally established the end of France in North America and the British domination over the region. However, the end of the French regime did not mean the end of the French population who perpetuated the French tradition, culture and religious influence adhering to the *stricto sensu*, by keeping in existence the limited number of French educational institutions[96].

[91] Donald Creighton, A History Of Canada Dominion Of The North, Houghton Miflin Company, 1958, Boston,Pp.48-51.
[92] Ibid.
[93] Ibid.,p.28.
[94] S D Clark, The Social Development Of Canada, Introductory Study With Select Documents, The University Of Toronto Press , 1942 Canada,P.69.
[95] Howard Robinson, The Development Of The British Empire, Houghton Mifflin Company Boston, 1922, Pp.212-16.
[96] D.Creighton,Op.Cit.,p.59.

According to the terms of the Treaty of Paris, the British did not interfere with the Catholic Church's primary position in the provision of education to French-speaking people. This explains how a dual educational system came to exist in Quebec (and later in other provinces and territories), with different educational frameworks for the Catholic Francophones and the English Protestants[97]. The American Revolution was a crucial element since it was the starting point of the creation of the British North America and the migration of thousands of loyalists who came to increase the number of Anglophones in Canada, bringing with them the American spirit of conquest and expansion. They sought to continue the practice of elevating their social standings by constructing an educational system and bringing it up to the same standard as the systems they had established in the colonies, so they wanted to ensure that it met the requirements of both[98].

In addition, Creighton asserts that "*the early universities in Canada had major contacts with the church (either the Roman Catholic or the Anglican), and that these institutions followed the model and regulations that were established in Europe"*[99]. He argues that theses early universities in Canada followed the model and rules established in Europe. The establishment of the three King's Colleges in Canada—Windsor, located in Nova Scotia in 1789; York, located in what is now Toronto, in 1827; and Fredericton, located in New Brunswick in 1828— represents an effort to transplant the educational ideals of the now-defunct British institutions into Canada.

Pre-industrilization politicians believed that education should be a lifelong pursuit rather than a limited one. They followed the Anglican faith, and in addition to offering boarding, they also provided academic instruction. More democracy-based institutions appeared (both in terms of management and population) managed by Scottish Presbyterians, such as Dalhousie (founded in Halifax in 1818), Queen's (formed in Kingston in 1841) and McGill (established in Montreal in 1821). It is important to note ,also, that Methodist institutions (such as Victoria College, which was established in 1841 in Cobourg, Ontario; Mont Allison University, 1839 in Sackville, New Brunswick) and Baptist institutions (such as Acadia University, which was established in 1838 in Wolfville, Nova Scotia) were founded to

[97] The First King's College Was Founded In Windsor (Nova Scotia) In 1789 And The College Of New Brunswick Was Created In Fredericton In 1800. McGill College Emerged In Montreal In 1821 Supported By Funds From A Rich Mercantilist Company Of James McGill. King's College At York (Nowadays Toronto) Was Awarded A Charter From The British Crown In 1827.
[98] Howard Robinson, op.cit., p. 212.
[99] Creighton Op.Cit.,p.62.

educate men for positions in public education and the ministry[100].The Seminaire de Quebec, which had been founded in 1663 by Bishop Laval, was responsible for establishing what is now known as the University of Laval in 1852. After that, in 1876, it opened a further location in Montreal, which would later develop into the University of Montreal in 1920. Catholics presented their own teaching and philosophy within their institutions, such as the University of St. Francis Xavier, which was an English-speaking university founded in the year 1855 .All of the institutions along with the Jesuits offered a religious diversity[101].

Up to the Constitutional Act of 1867 thirteen higher education institutions, out of the seventeen created, were under the churches control[102]. Only four universities, notably Dalhousie, McGill, the University of New Brunswick, and the University of Toronto, were secular institutions[103]. Soon, discussions on which organizations should get financial help from the colonial government were triggered when 'denominational universities' were established. One may take the example of the Ontario region in the pre-industrialization era in Canada laid the groundwork for the development of higher education and its relationship to the economy. In fact, during the second half of the nineteenth century, Ontario experienced a huge urbanization and industrialization. The population of Toronto (the main city) grew rapidly, and the city became a hub for manufacturing, financial services, and commercial trade. This growth was accompanied by a shift towards larger factories utilizing more advanced machinery, predominantly powered by electricity. As a result, there were serious discussions in the late 1880s about financing HE institutions in Toronto to provide courses in various technical skills (private or public money) (Yolande Sharman and A. Glassford, 2011)[104].

[100] Https://Www.Thecanadianencyclopedia.Ca/En.
[101] Axelrod, P., John G. Reid, Youth University And Canadian Society Essays In The Social History Of Higher Education, McGill-Queen's University Press Kingston,1989, pp.328-9.
[102] Olga Myhaylovna Elberth, The History Of Higher Education In Canada, Mediterranean Journal Of Social Sciences, Vol 06 No551 September 2015 Retrieved On 01/2020.
[103] While Most Universities Were Primarily Teaching Institutions, Several Universities, Especially McGill University And The University Of Toronto, Were Gradually Developing Quite Extensive Research Activities And Graduate Programs. These Two Universities Became The Only Non-Us Members Of The American Association Of Universities.
[104] Sharman, Yolande ,K. And A. Glassford, L. "The Appeal Of Technical Education In Tough Times: A Comparison Of The Toronto And Windsor Experiences, 1890–1930." 2011.

To put it another way, the topic of public money versus private finance started to become a prominent debate within the federation[105].the federal model, which has been adopted by Canadian institutions was an answer to the issue of combining religious and secular values, as well as public and private values. This answer developed in Canada was the public universities would be responsible for both the teaching of all academic subjects and the awarding of degrees, with the exception of theological studies to private institutions[106]. The creation of the federation led to more interest in the higher education system of Canada. According to Hallowell (2004), the federation was an attempt "*to balance the need for a unifying national government, with the rights of provinces to address the needs of their quite distinct local populations.*"[107].

It is essential to point out that the topic of higher education was a significant one, although it was so only to a limited portion of the population. It was clear that the different provinces of Canada had different ways of ruling education because of the linguistic and cultural diversity that exist within Canada. The Roman Catholic Church continued to play the preeminent role in the (higher) education of the population of Quebec. On the other hand, just one year after Canada became a nation, the province of Ontario made the decision to limit government funding for higher education to institutions that upheld a secular worldview[108].

At the turn of the Twentieth century, the subject of managing universities arose as a primary and significant concern, as it encompassed the function, obligation, and prerogative of staff in each university in order to protect the institution from political or governmental intrusion[109]. A commission was established in 1909 named Favell[110] to solve the issues, visiting a number of educational institutions in the country. It was successful in reaching a definite result, which may be summed up as follows from the final report:

[105] Elberth, Op.,Cit.,538.
[106] D.Creighton,Op.,Cit., P75.
[107] Hallowell, Gerald ,The Oxford Compagnion To The Canadian History, Oxford University Press, 2004, P.156.
[108] Ibid.
[109] D. Creighton, Op., Cit.,p. 102.
[110] A royal commission with a mandate to review the relationship between the government and the university, and the internal governance structure of the institution. The Flavell commission had influenced the governance arrangements of many of these public institutions, and they operated with considerable autonomy from government, in part because of what Neatby has argued was a common understanding of the role of the public university https://Www.Thecanadianencyclopedia.Ca/En Retrieved on November 2022.

> We have examined the governmental systems of other State universities upon this continent and have found a surprising unanimity of view upon the propriety of divorcing them from the direct superintendence of political powers[111] .(1906:276).

During the second part of the nineteenth century and the first half of the twentieth century, discussions on the federation of British North American colonies did not heavily focus on the topic of higher education as a fundamental public policy concern[112]. To have a complete understanding of the state of higher education in Canada during periods, we may refer to this assertion, according to Fisher (2006:03), illustrates a historical truth as outlined in the following way:

> In the preliminary version of the future constitution that was created in Charlottetown in 1864, the stipulation was made that universities would fall under the purview of the federal government. However, when the final version of the British North America Act was signed in 1867, the entire educational sphere had been relegated to the jurisdiction of the provinces, primarily at the urging of Lower Canada[113]

The provinces, therefore, have the central role in providing direct operational support to institutions as well as developing legislation, regulation, and coordination of those institutions. The activities of different types of higher education institutions in Canada are not directly coordinated by the federal government since the federal government does not play any part in this process according to the provision of the Constitutional Act. Because of this, the educational systems that are in place in each province have distinct organizational styles when compared to one another.

By the year 1939, the University of Toronto and the University of McGill were the only two universities that have a positive reputation for their academic programs on a global scale. There had no government or provincial funding[114].According to Fisher, about 5% of the population between the ages of 18 and 24 were enrolled (approximately 40,000 students) in

[111] "The Universities Of Canada Their History And Organization, With An Outline British And American University Systems". Appendix To The Report Of The Minister Of Education, 1896.Torontopbtntbi) Bt Wabwiok Bros. K. Rutter, 68 And 70 Front Strut West.1896 1906 Version.
[112] Morden Levi, Charles, Comings And Goings: University Students In Canadian Society, 1854–1973 2003. Montreal, Qb: McGill-Queen's University p.10.
[113] Fisher, Donald, The Development Of Postsecondary Education Systems In Canada , A Comparison Between British Columbia, Ontario And Quebec, 1980-2010, Fisher Kjell Rubenson, Theresa Shanahan And Claude Trollier, McGill-Queen's University Press, Montreal& Kingston,2014.
[114] Ibid., p.05.

the institutions. Most universities were found in the same geographical areas (mainly Ontario).

2.2 Development of Canadian Higher Education in Post-World War II

The end of the Second World War coincided with a global scale emigration movement (mainly from the South to the North) referred to as 'post-WWII emigration'. This phenomenon brought new population and there was a need from the government to select and control the migratory flux. Reforms were introduced in higher education and the quality of teaches, in terms of competencies, was questioned to impulse the technological and scientific changes. The federal government began to provide some financial support to universities after the war in order to help them cope with the entrance of veterans, and universities profited from a program that provided qualified returning troops with the option of earning a free university education if they met certain requirements[115]. Therefore, at the federal level, it was decided that persons who had "*heroically served their country would be rewarded by having the federal government pay for their tuition fees and basic living expenditures*"[116]Thus, the number of students enrolled in universities across Canada increased by 46 percent in 1946 as a direct result of the decision to admit 20,000 war veterans into the country's higher education system. Then, a year after, a total of 35,000 additional veterans registered for the program. A total of 53,000 veteran students were able to graduate from one of the several institutions in Canada thanks to the rehabilitation program, between the years 1944 and 1951[117].

Shortly after the war, in 1949, a commission was set to evaluate, assess and recommend the reforms needed for higher education in Canada (Massey Commission)[118] , which is considered by many as being the first step towards reforms and then the transformation of the system to adapt to the economic needs of Canada . The Royal Commission on National Development in the Arts, Letters, and Sciences published its reports in 1951[119], of about 550 pages to detail the situation of HE in the country. As a direct result of the Massey Report, the government increased the total amount of money that may be allocated through direct grants.

[115] Charles Morden Levi, Op.Cit.,pp.36-45.
[116] Ibid.
[117] Ibid.
[118] Https://Www.Collectionscanada.Gc.Ca/Massey/Index-E.Html.
[119] Ibid.

It is essential , also, to mention the role of the National Conference of Canadian Universities (NCCU), which would later evolve into the Association of Universities and Colleges of Canada[120], because it had developed a fruitful working relationship with the federal government before the start of the war. Following the end of the war, the NCCU expressed became a partner with the federal government, as well as, to work as a controlling body. The National Council of University Teachers (NCCT) organized a key meeting on Canada's 'crisis' in higher education in the year 1956[121]. At the meeting, projections were made regarding the growing demand for higher education, and the consensus among the experts was that enrolment would nearly triple following decade. Prime Minister St. Laurent (Liberal Party) decided additional funding from the federal government to aid the continuous expansion of the university sector to facilitate the growth of the universities[122].

As the number of students increased in the 1960's and 1970's because of immigration and the 'baby-boom', university professors who were hired in Canada throughout the 1960s and 1970s, had received the majority of their education from institutions located outside Canada, especially in the United States and Great Britain. The expenses that were necessary to keep up with maintenance and expand the scope of this system increased.[123] In the 1980's there was a need to reform and re-organize the HE system, and to establish new institutions, under the impulse of the 'neo-liberals'. The new organizations' aims and functions were very different from one province to the next. This was because these new organizations were founded in order to address particular needs that were present within provincial systems.[124]

Consequently, these new institutions not only offered a wide range of specialized occupational programs to their students, but they also offered programs that prepared students for transfer to universities. Students who participated in these programs could finish the first two years of their university education at the community college. After that, they could transfer to one of the province's universities to complete the last year of their degrees.[125] It is important to mention that in the 1960's a new and extensive network of colleges of general

[120] Sheffield, Edward. "Universities Canada". The Canadian Encyclopedia, 15 August 2024, Historica Canada. Www.Thecanadianencyclopedia.Ca/En/Article/Association-Of-Universities-And-Colleges-Of-Canada.
[121] Ibid.
[122] Ibid.
[123] Fisher, Op.Cit., p.26.
[124] Dennisson And Gallegher, Canada's Community Colleges: A Critical Analysis, University Of British Columbia, 1986,pp.12-14.
[125] Ibid.,p. 32.

and professional education (CEGEPs) was formed in Quebec province. To explain their functioning the two-year pre-university programs and the four-year technical vocational programs were falling under the responsibility of these colleges. In the same decade, the government of Quebec made the decision to establish the Université du Québec, a new multi-campus educational establishment with campuses located all across the province, in order to address the low rates of university enrolment among francophone students.[126] To ensure the autonomous role of universities and colleges, committees and councils were created in each province to control higher education institutions and to limit the role of central government in the functioning of the said institutions[127].

In Canada, unlike many other countries in the world, there are intermediary bodies between the university sector and government in the provinces that have to control the quality in the universities. To illustrate this assertion, the examples of the provinces of Newfoundland and Labrador, Quebec, Nova Scotia, and Manitoba all have institutions that function as 'go-betweens'[128]. Additionally, the New Brunswick, Prince Edward Island, and Nova Scotia governments receive advice from a regional entity known as the Maritime Provinces Higher Education Commission to manage, assess and control the PSE[129]. By the 1970s, many institutions of higher education in Canada had their own selecting bodies of the staff. In fact, both students and faculty participated in decision-making in department and faculty councils, and search committees with representation from a variety of constituencies; they were given a major role in recommending senior administrative appointments (Jones, 2002; Jones, Shanahan, & Goyan, 2004)[130].

In the same decade, all the provinces had already put in place their own distinct systems of higher education, which were completely independent from one another (constitutional Act of 1867). Aside from the coordination of available financial resources, the province, on the whole, promoted or, at the very least, accepted large degrees of university autonomy. According to Dennison and Gallagher, (1986) :

[126] Dennisson And Gallegher, Op.Cit.,p.32.
[127] Ibid.
[128] The Different Controlling Bodies Composed Of Memebers Of The He Institutions And The Local Government.
[129] Ibid.
[130] Johnes, Shanahan And Goyan, ," The Academic Senate And University Governance In Canada" , The Canadian Journal Of Higher Education La Revue Canadienne D'enseignement Supérieur Volume Xxxiv, No. 2, 2004, pp. 35–68.

> (…..)establishing both its overarching goals and the strategy that would be most effective in accomplishing those goals. This allowed the universities to keep their autonomy in both the substantive and procedural spheres. In contrast, the provinces had a propensity to view colleges as instruments of state policy, and the sector was significantly more strictly regulated; in some instances, the Ministry responsible for higher education even managed the colleges directly.

Even though the federal government was no longer responsible for providing direct operating grants to universities, the federal government was still responsible for a range of policy areas that had a direct impact on higher education. Henceforth, post Second World War II, the federal government established the Canada Council to broaden its role in the process of financially supporting academic research. Following that, the government established three separate research granting councils: the Medical Research Council, which later developed into the Canadian Institutes of Health Research; the Natural Sciences and Engineering Research Council; and the Social Sciences and Humanities Research Council[131]. The provision of financial assistance to students by the federal government has also developed into several forms; The Dominion-Provincial Student Aid program has been operating continuously since 1939. In 1964, the Canada Student Loan Program was launched. The Canada Student Loan Program is still in operation today. All this bodies, councils and committees, coupled with the different programs testify the implementation of human capital doctrine in Canada.

In the 1970s economic crisis caused the provinces to slow down what had previously been two decades of annual growth in the funding for higher education. The economic crisis of 1970s was characterized by falling tax revenues which meant that educational institutions in Canada could no longer rely on obtaining the level of financial assistance that they had been asking for. Thus, the academic staff turned to unions to guarantee their rights and to maintain their wages. Besides, the universities were expected to create their own answers to the financial problems they encountered. This was done to prevent educational institutions from considering faculty members pay as a means of addressing budgetary issues. Acting as a national umbrella organisation, the Canadian Association of University Teachers (CAUT) was the most powerful supporters of the unionisation campaign at that time[132]. The consequences

[131] Daniel Lang, Financing Higher Education In Canada ,At :https :// Www .Researchgate .Net /Publication /263735232 , Retrieved On 19/09/2019.
[132] Ibid.

of unionisation went beyond disputes about pay for academics. After unions emerged, strict policies on nomination, tenure, and promotion were developed. These rules called for peers' involvement in the decision-making process and in review[133]. Consequently, the financial crisis led the appearance of the basic framework of mass education- provincial education, and higher education- started to take shape by middle of the 1970s. These systems defined themselves for the next two decades to rule higher education institutions. The governments continued their efforts to convince universities and colleges to expand their student population in order to satisfy the growing need in the knowledge-based economy. We may assert that the financial crisis of the 1970s accelerated the process of moving towards a new model based on Knowledge economy and services.

One of the efforts, that the federal government did, as early as 1972, to encourage families to face the increase in tuition fees in the funding of postsecondary education, was the establishment the Registered Education Savings Program, also known as RESP, with the goal of providing parents with the opportunity to establish savings accounts for their children that could only be accessed for the purpose of making payments of their children's future education. The second most important investment field was done on Research and Development (often known as R&D). The federal government's interest in making more strategic investments in research and development began to grow in the 1980s, which coincided with the establishment of National Centres of Excellence. These centres were established to provide financial support for research to promote interaction between academic researchers and private sector representatives.

During the 1980s and into the early 1990s, the federal government initiated a number of unilateral and multilateral adjustments to coordinate their efforts since no centralized institution in terms of higher education management existed. According to Roopa Desai Trilokekar and Glen Jones; the government started by a series of reforms in the process of modernization and harmonization between the different systems of education in Canada ; they asserted the following : "*The Council of Ministers of Education, Canada (cmec) was created in 1967 to act as the premier administrative organization for education in Canada; however, its role remained elusive. Was it an interprovincial organization or the national forum for education? Cmec did make some strides in formalizing agreements with the federal*

[133] Lang, Ibid.

government…" [134]to solve the lake of common coordination between the different systems of HE that existed.

Consequently, the federal government started looking for answers to lower the 90s budget deficit; the changes were executed one after the other. First , the transfer policies changed to establish a social transfer envelope, the federal government then 'drastically' cut the financial flow to the provinces for health care, education, and a range of other social programs. Fisher et al., (2006) claim that in the period between1995 and 1998 budgets the federal government refused to grant financial support to the provinces totalling $4.5 billion (CD) drop in education[135].Thus there was a need to find alternatives to finance higher education institutions and to compensate the loose resulted from budget restrictions. As an illustration one may cite the case of the province of Ontario (the most populated with the greatest number PSI); in fact reforms were put into effect by the government of the province of Ontario with the intention of reducing the financial contribution of the government. The amount of money that the province of Ontario provides to its universities and colleges has been drastically decreased. In addition, the province has regulated tuition costs, which implies that they increased; however, professional programs would be much more important to compensate the budget gap . Due to the lack of a coherent policy framework at the national level, the provinces' responses to the unanticipated decline in money transfers were different.

Therefore, the tuition fees that were being charged by each province such as Ontario and Nova Scotia, relied heavily on fees to cover the needs of universities, whereas the government of Quebec purposefully maintained low university rates. CEGEPs, for instance, did not charge tuition at all. This led to disparities in the tuition fees between provinces, according to the different approaches of the policy-makers in each province. According to Jones and Young (2004), the Canadian state of Ontario conducted measures such as marketization strategies with the goal of improving competition among institutions and stimulating new public-private sector funding collaborations. These marketization strategies attempted to enhance investments and to attract students[136].

[134] Tamtik, Merli , Roopa Desai Trilokekar, And Glen A. Jones, International Education As Public Policy In Canada, McGill-Queen's University Press Montreal & Kingston, 2020, p.30.
[135] Lang (2005) Op.,Cit., pp.51-53.
[136] Glen A. Jones, An Introduction To Higher Education In Canada, N Book: Higher Education Across Nations (pp.1-38)Chapter: An Introduction To Higher Education In Canada Publisher: B R Publishing Corporation Editors: J. M. Joshi, Saeed Paivandi, 2014.

By the end of the twentieth century marked an expansion in the Canadian economy, so the deficit that had been present in the budget of the federal government was eliminated. As an obvious decision, the federal government invested in higher education in two different ways; first, under the Canada Study Grants program, which was established by the federal government and managed by the Canada Student Loans program, students who have financial requirements are eligible to receive grants of up to $3,000 CD. These grants can be used to pay for educational expenses. In the following years, the program was expanded to include assistance for disabled students as well as assistance for women who were pursuing PhD degrees[137]. It is noteworthy to report that there were worries that an excessive number of students were accumulating an excessive amount of debt to finance their education. As a reaction to that tuition had increased in most provinces due to the reduction in the money provided by the government to HE institutions. To solve this problem, by the year 1998, the government launched the Canada Millennium Scholarship Foundation to help both students and institutions. The CMSF received an amount of 2,5 billion CD[138]. Moreover, it was established with the intention to provide assistance to deserving students. According to Fisher et al., (2006), most of the funds were distributed in a form of scholarships to students who needed financial aid.

Furthermore, in 2008, the government of Canada launched a program known as the Canada Excellence Research Chairs initiative, which encouraged academic institutions to submit applications to hire academics of the greatest qualification. The goal of the program was to fill research chairs with individuals who had the highest level of expertise. The second major action was the creation of the Canadian Foundation for Innovation. The CFI program puts more an emphasis on the research infrastructure than it does on the researchers themselves. The Canada Foundation for Innovation program was a new source of financial assistance of new research facilities, the acquisition of research equipment, and a conception of infrastructure projects that are necessary for conducting research.

Henceforth, these two major investments in research, along with some increased funding for the granting councils, an expansion in graduate fellowship programs, and some funding to try and compensate institutions for indirect costs, mean that there are more resources associated

[137] Jones, Op., Cit., pp. 1-38.
[138] Https://Library.Carleton.Ca/Find/Data/Survey-Titles-Full/Canada-Millennium-Scholarship-Foundation-Cmsf.

with research than there were before. Therefore, the role that the government of Canada plays in the process of creating policy regarding higher education has undergone a considerable transformation.

2.3Current Situation

To recapitulate, higher education in Canada should be understood as the sum of ten different provincial 'systems' and three different territorial 'systems.' As shown in Table 1, the provinces and territories differ in space and population, thus, both the infrastructures and academics differ too. The province of Prince Edward Island is the smallest in Canada, with a total area of 5,660 square K and having a total population of around 146,000 people. The province of Ontario, which has a population of over 13.5 million people and enrols more than 760,000 students, has the largest higher education system. According to Jones and Skolnik (2009), the province of Ontario is home to a variety of private universities, theological institutions, and vocational colleges in addition to having a total of twenty universities that are financed by the government and twenty-four schools of applied arts and technology.

On the other hand, due to their small populations and large land areas, each of the three territories has serious obstacles when attempting to meet the post-secondary education requirements of their respective jurisdictions. Each jurisdiction has established its own college, which provides a variety of educational opportunities via on-site and distance learning/studying options. Actually, the colleges' *satellite campuses* are dispersed around the territories. In addition, these institutions frequently collaborate with universities in the southern provinces. For instance, they may help facilitate degree programs that are provided by universities in partnership with colleges, or they may decide for the transfer of credit. They have installed distance learning via mails during the nineteenth century[139]. They perpetuated this tradition by the beginning of the Twentieth-first century via the use of technologies and internet. According to Kemal Gürüz (2008):

> All over the world, traditional institutions are delivering some of the courses in their curricula online, or are planning to do so. In the late 1990s and the early 2000s, over half a million Canadians in the various adult education and training programs were doing part of their coursework through some form of distance learning (Green, Eckel, and Barblan 2002). In 2001,57 percent of Canadian universities were offering some three thousand online courses

[139] Robin S. Harris,Op.Cit.,p.105.

> (Stella and Gnanam 2004). By 2004, forty-four Canadian universities were offering courses online [140].

It is, then, possible for the myriad of college satellite campuses spread across various regions to operate, as these institutions often engage in partnerships with universities in the southern provinces through distant and e-learning methods. Besides, they may help facilitate degree programs that are provided by universities in partnership with colleges, or they may decide for the transfer of credit.

The following chart illustrates the territorial and demographic reality in Canada that may help the researcher at comprehending the distribution of the higher education institution. This fact, the largeness of the Canadian territory and the unqual distribution of the population may explain the unbalance representation in terms of academic institutions and staff in the country.

[140] Gürüz , Kemal ,Higher Education and International student Mobility in The Global knowledge Economy, 2008 State University Of New York.

Tableau 1 The Territorial and Demographic Distribution of Cnadian Post-Secondary Institutions

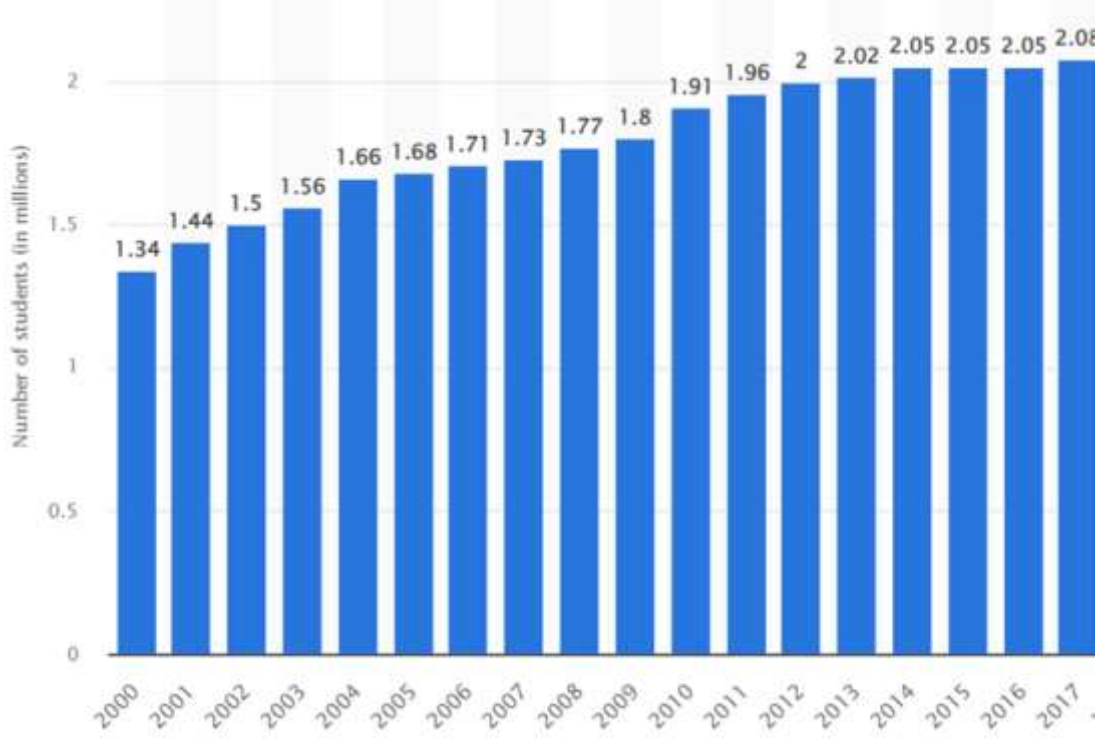
Jurisdiction	Area km^2	2012 Population	University	College	Total
Newfoundland and Labrador	405212	512700	18324	9549	27870
Prince Edward Island	5660	146100	4401	3081	7482
Nova Scotia	55284	948700	42834	11811	54645
New Brunswick	72908	756000	23415	8217	31635
Quebec	1542056	8054800	287475	214761	502236
Ontario	1076395	13505900	483783	276948	760731
Manitoba	647797	1267000	43632	18390	62025
Saskatchewan	651036	1080000	31770	20541	52308
Alberta	661848	3873700	128361	60246	188607
British Columbia	944735	4622600	173583	93165	266745
Yukon	482443	36100	-	246	246

Source: Area data from Natural Resources Canada. Statistics Canada's CANSIM table 051-0001 contains information regarding the population. Enrolment data for 2010/11 from Statistics Canada, CANSIM, table 477-0019.

The following graph from the Canadian statistics website shows the progression in students' enrolment in the turn of the twentieth-first century. It is estimated that there are around 163 public and private universities in Canada (CMEC, 2013). This number also includes several institutions that possess the legal right to function as independent

universities, but which instead function through federation arrangements with provincial universities at the present time. This done to ensure the inclusivity of HE institutions to all Canadians wherever they live.

Figure 10 Number of Students Enrolled in PSE in Million (2000-2017)



Source:https://www.statista.com/statistics/447739/enrollment-of-postsecondary-students-in-canada/

As previously mentioned 97 HE institutions are members of AUCC. There are ninety universities that are recognized as such, in accordance with the statutes of the several provincial governments and that offer recognized university degree programs[141]. The vast majority of these 90 colleges and universities fall under the category of 'public' institutions. This does not refer to state-owned institutions; rather, it refers to autonomous organizations that operate on a not-for-profit basis and receive funding from the government since it is believed that they are contributing to a greater good for the public. By the beginning of the twentieth-first century, Canada became the first nation among OECD members in term of enrolment among adult; the following table illustrates this situation.

[141] Fisher, et al.,(2014), Op. Cit., pp.125-28.

Figure 11 Post-Secondary Enrolement in 2014

	Total	University	College
Canada	2,023,191	1,283,229	739,959
Full-time	1,489,536	956,154	533,385
Part-time	533,652	327,078	206,574

Source: Shanahan, Nilson, Broshko, Handbook of Canadian Higher Education Law, Queen's Policy Studies Series School of Policy Studies, Queen's University McGill-Queen's University Press Montreal & Kingston,2015, p.40.

According to Sue Winton, early years of the twentieth century, the prevailing institutional model for higher education in Canada consisted of private denominational universities. However, the secularization of the university sector was brought about as a result of the post-war expansion in the university sector. This shift took place because of the growth that happened in the higher education sector. By the 1970s, people in Canada generally saw universities as public, non-religious organizations, and the government viewed the awarding of university degrees as a public monopoly. The government maintained a strict monopoly over many educational institutions, including universities. This included the amount of students who may enrol in those schools[142]. The following figure indicates the public and the quasi –public schooling institutions in Canada[143]:

[142] Robin S. Harris,Op.Cit.p.226.
[143] Winton, Sue, Unequal Benefits Privatization And Public Education in Canada, University Of Toronto Press,2022, p.23..

Figure 12 Public and Private Educational Institutions in Canada

School Types	BC	AB	SK	MB	ON	QC	NB	NS	PEI	NL	YK	NW	NT
English-language schools part of publicly funded education system	X	X	X	X	X	X	X	X	X	X	X	X	X
French-language schools part of publicly funded education system	X	X	X	X	X	X	X	X	X	X	X	X	X
Catholic schools part of publicly funded education system(s)		X	X		X						X	X	
Private schools receive some government funds	X	X	X	X		X							
Charter schools receive government funds		X											
Homeschoolers receive some government funds		X	X*								X	X	X

* Varies by school district.

Source: S.Winton (2022) p.23

Even though provinces continue to exert influence on the overall number of universities, a limited number of private universities have been given the right to establish themselves in provinces[144]. Private universities are ,most of them, either directly affiliated with a religious denomination (such as the Canadian Mennonite University in Manitoba) or offer programs within an institutional environment that supports the beliefs and values of a particular religious group (such as Trinity Western University in British Columbia). Given that these institutions only enrol a very few percentage of the whole number of university students, there is a reason to assume that the private sector will grow in the foreseeable future. On the other hand, there is little sign that the public sector will expand, due to the nature of the needs of the new economic model that starts emerging in Canada[145].

Moreover, the diversity of the Canadian HE system could be illustrated by the Quebec exception; in fact, Quebec is an unique case in Canada, since it is necessary for students to complete their pre-university program at one of the CEGEPs that are located in the province. These educational facilities offer preparatory courses for university as well as vocational training. This required pre-university training helps to explain why a greater proportion of

[144] Sue Winton, Unequal Benefits Privatization And Public Education In Canada, University Of Toronto Press,2022,pp.31-40.
[145] Ibid.

postsecondary students in Quebec enroll in colleges as opposed to students in any of the other Canadian provinces[146].

All in all, from the end of the 1990's till nowadays, there is a constant progression in students enrollement tendency that is observed all over Canada as reported by Green (2015) quoted from Carney Strange and Donna Hardy Cox(2016) who confirmed this growing trend:

> Twenty years ago, in 1995, people holding university degrees in Canada numbered 635,000. Ten years later, that total had grown to 1.3 million, then to 2.1 million by 2015. In 2025, says O'Heron [director of research and policy analysis at Universities Canada] there will be more than 2.5 million degree-holders in Canada. And that year, the cohort of adults aged 50 to 69 with a university degree will be four times larger than it was in 1995:"There is no question the demand for courses outside degree programs is going to grow too," he concludes" In Carney and Hardy Cox (2016)[147]

According to the quote, in the turn of the new millennium a new Canadian society emerged with post-secondary qualifications to meet the needs of the newest society to spouse the coming investment and economy based on knowledge and services.

It is necessary for the researcher to look at the demographic constitution of the Canadian PS I,an in-depth analysis of the administrative, academic staff, and students is necessary. One may observe that all the mosaic of the Canadian society are taking part in the systems. This is due to three factors; historic development of the country, the Canadian uniqueness and the post-world war II multiculturalism generated by the migration flux. The tendency is that more and more women, 'first nations representatives[148], immigrants', disabled and other groups, are represented in the PSE, so diversity is becoming more palpable in the twentieth-first century. The following tables may illustrate this trend. First when analysis the following table one may clearer notice that the higher ranks in post- secondary institutions more males are obtaining the full professor degree than females. The portion of females is more important when the

[146] Shanahan, Theresa ,Michelle Nilson, Li-Jeen Broshko, Handbook Of Canadian Higher Education Law, Queen's Policy Studies Series School Of Policy Studies, Queen's University McGill-Queen's University Press Montreal & Kingston,2015, pp.40-42.
[147] Strange, C. Carney And Donna Hardy Cox, Serving Diverse Students In Canadian Higher Education, McGill-Queen's University Press Montreal & Kingston, 2016, p.149.
[148] The term signifies the Amerindians of Canadian Northern territories.

degrees are less important[149]. We can observe that the pyramid of gender in this case is reversed.

Tableau 2 Gender Representation of University Teachers

Rank	Males	Females	Total
Full Professor	11447	3354	14946
Associate Professor	9550	5923	15473
Assistant Professor	5446	4715	10161
Rank Below Assistant	1612	1875	3487
Other	431	436	867
TOTAL	28486	16448	44934

Source: Statistics Canada, CANSIM, table 477-0017.

The situation should be reviewed later on in-depth when dealing with structural reforms and the positive actions undertaken at both the federal and provincial levels.

The concept of diversity in Canadian higher education encompasses a broad spectrum, including cultural, ethnic, gender, socioeconomic, and linguistic diversity. This 'inclusivity' has been shaped by various historical, social, political, and economic factors, resulting in

[149] Source: Area Data From Natural Resources Canada. Statistics Canada's Cansim Table 051-0001 Contains Information Regarding The Population. Enrolment Data For 2010/11 From Statistics Canada, Cansim, Table 477-0019.

policies and practices that aim to address inequities and promote equal opportunities for all[150].

2.4 Measures to Ensure Canadian Higher Education Inclusiveness

To Start with, according to Carney and Hardy (2022),Gao and Jamal (2007), Anderson and McCartney (2014) the Higher education institutions are at the center of cultural and ethnic diversity since Canada's higher education institutions are home of a rich mosaic of cultural and ethnic backgrounds. The representation of diverse cultural and ethnic groups has increased thanks to the country's immigration policies, which enhance multiculturalism. Universities have implemented various initiatives to support students from different cultural backgrounds, including cultural awareness programs, multicultural student services, and the celebration of cultural events on campus.

To put in another way this demographic diversity encompasses the inclusion of 'Indigenous' students as a result of the aftermath of the Truth and Reconciliation Commission (TRC) recommendations; the commission took place between 2007 and 2015[151](the mandate of the said commission could be found in detail in the link as reference in the footnote)[152].Canadian universities have made concerted efforts to include Indigenous culture, knowledge and perspectives in their curricula. Programs are designed for Indigenous students, such as access initiatives, mentorship programs, and scholarships, have been established to support them[153].

The second category representing the ethnic demographic diversity is the one concerning immigrants. At this stage one may distinguish between two categories of foreigners in the HE institutions; economic immigrants and international students. In the past, these student demographics have included students who had a lower socioeconomic level, students who were the first in their family to attend college, students with disabilities, and Indigenous students (Bourke et al., 2019; Priebe et al., 2008; Aylward & Bruce, 2012; Pidgeon, 2016). There is still a concerted effort being made in the present day to expand access to

[150] C. Carney Strange And Donna Hardy Cox, Op.Cit.,p.5.
[151] Https://Www.Rcaanc-Cirnac.Gc.Ca/Eng/1450124405592/1529106060525#Chp1.
[152] Https://Www.Residentialschoolsettlement.Ca/Schedule_N.Pdf.
[153] C. Carney Strange And Donna Hardy Cox, Op.Cit.,p.29.

postsecondary education for the student demographics (underrepresented) and to increase the number of these students who remain enrolled in postsecondary programs[154].

According to Bruneau (2004), there was an increase in people's interest in gaining access to PSE in Canada after the end of the Second World War. To sum up the previous section one may say that the interest was driven by a desire of many to continue their education. Postsecondary institutions had the responsibility of adapting to the altering demands of society and, in particular, of assisting veterans, and other underrepresented groups in their integration or reintegration into society as part of their purpose. During this time, there was also a movement toward the secularization of public service institutions (PSIs), despite the fact that a number of PSIs in Canada were linked to religious institutions[155].

We shall start with, *first generation students* whose parents did not complete their primary and secondary school, as defined by Bach (2017)[156]. These children are considered first generation students. " *Some educational institutions take this requirement one step further by including children whose parents did not attend a PSI at any time in their lives or students whose parents did not attend a PSI in Canada as part of the pool of applicants for this program. First-generation students are typically at a disadvantage when it comes to maintaining their PSE credit load and finishing their degrees, regardless of the PSI that is used to define these individuals*"[157]. These students , according to Bach are not aware of what to expect when they arrive to the post-secondary level or how to properly interpret PSI policies. If this is the case, then they should obtain this information as soon as possible. These students may be more commonly compelled to work while continuing their education, whether on a part-time or full-time basis, because their families may have a lower socioeconomic position and have higher difficulties in terms of paying these students' education.

[154] Cited By Dan Cantiller, Canadian Post-Secondary Education: Student Diversity And Access Over The Past 50 Years, Https://Dancanthinks.Medium.Com/Canadian-Post-Secondary-Education-Student-Diversity-And-Access-Over-The-Past-50-Years-2fa91558e84a.
[155] Bruneau, William, Canadian Journey Post- Secondary Education Since 1945, Canadian Education Association, Https://Www.Edcan.Ca/Wp-Content/Uploads/Edcan-2004-V44-N4-Bruneau.Pdf.
[156] Bach, A. (2017). Striving To Place: The First Generation Student Experience At McGill University. Montréal, Qc: McGill University. Retrieved August 11, 2019 From Https://Ua.Ssmu.Ca/Wp-.Content/Uploads/2017/01/Striving-To-Place-The-First-Generation-Student-Experience-At-McGill.Pdf.
[157] Ibid.

According to Young-Jones et al., (2013), first generation students, in particular, are able to take the benefits of building connections with academic advisers to enhance their academic and social integration into the institution[158]. These connections can help students feel more comfortable asking questions and expressing concerns about their education. According to Strayhorn (2015), academic advisors can serve as "cultural navigators" for these students in order to aid them in comprehending the policies and structures of the institution, as well as locating student services and communities of support[159].

At this level, it is important to mention the economic immigrants that could be themselves halved into two sub-groups , the graduates and non-graduates . The graduates are immigrants who arrive to Canada with university qualifications from their original countries. The following figure from Canadian statistics shows the tendency about the this qualifications:

Figure 13 Bachelor Degree Holders and Higher Diplomas Population (2001-2021)

	Total	Recent immigrants	Established immigrants	Canadian-born people aged 25 to 34	Canadian-born people aged 35 to 64
			number		
People with a bachelor's degree or higher					
2001	3,131,700	414,300	505,500	722,100	1,489,800
2006	3,883,100	597,300	664,900	800,900	1,820,000
2011	4,622,800	662,900	907,300	933,800	2,118,800
2016	5,201,300	795,600	1,107,900	1,015,800	2,282,000
2021	6,057,800	991,600	1,423,200	1,128,100	2,514,900
			percent		
People with a bachelor's degree or higher					
2001	19.5	33.8	21.5	22.9	15.9
2006	22.7	46.6	24.5	25.7	18.2
2011	25.5	49.0	29.6	28.3	20.4
2016	28.0	49.9	34.2	29.9	22.1
2021	32.0	55.3	39.8	32.6	24.8
			percent		
Employment rates of people with a bachelor's degree or higher					
2001	84.2	73.2	83.9	88.2	85.3
2006	83.2	75.4	82.2	87.8	84.0
2011	82.8	74.8	81.5	87.9	83.7
2016	83.3	75.7	82.4	88.5	84.2
2021	82.9	79.1	80.5	87.4	83.8
			percent		
Population growth from 2001 to 2021	93.4	139.3	181.5	56.2	68.8

Source: Statistics Canada(p.3) Economic and Social Reports Catalogue no. 36-28-0001 Vol. 4, no.5, May 2024

[158] Young-Jones, A. D., Burt, T. D., Dixon, S., & Hawthorne, M. J. (2013). Academic Advising: Does It Really Impact Student Success? Quality Assurance In Education: An International Perspective, 21(1), 7–19. Doi: 10.1108/09684881311293034.
[159] Young-Jones, A. D., Burt, T. D., Dixon, S., & Hawthorne, M. J. (2013)., Ibid.

The above figure shows the increase of non-Canadian born graduate during the two first decades of the Twentieth-first century. Thus, the immigrants made the bulk of high-qualified meritocratic population. This tendency shows the extent of selection of immigrants. Whether it is chosen or not, the high number of new entries holding a bachelor and more is submitted to debate since the high –skilled labour market should be marked by an ongoing process of life-long learning to meet the needs of qualifications in the labour market.

The second subgroup is the one related to international students from all over the word ;some may find a job and stay in Canada , others (the majority) return to their home country. They are said to be 'a critical component of demographic diversity in Canadian higher education'[160]. They contribute to the cultural richness of campuses and bring diverse perspectives to academic discussions. International students also face some challenges, like language barriers, cultural adjustment, unique Canadian weather conditions, and financial pressures. Canadian universities have responded by offering tailored support services, including language programs, orientation sessions, and counselling services, to help international students integrate into the academic and social life of the institutions. They are vital to the economic performance of the Canadian HE institutions since they contribute financially to their training and apprenticeships in Canada[161]. We shall detail more in the coming chapter to depict the financial and the economic contribution of international students

As for gender diversity, the representation of women in Canadian higher education has improved over the decades[162] thanks to several reforms, reports and acts to ameliorate the position of females in the HE sphere[163]. The website of the Colleges and Institutes of Canada notes the following*;*

> In the early 1990s, a significant shift occurred in Canada as women started earning more degrees than men. Since then, female graduation rates in Canadian colleges and institutes have consistently remained above or around half, marking a lasting and positive trend (Statistics Canada, 2022). The

[160] Carney Strange And Donna Hardy Cox.
[161] Guruz, K., Op.Cit., pp.255-59.
[162] Macdonald, Sara z ,University Woman History of Women and Higher Education in Canada, McGill-Queen's University Press,2021, pp.2-7 Montreal & Kingston | London | Chicago.
[163]Https://Www.Canada.Ca/En/Women-Gender-Equality/Commemorations-Celebrations/Royal-Commission-Status-Women-Canada.Html June, 2024.

> most recent data from 2021/22 reveals women represent 55% of college and institute enrolment and nearly 60% of graduates across various disciplines.[164]

However, gender disparities persist, particularly in higher academic ranks and in certain faculties (as shown in figure 02 'page 21). For instance the STEM (Sciences and Technologies) females are underrepresented despite the fact that this sector is the most lucrative and the degree holders from the STEM are well-paid and quickly hired.

Canadian universities have implemented gender equity policies to encourage women to pursuit their academic endeavours and to permit them to improve their socio-economic status via promoting affirmative actions to curb the gender issue[165]. The other communities which are granted rights concerns the sexual orientation communities; in fact, these groups are more and more active to be included in the 'affirmative actions'. Thus, universities have adopted policies to create safe and supportive environments for these students and staff. Initiatives such as "*gender-neutral restrooms and inclusive curricula"* are examples of how institutions are working to ensure that all students, regardless of their gender identity or sexual orientation, '*feel welcome and respected on campus*[166].

Furthermore, the socioeconomic diversity is another crucial issue to be solution to permit access to education for students from low-income backgrounds. To address this, many Canadian universities have developed financial aid programs, including scholarships, bursaries, and work-study opportunities, aimed at reducing the financial burden on students from disadvantaged backgrounds . In an article published in the fall of 2019 Victoria Fritz, Tricia van Rhijn examined a series of factors that might lead to exclusion of some young Canadians they noted the following [167]:

> Reasons for class exclusion include the reality that low-income students are more likely to be: misinformed about PSE costs , financially independent, perceive PSE as unaffordable, and less likely to have parental financial support. Furthermore, debt-aversion is a common inhibiting factor for low-income individuals as it prohibits one from deciding to pursue PSE. Children from low-income neighbourhoods are less likely to have positive peer and

[164] Https://Www.Collegesinstitutes.Ca/By-The-Numbers-Exploring-Womens-Presence-In-Canadian-Colleges-And-Institutes/ Retrieved On April 2024.
[165] Https://Heqco.Ca/Women-In-Academia-Part-One/ Retrieved On April 2024.
[166] Strange, D. And Hardy-Cox,C. pp.92-3.
[167] Fritz, Victoria, Tricia Van Rhijn, Examining The Postsecondary Enrolment Of Low-Income Mature Students In Canada, Canadian Journal For New Scholars In Education Volume 10, Issue 2 7 Revue Canadienne Des Jeunes Chercheures Et Chercheurs En Éducation Autumn/Automne 2019 Retrieved May 2022, pp.7-20.

parental support concerning PSE, in addition to disadvantages leading to grade-level underperformance in high school.

Efforts to enhance socioeconomic diversity also include programs designed to encourage students from minorities to pursue higher education. These programs often target high school students in rural or economically disadvantaged areas, providing them with the resources and support needed to transition to university[168].Thus, following the recommendations of Truth and Reconciliation Report (2015) action in education and higher education have to be taken to ameliorate the learning conditions of the 'indigenous' and people of the northern territories.[169]Some of the measures are summarized as follows: Inclusive Curriculum for reflecting the diversity of the students to preparing them to succeed in a globalized world.

Thus, Canadian universities have to integrate '*diverse perspectives into their curricula'*, to exposed students to a broad range of ideas and experiences. This includes '*the incorporation of Indigenous knowledge, multicultural education, and the study of global issues'*[170].For example, many universities have introduced *mandatory courses on Indigenous history and culture,* in response to the TRC Calls to Action (2015). In fact, these courses are designed to educate students about the history and contributions of Indigenous peoples in Canada.

In addition to that, the report recommends to change the teaching practices in Canadian higher education to accommodate with the diverse learning needs of students such as innovative pedagogical approaches-experiential learning, collaborative projects, and the use of technology- are being employed to create more inclusive and engaging learning environments.

To transition towards an inclusive higher education, measures were taken ,starting from the 80s, to permit the accessibility to the disabled students .In fact, it is notable that the number of "*students registered with accessibility services in Ontario universities alone saw a significant increase from about 21,643 to 42,000 between 2010 and 2019"*[171], indicating a broader trend towards greater recognition and registration of students with disabilities in higher education

[168] Ibid.
[169] Https://Www2.Gov.Bc.Ca/Assets/Gov/British-Columbians-Our-Governments/Indigenous-People/Aboriginal-Peoples-Documents/Calls_To_Action_English2.Pdf.
[170] Ibid.
[171] Joan Wolforth, From Strange, D. And Hardy-Cox,C., pp.128-134.

across Canada. Thus, regarding measures to support disabled students, Canadian universities have a range of '*policies and accommodations designed to provide equitable access to education'*.[172] These measures include extra time for exams, individualized instruction, and the use of assistive technologies. However, challenges remain, such as *bureaucratic hurdles and inadequate policy adjustments that sometimes prevent students from fully benefiting from these accommodations*. According to Woforth there is gap between the supportive environment of high schools and higher education environment that should be fulfilled.[173]

As an illustration, the Accessibility for Ontarians with Disabilities Act (AODA) legislation was passed in 2005, Ontario's post- secondary institutions (PSIs) have made significant efforts to ensure that their physical campuses, support structures, and customer service offerings are compliant with AODA regulations (Flaherty & Roussy, 2014). This is to ensure that all Ontarians, including those with disabilities, have equal access to post-secondary education. Unquestionably, there is opportunity for additional improvement in both the experiences and outcomes of these students' postsecondary education (PSE).Implementing such measures enhanced the attractiveness of Canadian post-secondary institutions and provided another source of income.

It is worth mentioning that according to reports published in 2013 by the Canadian Association of College and University Student Services and the Canadian Mental Health Association, the incidence of mental health problems among students enrolled in post-secondary education in Canada has been on the rise. It is possible that an increase in the number of young people who self-identify as having worries about their mental health can be related to better support during their schooling years, as well as a reduction in the '*societal stigma*' that is associated with mental illness[174].It is common for mental health difficulties to emerge during the time that these individuals are pursuing higher education. It has been noted that there has been an increase in the need for on-campus counselling and aid with accommodation for students who struggle with mental health concerns and it is projected that this situation will continue to rise in the future for several factors[175].

[172] Ibid.
[173] Joan Woforth, In Strange, D. And Hardy-Cox,C. p.133.
[174] Grayson, Op.,Cit.,p.6.
[175] Ibid.

In several provinces, such as British Columbia, Alberta, and Quebec, the provision of pre-university or university-transfer programs made it possible for a direct interaction to exist between the college sector and the university sector. This led to the establishment of a distinct divide between colleges and universities as a result of the institutional structures that came to existence during the expansion period that followed World War II.

In some other provinces of Canada, such as Ontario and Manitoba, the two institutions ran concurrently with each other, and there was no clear coordination between them. One of the most distinctive features of the university and college sectors in all of Canada's provinces was the fact that universities issued degrees, while colleges did not.

Back to the 1990s, a number of provinces came to the realization that they wanted to provide access to degrees that were equal to those awarded by universities. To accomplish this goal, they decided to allow colleges that were not affiliated with universities to award degrees, with the stipulation that '*acceptable quality standards be maintained*.'[176]. This expansion of degree awarding was intended to promote access to under-represented populations, whose members were more likely to attend colleges than universities, decrease some of the restrictions that were related with university transfer, and provide students with more choices in general. People who fall into this category are more likely to attend two-year institutions than four-year universities[177].

According to Jones (2009 cited in 2014), nowadays, fifty percent of Canada's provinces have given at least some of their authority to confer degrees to the country's colleges and universities. In addition, several different provinces have given their approval for the establishment of new hybrid institutional forms that continue to shape the boundaries between the various categories of institutions. In the Canadian province of British Columbia, several of its community colleges were transformed into university colleges then *were reorganized into teaching-intensive universities*. These new universities provide a wide range of undergraduate courses. In addition to that, they continue to deliver courses that are associated with their former role as community colleges. Short-cycle vocational and trades programs are some examples of the programs that fall under this category. Teaching now plays a more major role in the overall objective of these two former community colleges in Alberta that have turned

[176] Brent Davis, In Shanahane et al., (2015) pp. 57-78.
[177] Ibid.

into universities. Both institutions were formerly known as the Alberta Colleges of Applied Arts and Technology[178].As a result of legislation that established a process for achieving accreditation, the Colleges of Applied Arts and Technology in Ontario are authorized to provide degree programs in applied subjects. Despite the fact that the opportunity was presented to all educational institutions, the great majority of degree programs are still only given at a select educational establishments. Because of this, educational facilities that are part of the same filed have a greater degree of differentiation amongst themselves. (Marshall, 2008): "*What had been some pretty distinct borders between the various kinds of institutions that are found within provincial systems have become confused as a result of these institutional transformations and the rise of degree awarding in institutions that are not universities*."[179]

Henceforth, these transitions are not simple and involve a large number of parameters to consider; as a result of an increase in the total number of degrees that can be obtained, educational institutions have placed a greater emphasis on recruiting faculty members who have had doctoral degrees. In terms of the importance of applied research, which is frequently characterized as an extension of the traditional role of colleges in serving the needs of local industry, and in terms of the competition for traditional grants from federal research councils, there has been an expansion of research activity in the non-university sector.

This growth can be attributed to two different factors. First, there has been a rise in the number of businesses and organizations that are engaged in research. As a consequence of these reforms, students have more options to select when it comes to the degree programs that are available to them[180].The importance is given to teaching practices then research, since the private sector is engaged in the life-long training of the employees . This is why the value that is placed on teaching is higher than the value that is placed on research. This contrasts with the conventional 'hybrid system' that is associated with Canadian universities, where the emphasis is focused on both teaching and research. They also raise questions about the quality of new degree programs, the expansion of research in an environment where there is competition for research funding, and, more generally," *the question of whether these new*

[178] Jones, Op., Cit., pp.1-25.
[179] D. Marshall, Differentiation By Degrees: System Design And The Changing Undergraduate Environment In Canada, 2008, Https://Www.Semanticscholar.Org/Paper/Degree-Accreditation-In- Canada marshall/95119bddbf157deb4c85db7bad7710063fce7d60.
[180] Ibid.

institutions represent true hybrid institutional types, or whether they will evolve, over time, into traditional Canadian universities by abandoning their distinctive characteristics"(Jones:2014). This is due to the fact that the objectives of each of the numerous institutions are fundamentally different.

2.5 Reforms in Funding System and Degrees Granting

Higher education system in Canada developed, as seen previously, in the years following WWII. It is characterised by being religious or secular, publicly or privately financed and conferred degrees and shared administrative and governing structures with other types of educational establishments. Due to the fact that these universities all belonged to the same national organization, the Association of Universities and Colleges of Canada (AUCC) they shared a similar conception of the role of universities in society. Shortly after the war, there was no common agreement between HE institution regarding the necessity of a national quality assessment procedure. In general, universities interacted with one another as if they were on equal footing. The value of a bachelor's degree obtained from one university was acknowledged to be equivalent to that of a degree obtained from another university. When selecting whether to accept a student into a master's degree program in Canada, the most important element that was evaluated was the student's undergraduate grade point average. This was true regardless of the student's previous degree or the Canadian institution from which they had graduated[181].

Henceforth, there was no requirement for a centralized national system to accredit educational institutions because the provinces maintained strong control over the authority to award degrees[182]. This does not mean that issues of quality within Canadian higher education were not debated and discussed; however, the majority of provinces were more concerned with access and funding issues than quality as report by Fisher et al., (2014).

This was due, to the fact that there was '*no cause for alarm*' regarding the quality of the undergraduate programs that were being provided by Canadian institutions. However, many academics and politicians thought that those programs could and should be improved upon.

[181] Ian Clark, David Trick, Richard Van Loon , Academic Reform , Policy Options For Improving Quality And Cost-Effectiveness Of Undergraduate Education In Ontario, Queen's Universitry, Kingston, 2011, pp.7-14.
[182] Ibid.

The majority of the responsibility for addressing issues relating to the quality standard was given to the independent institutions[183].

The first provinces to install indicators of performance were Alberta and Ontario which introduced for the first time in the 1990s. For instance, the province of Ontario formed the Ontario Council on Graduate Studies. The mission of this council is to evaluate applications for new graduate programs and to conduct routine reviews of the quality of existing programs. Later, these variables were connected to the funding system, despite the fact that their influence on the total amount of money that was distributed to institutions did not constitute a particularly substantial factor. As a consequence of the rise in the number of educational establishments that provide degrees, new approaches to quality assessment have emerged[184].

As a consequence of this, a number of jurisdictions, notably the Canadian provinces of British Columbia, Alberta, and Ontario, established committees that were tasked with evaluating proposals for new degree programs and providing recommendations based on their findings. Experiments have been carried out by the governments of a number of provinces, most notably Alberta, Ontario, and Quebec, in which multi-year agreements between universities and the governments of those jurisdictions, which set expectations for the institutions, have been the subject of the agreement[185].

This may explain that concerns regarding the quality of degrees have also been raised as a result '*the proliferation of degrees and HE institutions*'(Clark et al., 2011). In 2007, the Council of Ministers of Education developed a Canadian Degree Qualifications Framework as a response to the quality assessment. This framework outlines *the minimum requirements that must be met in order for a degree to be considered valid*[186]. This framework lays out the *required skills and knowledge that come along with each level of education*. This strategy places a greater focus on the outcomes than it does on the inputs that go into creating degree requirements (such as disparities in the features that different institutions have). In the Canadian province of Ontario, there was a development of a credentials system that was somewhat comparable to this one[187].

[183] Op.Cit., Clarck et al., (2011)p.12.
[184] Ibid., pp.59-66.
[185] Ibid.,pp.177-22.9
[186] Https://Www.Cicic.Ca/1286/Qualifications_Frameworks.Canada.
[187] Fisher et al.,(2014) p.320.

The Higher Education Quality Council of Ontario has also shown a great interest in learning outcomes, but with the objective of establishing more comprehensive outcome standards that have the potential to serve as the foundation for a quality review process at the provincial level. This interest in learning outcomes derives from the fact that the Higher Education Quality Council of Ontario was established with the goal of improving the quality of higher education in Ontario. The Council is now participating in a feasibility study on the Assessment of Higher Education Learning Outcomes that is being carried out by the OECD, and it is providing help for research that is focusing on the formation of discipline-based learning outcomes. The Ontario experience would have to be copied soon by all the other provinces. Thus, being the most populous province and having the greatest number of HE institutions makes Ontario at the vanguard of the quality assessment[188].

The question of funding is of high importance since it represents the cornerstone of the HE institution. There are two financial sources for the HE institutions; the government grants and students tuitions. Both of these possible avenues of financial gain are heavily influenced, to a great degree, by the respective provincial governments in the majority of the country's provinces. However, provincial governments also influence or control the decisions made by universities on the amount of tuition fees, either directly or indirectly. This is because provincial governments select the amount of financial support that they will provide to higher education.

It must be added that policies addressing how much students are expected to pay for their education might vary greatly from one province to another. Massive student protests occurred in 2012 during what has become known as the "maple spring"[189]in reaction to a proposal by the provincial government of Quebec to increase tuition costs. Throughout its history, Quebec has consistently maintained some of the nation's most affordable university tuition rates. The government's attempts to limit these protests through legislation (but not only because police violence) led to new concerns that the government was limiting freedom of speech and the right to peaceful protest, which led to the expansion of the reform movement to include a

[188] Clark et al., (2011).
[189] In 2012, Québec And Canada Experienced The Longest Student Strike In Their Histories. The Strike Lasted Several Months (From 13 February To 7 September 2012) And Pitted Students In Québec Against The Provincial Government On The Issue Of Tuition Fee Increases. Https://Www.Thecanadianencyclopedia.Ca/En/Article/Quebec-Student-Protest-Of-2012.

wide variety of individuals and groups supporting the rights of students to continue their political action.[190]

The aftermath of the protests the liberal government of Jean Charest made the decision to call elections, and the issues surrounding tuition and the protest movements that were associated with it became important campaign issues. Although the situation in Quebec was "exceptional and unprecedented", there is little doubt that rising tuition costs have become a crucial political issue in a number of provinces. The Liberal Party of Jean Charest was defeated, and the newly elected government moved to reverse the tuition increases and maintain "*the fee freeze*"[191]. It is difficult to reach a consensus on what exactly constitutes a "reasonable share," but student organizations have had a great deal of success in tying affordability to government limitations for access. On the other hand, because students are the firsts beneficiaries of their education, there has been a growing expectation in many provinces that they should contribute with a modest amount to cover the costs of their studies[192].

Thus, Quebec and the other provinces of Canada have been subject to a political changes that has resulted in *the raising of fees, the freezing of fees, and the lowering of fees*. This cyclical changes were dictated, in part, by the ideology of the parties in power in each province, as well as, the electoral promises made by those parties. Student organizations have had a good deal of success in tying the issue of affordability with the governments' priorities for access[193].

Beside the students fees, the second most important source of funding are operating grants from the respective provincial governments. In most provinces, there is either an explicit connection between funding and enrolment (as in Ontario and British Columbia) or an implicit connection based on prior allocations, but both types of connections are common[194].

However, the system that is put into place in each province in order to establish these funds is different from one another. When one takes into account the government's allocations on a

[190] Https://Www.Thecanadianencyclopedia.Ca/En/Article/Quebec-Student-Protest-Of-2012.
[191] Unge, Zoe ,Educational Reevaluation, Political Transformation: Québec And Higher Education, College Quarterly Fall 2013 - Volume 16 Number 4, Https://Files.Eric.Ed.Gov/Fulltext/Ej1020532.Pdf.
[192] Https://Www.Cbc.Ca/News/Canada/Montreal/Maple-Spring-Student-Protest-Report-Criticizes-Police-Tactics-1.2643926.
[193] Olivier Bégin-Caouette And Glen A. Jones (2014) Student Organizations In Canada And Quebec's 'Maple Spring', Studies In Higher Education, 39:3, 412-425, Doi: 10.1080/03075079.2014.896178.
[194] Fisher et al., p.92.

per-student basis, one sees that the level of operational support that is provided to institutions by the government varies greatly from one to the next. However, there are also considerable disparities between the provinces in terms of scale, programs offered because some provinces are poorer than others. The deal for the provinces is to decrease students' tuition fees and to maintain the same revenues for HE institutions. One of the solutions was to increase the international students' enrolments to insure extra substantial revenues for the institutions. . International education and internationalization in general, is an interesting policy dilemma in Canada due to the fact that both the federal government (which is responsible for foreign relations and controls visas) and the province governments (which are responsible for education) are responsible for it[195].

According to Trilokekar, Jones, and Shubert (2009), the process of coordinating policy in funding faced several challenges. Although there has never been a national strategy for international education, since there is no federal minister of HE, the federal government has issued a series of recommendations that would involve both levels of government in an *ambitious plan to double the number of international students*. There is a growing consensus that both levels of government need to work together in order to strengthen Canada position within the increasingly competitive international market, to support what has already become a major revenue-generating industry for the Canadian economy, and to attract international students[196].

For internationalizing the education that is provided at postsecondary education (PSE) institutions in Canada, there has been an emphasis placed on expanding the number of students who come from other countries to study in the country. When opposed to studying in the United States or the United Kingdom, where there are supposed more 'expensive' and less offardable, studying in Canada may be seen as a more desirable and financially secure alternative by international students as it is seen to be of a higher quality too[197].

It is possible for international students to obtain permanent residency and, eventually, citizenship in Canada while they are pursuing their higher education in Canada. Also benefiting from this change are postsecondary educational institutions in Canada, notably

[195] Bégin-Caouette And Glen A. Jones (2014) Op.,Cit.,pp.412-25.
[196] Ibid.
[197] Bruneau, W. (2004). A Canadian Journey: Post-Secondary Education Since 1945. Education Canada, 44(4), 25–27.

their ability to increase tuition fees for international students without being subject to regulating measures equal to those that apply to students who are Canadian citizens or permanent residents (Maru, 2018)[198]. This could be problematic from both an ethical and a quality point of view[199]. According to Grayson in 2003, forty percent of Canadian students who enrolled in PSE would not continue between the first and second year of enrolling in PSE (Grayson & Grayson, 2003)[200]. According to Grayson this is not the case for international students. He explains this fact by asserting that educational institutions are planning and putting into practice the appropriate supports to ensure that overseas students are successful in their studies in the Canadian institutions[201].

2.6 The Province of Ontario: PSE as a Case

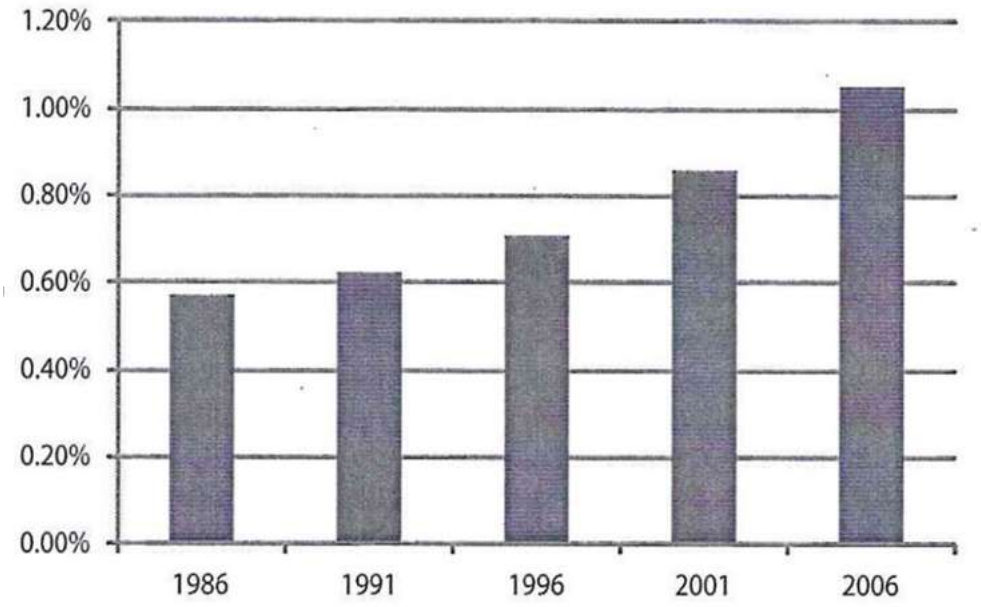
In this section we shall highlight the case of Ontario as being the province the most populous, vital and prosperous in Canada. In fact we shall light on this province HE since it has the highest number of institutions which makes the province at the vanguard of the PSE in Canada. Furthermore, the province has links with the US universities and it contains the biggest number of international students.

In addition to attracting a high number of local students from the Greater Toronto Area, Toronto Private Secondary Institutions are also quite popular with students coming from other provinces as well as students coming from other nations. According to the most recent data from the Canadian Bureau for International Education (2018), the city of Toronto holds the title of the most popular destination in the all of Canada for schools attended by international students. This may be the result of a high concentration of PSIs, in addition to the large number of cultural supports and other resources that are easily accessible in this enormous urban region. According to the findings of the research project titled "Ontario: A Leader in Learning" (Ontario, 2005), which was presented by Bob Rae (a neo-liberal politician), who was serving as the Minister of Training, Colleges and Universities in Ontario that time, one of

[198] Maru, S. (2018, June 11). Canada's Post-Secondary Schools Exploiting International Students, Says Recruiters. Cbc News. Retrieved August 11 2019From.Https://Www.Cbc.Ca/News/Canada/Windsor/International-Student-Recruiter-Institution-Exploitation- 1.4668831.
[199] Ibid.
[200] Grayson, J. P., & Grayson, K. (2003). Research On Retention And Attrition. Montreal, Qc: Canada Millennium scholarship foundation. Retrieved july1 ,2019 ,From http:// Www .Library. Carleton.Ca /Sites/Default/Files/Find/Data/Surveys/Pdf_Files/Millennium_Rs-6b_2003- 12_En.Pdf.
[201] Ibid.

the primary areas of emphasis for the implementation of change was to address the availability of opportunities for a greater number of individuals.

Figure 14 Ontario Residents with a PhD Degree



Source: Fisher et al., 2014

Furthermore, in response to recent changes that the provincial government of Ontario has made to the Ontario Student Assistance Program (OSAP) and financing for Ontario public service organizations (PSIs), a huge concern was made. Since the *"tuition freeze,"* public postsecondary institutions in Ontario were compelled to devise a strategy to make up for losses in their budgets. Doug Ford (prime minister of the province), made the statement that "*some institutional financing from the provincial government would depend on the progress that institutions make toward satisfying certain important performance benchmarks"*, Doug Ford wanted to ensure that institutions receive adequate funding. However, these have not yet been broken down into specifics. In this politically and fiscally unstable environment, the sectors that have been put in the most jeopardy are the ones that include funding for Student Affairs departments and programs, as well as for contract academics.

Conclusion

This chapter has provided a detailed overview of the evolution and current state of Canadian higher education, tracing its historical development and the reforms that have shaped its modern landscape. Over the years, Canadian higher education has undertaken transformations, driven by the need to adapt to new economic demands under the impulse of the Neo-Liberal. The reforms initiated have not only aimed at enhancing the quality and relevance of education but have also focused on creating an inclusive system that accommodates a diverse student population.

Canadian higher education has been featured by its continuous expansion and adaptation to respond to industrial and post-industrial needs. The transition from an elitist to mass-education access represents a challenging shift in the educational landscape, reflecting broader social changes and the democratization of education. The recent stress on inclusivity and accessibility has been active in shaping policies that address obstacles faced by under-represented populations, ensuring that higher education contributes to social equity and cohesion.

The need for curricular reform has been a central theme in recent decades, as a consequence of the shift towards a knowledge-based economy that values flexible, adaptive skills and lifelong learning. Higher education institutions have moved towards more interdisciplinary and applied programs (STEM) to better prepare students for dynamic work environments. This shift is crucial in a post-industrial society where innovation and technological proficiency are paramount.

Furthermore, the funding systems for higher education have been re-assessed to support these transformative goals. Investment in higher education is seen not just as a public expenditure but as a prominent element to the socio-economic development Canada. However, the challenge remains to balance public funding with the rising costs of quality, inclusive education—ensuring that financial mechanisms do not become a barrier to access.

Internationalization has also become crucial, with Canadian institutions engaging in global research networks, attracting international students, and offering globalized curricula. This aspect of higher education not only enhances the international stature of Canadian institutions but also enriches the educational experience by preparing them for a connected world.

All in all, Canadian higher education stands at a pivotal juncture. The reforms undertaken have set the foundation for an inclusive and flexible system that is more internationally oriented, associated with the needs of a post-industrial society. Their role extends beyond academic instruction to being catalysts of social change and economic innovation.

Chapter Three: Higher Education and Canadian Economy: Two Way Traffic

Introduction

Among many other sectors, education is undoubtedly vital for a nation's economic growth. Eventually, the decision of policies, tactics, and choices on the development of education depends heavily on the state of the economy. Hence, this chapter attempts to investigate the contribution of the economy to higher education in Canada as well as the impact of higher education on the Canadian economy. The chapter will also investigate the notion of human capital in relation to the economy and higher education and then, investigate the extent to which the latter two help to produce human capital.

Usually, to analyse a nation's economic development is done by considering its GDP (Gross Domestic Product), and the people's financial situation. Economists are making thier appreciation in relation to people's *per capita* income, which shows the GDP in relation to nation population ratio.

Starting the Twentieth century, Canada ranks among the nations with the greatest income level. Higher education in Canada shows a dynamic terrain moulded by provincial government and finance systems. In fact, universities are obtaining authority and most of their money derived from provincial legislation and budgets. Provincial governments maintain exclusive accountability for all levels of education[202] . However, public financing for higher education has been drastically reduced over the previous ten years, which would affect institutions' counts and educational quality especially in Ontario[203]. This emphasises the requirement of a contextual knowledge in Canada since it shows the complex interaction of government policies, funding, and the quality of the educational experience.

Moreover, the national innovation systems approach highlights the need of higher education in promoting economic development by stressing the part of education, skills, invention, and manufacturing in economic advancement[204] .

[202] Prevost Vierula, C. "The New Finance Of Public Higher Education – Canadian Perspective." 2012.
[203] Fisher et al., (2014) Op.Cit., pp.145-7.
[204]. Kruss, G., Mcgrath, S., Petersen, I. H., And Gastrow, M. "Higher Education And Economic Development: The Importance Of Building Technological Capabilities." 2015.

3.1 Key Points of the Canadian Economic System

One of the assertion that needs to be highlighted is the one concerning supporting economic growth in Canada which would depend on higher education institutions. As noted by Kruss et al., 2015, who sustains that the increased enrolment in higher education has greatly contributed to encouraging innovation and economic growth[205]. The authors add that emphasising the value of education, skills, work, innovation, and output for economic development, the national innovation systems approach offers a framework to consider the developmental contribution of higher education[206]. Moreover, universities also provide trainers of scientists and engineers, and help to create jobs and local businesses[207]. To further the economic vitality of the region, they also assist local businesses, form alliances with government and civic groups, and link knowledge producers with commercializes. The PS institutions help to promote economic development by offering graduates, knowledge, and direct support, therefore complementing the human capital claim and stressing the important links between higher education and the larger economy.

The part played by human capital in economic growth in the Canadian context is mostly dependent on education—that is, the knowledge, skills, and competences. As Mincer (Mincer, 1995) clarifies that the development of human capital influences economic growth as well as a component of it. In fact, constant economic development depends on this reciprocal links between the increase of human capital and economic growth[208]. Furthermore, Ndiaye (2018) emphasises how investments in human capital through education and skill development might result in higher employability, therefore matching the supply of education with job market needs. Labour economics and growth theory both depend on the idea of human capital since its quality is considered as one of the causes of economic development[209]. Thus, appreciating the complex links among education, the economy, and general development inside Canada depends on knowing the function of human capital. In other word how to contextualise human capital within the Canadian higher education institutions.

[205] Ibid.
[206] Ibid.
[207] Mapuranga, B. "The Role Of Universities In Economic Development." 2016
[208] Mincer, J. "Economic Development, Growth Of Human Capital, And The Dynamics Of The Wage Structure." 1995.
[209] Ndiaye, B. "The Role Of Investment In Human Capital: Evolution Between Microeconomic And Macroeconomic Approach." 2018.

Higher education importance as a main driver of economic change becomes more important as Canada shifts into a post-industrial society. This is the reason why emphasizing the growth of human capital, within the context of 'knowledge-driven economy', in Canadian higher education institutions is vital for socioeconomic mobility and innovation rather than only hubs of learning and research.

Actually, there is an assumption that stressing the need of knowledge, skills, and competencies in increasing production, this chapter starts by defining the theoretical framework linking human capital development with economic growth. The focus is put on the efforts of Canadian schools and universities in arming people with the skills required to develop in a rapid-changing economic environment.

This chapter, also, looks at how Canadian higher education has evolved to meet the needs of a post-industrial society by encouraging skills fit for the demands of an ever service-oriented, tech-driven economy. Consequently this chapter would need two concentrate on two provinces cases (higher education in Ontario and Quebec) with actual data (mainly statistics of Canada) helps the study to show how directly or indirectly educational policies and initiatives have affected economic results in different spheres.

Nowadays, the Canadian higher education system is characterized by a decentralized structure, with 91 public universities spread across the country. Unlike most countries in the world, there is no federal ministry or department of education and higher education (appendix01), and the responsibility for education, including higher education, lies solely with the provincial governments. This decentralized approach extends to the funding of higher education, with provincial governments being the primary funding source for universities and colleges. However, over the past decades, there have been many reductions in public funding for higher education, leading to challenges such as a decrease in the number of full-time faculty and a potential impact on the quality of education.

Furthermore, the historical context of post-secondary education funding in Canada reveals a reliance on federal financial support, which has diminished over time. This reduction in federal funding has prompted provincial governments, such as Alberta, to implement performance-based funding models and emphasize business-planning approaches for public colleges and universities. It is important to note that the administration of higher education has always been the responsibility of the provinces, despite federal funding contributions

(Prevost Vierula, 2012). This is the reason why understanding these structural and funding dynamics is essential for comprehending the contributions of Canadian higher education to the economy and the challenges it faces in sustaining its operations.

Furthermore, the discussion on how higher education helps to promote innovation and entrepreneurship inside Canada, thereby influencing employment creation, technical development, and foreign competitiveness. As Canadian higher education shapes the social and economic nature of the country, the chapter ends by evaluating the future possibilities and challenges that await the sector.

3.2 Historical Overview of Canadian Economy

This section aims at exploring, briefly, the main stations of the development of Canadian economy. The economic history of Canada will be mentioned to point out the contrasts and similarities of the Canadian economy in connection to the economies of westerners over the various periods of time since the arrival of Europeans in North America. The purpose of what follows is to bring out an insight of the Canadian economy. One may observe that Canada obeyed, from its foundation, to the capitalism; in fact, the first phases of Canadian economy were based upon 'Capital'. We may distinguish between four different phases of the Canadian economy that could be summarized as follows :

As the rest of Europe, during the time of geographical discoveries, the industry was embryonic and was limited to home-made goods. Even before Europeans (French and British) established permanent settlements in Canada, they recognized the country's potential as an economic actor. It is commonly assumed by historians on the reasons behind colonization of North America are multiple and varied according to the colonizers and the regions colonized; historians arrived at the conclusion that fishing, framing, and the exploitation of wood were the primary sources of the colony. However, it appears that wood was the main reason to conquer the region .The reason for this was because of the huge naval industry that existed in Europe[210].

Settlements in Canada in the late sixteenth century marked the transition from the pre-mercantile period to the mercantile period in North America. The primary motivation for the spread of colonial territories was to securing colonies as reliable suppliers of essential raw

[210] Https://Www.Thecanadianencyclopedia.Ca/En/Article/Economic-History.

commodities for the mother country. The first company to operate in the region was the Hudson Bay Company[211] . The mother country, on the other hand, felt resentment against the colony since it served as an external market for the finished goods that the mother country produces in excess[212]. This strategy was advantageous to the mother country for around two hundred years, during that time it enabled the mother country to flourish and secured a sustainable income. In point of fact, the commercial period protected the colonies from any challenges that would have resulted in a break in relationship with the metropoles. This was feasible due to the fact that parties on both sides of the Atlantic could participate in joint investments and share in the resulting profits[213].

As commonly known about this period, this was the change that was sparked by newly developed machinery in the textile industry, steam power, and new ways in agriculture. By the mid-eighteenth century, the thirteen colonies and Canada were in the midst of their own agricultural revolution. Great Britain was witnessing major shifts in the means of production as well as an immense number of inventions, served as the focal point of this event. The mid-Eighteenth century is considered to be the beginning of the 'new era', and the country served as the pioneer of the transformation. During this process, North America was no exception; the introduction of a new economy that was driven by scientific advancement and industrialization proved to be a 'revolution' that eventually had an effect on the rest of the world.

By the end of the eighteenth century and the turn of the nineteenth century, industrialized countries began sending their brightest minds to North America in the hopes of expanding different aspects of the industrial sector. A crucial component of this effort was the building of railways to connect the various regions and provinces that comprised the 'Huge Empire', notably in the north-eastern parts of the continent. The development was not just to the railways but also extended to canals (the Saint Lawrence in Quebec and the canal Lachine in

[211] The Hudson's Bay Company (Hbc), Chartered 2 May 1670, Is The Oldest Incorporated Joint-Stock Merchandising Company In The English-Speaking World. Hbc was a fur trading business for most of Its History, A Past That Is Entwined With The Colonization Of British North America And The Development Of Canada. The Company Now Owns And Operates Nearly 239 Department Stores In Canada And The United States. Https://Www.Hbcheritage.Ca/History/Company-Stories/A-Brief-History-Of-Hbc.
[212] Https://Www.Thecanadianencyclopedia.Ca/En/Article/Economic-History.
[213] Ibid.

Montreal) in order to establish a system of transportations between the various regions, to release regions from isolation, and to ensure the movement of goods[214].

By the 1850s, many industries had grown in Montréal, Toronto, and other smaller places, including small factories that made farm implements, tools, and other metal goods. These factories were located across the country. These companies had their operations based in Canada. During the same period, developments in the brewing, milling, textile, and shipbuilding sectors ushered in a new era of industrialization and flourished in a new economic order. First Industrial Revolution early entrepreneurs belonged to the 'petit bourgeois' class reflected the rise of a new capitalist class that mostly relied on medium-sized family farms. These pioneering capitalists were also largely responsible for the development of the middle class. During this period, British bonds were commonly utilized in order to support the purchase of industrial property. These bonds were issued by the government of the United Kingdom[215].

Historians agree upon the fact that the Industrial Revolution began in Canada later than it did in its neighbouring country (13 colonies) and Britain. According to Firestone (1960) this is due to the fact that Canada in the Empire should remain an agricultural colony to feed the industrialized parts of the rest of the empire. It has served as an instrument of empire in different ways according to Fowke cited in Firestone (1960):

> The requirements of place and time. Simplest and most obvious has been its use as a defence device, where settlement has been encouraged for the protection of territory and trade routes. Equally widespread has been its use as the provisioner of the great staple trades, whether of fish, fur, sugar, or timber, or of the carrying trades itself. Provisioning, of course, has been partly a defence function, since in the economic conflict of competitive empires, notably the English and the French, survival necessitated a degree of commercial vitality possible only on a strong agricultural base. A significant change occurred, probably within the past hundred years, when Canadian agriculture finally achieved direct commercial importance as the provider of a staple product, wheat. [216]

[214] Easterbrook, W. T., And Hugh G. J. Aitken. "The European Background." Canadian Economic History, University Of Toronto Press, 1988, Pp. 3–22. Jstor, Http://Www.Jstor.Org/Stable/10.3138/J.Ctt1287zqv.4.
[215] Vincent Geloso, The Economic History Of Canada, Https://Ssrn.Com/Abstract=3895172. Https://Doi.Org/10.2139/Ssrn.3895172. Doi:10.2139/Ssrn.3895172.
[216] Fowke, Vernon C. , Canadian Agricultural Policy, University Of Toronto Press, 1946.

According to Geloso (2021), Confederation and the subsequent establishment of a single financial system, replete with a common currency and regulations, were significant elements that contributed to the ease with which British North America was able to undergo the process of industrialization. It established a 'tariff-free,' open colonial market, which made it easier for investment capital to be moved, and it developed a modern freight handling capacity; these three factors combined to propagate business from the east to the west.

The origins of the industrial revolution in Canada can be traced back to the 1860s, when the country's economy was prospering, and many attempts had been done to enhance the country's industry. During this time, Canada experienced the beginnings of the first wave of the industrial revolution coming from the United States. Up to the year 1871, shipbuilding and forestry were the most major industries in Ontario and Quebec. The Confederation placed a significant amount of importance on industrialization; it was to the state to take part in the process of establishing an industrial policy. As a consequence, the new economic policy that formed in the last half of the nineteenth century and came to be known as industrialism was "*more than just a pattern of similar practices and institutions; Investors, workers, and governments were all working toward achieving it*."(Galeso:2021). According to Geloso the progress of industrialization necessitated the transportation of goods, labour, raw materials, and capital, which were not easy to find in one unique province. Only Ontario and somehow Quebec were fortunate to gather the needed elements for industrialization.

By the year 1890, businesses in Central and Maritime Canada were utilizing iron ore from Labrador and Bell Island in Newfoundland; coking coal was making its way from Cape Breton to Ontario; and industry employees were going from one province to another, coast to coast, throughout the entire Canada. It is essential to stress the fact that immigrants from parts of the British Empire that were undergoing rapid industrialization (such as Lancashire and Yorkshire, Wales, Lowland Scotland) were moving to Canada in order to assist in the process of industrializing the country.[217]Thus, both inner and outer migration occurred in the beginning of the twentieth century.

Pp. 3 And 4.Cited In O. J. Firestone, Development Of Canada's Economy, 1850-1900, Trends In The American Economy In The Nineteenthth Century, The Conference On Research In Income And Wealth,Volume Publisher: Princeton University Press,Volume Isbn: 0-870-14180-5,Volume Url: Http://Www.Nber.Org/Books/Unkn60-1 pp.217-52.

[217] Firestone, Op. Cit., pp.221-23.

Migrants were mainly described as peasant populations whose native nations (foreigners) were still largely feudal (China, Ireland) were ensured to be 'thrust' quickly onto 'the cutting edge of industrialization' as mechanized and later automated work intensified. Those peasant populations would be driven immediately onto industrialization "*In addition to this, it meant that work would be conducted by untrained labour from Canada, particularly young people*"[218].

In addition to manhood, the industry required energy. The use of domestic animals was common. In more rural regions the use of waterpower was popularized in some capacity, waterwheels might have been constructed so as to take advantage of the rapids that were common to the area. Canals in Lachine, Quebec provided a source of energy, which was vital to the development of the oldest businesses in the Montreal area. Canals were essential to the establishment of businesses in eastern part of the country. However, waterwheels were inefficient during the long winters (freezing conditions), so an alternative had to be found which was the use of steam powered engines. The coal industry developed rapidly in the country. Notwithstanding, getting sources of energy into city centers- the key place for the other resources- proved to be an extraordinarily difficult task. This challenge was overcome by implementing the most recent advancements in steam power technology after those were carried out in Britain.

By the end of the nineteenth century in Canada, natural and water-based energy sources in industrial and metropolitan areas had been replaced by fossil fuels. This occurred in both rural and urban areas[219]. Thus, the energy production and distribution, transportation over long distances, and the banking system were the oldest service based industries in the country.

When factories started operating nonstop throughout the year, workers were given the opportunity to take on wage-labour positions that were permanent and full-time. This was owing, in part, to the fact that the economy of Canada was becoming increasingly dependent on cash transactions. A growing number of people who made their living on farms eventually find themselves forced to seek employment in a different industry so that they could save

[218] Geloso, Vicent Op.,Cit.,pp.8-15.
[219] Easterbrook, W. T., And Hugh G. J. Aitken. "The St. Lawrence Lowlands, 1815–1849: Immigration, Land Settlement, Agriculture, And Trade Policy." Canadian Economic History, University Of Toronto Press, 1988, Pp. 272–92. Jstor, Http://Www.Jstor.Org/Stable/10.3138/J.Ctt1287zqv.16. Accessed 19 Aug. 2023.

sufficient funds to purchase their own parcels of land. This was also the situation for industrial workers from other countries who came to Canada with the intention of one day establishing themselves there as independent entrepreneurs. Their goal was to work in Canada's manufacturing sector. As a result of this period of transition never came to an end, rural communities continued to rely on wage labour as a means of supplementing the revenue they received from farming (Geloso, 2021). On the other hand, during the nineteenth century there were restrictions placed on mobility of labour, which resulted in these transfers being more and more permanent. Those restrictions continued until the Twentieth century. By the 1870s, wage labour had surpassed agriculture as a viable source of subsistence in many locations, beside an increasing number of immigrants in Canada were acquiring employment opportunities post the establishment of the confederation (1868).The historians noted that most of the 'new-comers' were involved in the industrial sector than the agricultural one[220] .

Despite the fact that the economy was undergoing considerable orientation and character alterations up to the middle of the 1890s, growth was not particularly exceptional[221]. This was due to the fact that the economy was undergoing the 'Second Industrial Revolution'. It is a historical fact that between the years 1861 and 1901, Canada was a country that sent people abroad in great numbers. Canada was an exporter of people (mainly to the USA)given that population is a key measure of the health of the country's economy[222]. The 1870s and 1880s saw economic booms in Ontario and southwest Quebec, driven by industrialization. The 1890s saw an increase technological advancements, including the Bessemer technique, which boosted steel production, coking coal, iron mining, and infrastructure[223]. Historians reported that markets for manufactured goods developed elsewhere, Canada's industrial development accelerated. This quickening of industrial capitalism brought forth the necessity to cut manufacturing goods labour input using machines and automation. New machinery, architectural redesign and work area modification, and metal ship construction for products transportation were all part of the Second Industrial Revolution[224]. Thanks mostly to Ontario, capital investment in the economy increased gradually from $37 million CD in 1871 to $595 million CD in 1911[225].The Canadian work force started to shift from the start of the twentieth

[220] Geloso (2021) Op.Cit., p.15.
[221] 0. J. Firestone,Op.Cit.,p.220.
[222] Ibid.
[223] Ibid.,p.222.
[224] Ibid.
[225] Vincent Geloso,Op.Cit.,p.17.

century. With about 789,422 operators and labourers overall in 1901, the total count exceeded that of farmers and agricultural labourers[226].

Henceforth, industrialisation was intended to break away from the pre-Confederation economy and result in unpredictable social and economic changes. In fact, the middle class growth was a key factor in these changes, and national policies were designed to support population and economy developments. The Second Industrial Revolution, which began in the late Nineteenthth century, was marked by rising productivity and efficiency, large-scale manufacturing businesses, mass automation, and worker time management advances; Canada was no exception. In North America, mass production increased, and technological developments progressed. As an illustration, Henry Ford transformed mass manufacturing in the automotive sector by building large-scale facilities for consistent, reasonably priced, durable cars. This marked a shift from traditional handcraft manufacturing to a less complex and more affordable vehicle. These events opened Canada's new automotive markets for development. Ford's dynamism in Canada involved auto production, meat packing, farm implement manufacturing, and retailing, primarily in Ontario and Quebec. Natural resource extraction, shipbuilding, steel production, and coal mining expanded in Nova Scotia[227] .One may consider that industrialization in Canada occurred in the shadow of the US industrial development.

Late nineteenth century and early twentieth century Canada turned towards the industrial period, changing both its social structure and economy. This change was brought about in part by government policies, transportation system, and natural resources. Railroads helped textiles, steel, and equipment expand as well as others. Driven by growing demand for commodities as well as World Wars I and II, Canada's industrialisation shot in the first part of the Twentieth century, however, in the second half, it moved to services even though natural resources were extracted and manufactured items were processed.[228]

[226] Ibid.
[227] Melanson, Stewart, Learning From The Past -Volume 1: The Automotive Industry And Economic Development In Ontario; A Historical Perspective (1904to The Present), Working Paper Series:Ontario In The CreativeAge,February,2009,Https://Www2.Rotman.Utoronto.Ca/Mpi/Wpcontent/Uploads/2009/02/Learning_From_The_Past_Vol_1_Auto-Smelanson.Pdf.
[228] O.J.Firestone,Op.Cit., p.220.

In this respect, it is worth mentioning that the Confederation of the United Provinces in 1867 led to the introduction of tariffs in Canada to protect manufacturing sectors from external competition. This policy aimed to stimulate growth and expansion by allowing the construction of factories, which were often American-owned. By the 1920s, American factories facilities had become dominant in various Canadian industries, including consumer goods, chemicals, auto parts, and automobile assembly. This policy also contributed to regional "grievances" in the "Western" and "South-eastern" regions of Canada, as they felt it unfairly favored industrialists, laborers, in the Ontario[229].The First World War accelerated the Second Industrial Revolution in Canada, with interventionist policies pushing manufacturing of munitions, firearms, transportation, and support equipment to the private sector. Industrial wage economies attracted immigrants and citizens to cities, which became the centers of industrial activity. The Great Depression led to increased suffering and reservations about the capitalist system due to unemployment in industrial areas. The Second World War ended the Great Depression due to unprecedented government intervention in the industrial economy. Government planners ordered private industry to develop wartime weaponry, ammunition, machinery, and transportation equipment, and established new commercial enterprises and royal businesses. For example, the federal government of Ontario established the Polymer Corporation to facilitate rubber production for the war effort [230].The chemical and mechanics industries in Ontario were revitalized by the major companies with manufacturers like General Motors fulfilling contracts to deliver automobiles and machinery to the Canadian government. During the war, daily production of goods like food and clothing was interrupted, but shipbuilding thrived on the East Coast, and cities like Hamilton became industry leaders in steel fabrication. Canada achieved its full employment potential after the war[231].

During World War II, Canadian industry produced over $9.5 billion CD worth of material, but only accounted for less than 10% of the overall Allied military production. Improvements in transportation, such as railways and highways, were crucial in expanding and diversifying the Canadian economy. The fur trade is credited with establishing a unified transcontinental

[229] Coulombe, Serge, Regional Disparities in Canada: Characterization, Trends and lessons, for economic Policy,Workingpapernumber18november1997,Https://Publications.Gc.Ca/Collections/Collection/C21-24-18-1997e.Pdf.
[230] Vincent Geloso,Op.Cit.,p.19.
[231] Serge Coulomb, Op.Cit.,p.2.

commerce economy. Post-World War II, economic activity concentrated in major cities, with suburbs spreading into previously agricultural regions .

The 1950s saw the highest industrial employment in Canada, with the production of various consumer items such as automobiles, home appliances, steel, and chemical products. The industrial sector employed the majority of male workers due to government initiatives that promoted the idea of male breadwinners. Around 30% of Canadian workers were affiliated with a labour union during the 1960s and 1970s. Major brands in the industry included Massey-Ferguson, Bombardier, General Motors of Canada, Dominion Steel, and Coal Corporation. Furthermore, advancements in automation, new production methods, and worker productivity led to increased dependence on technology and worker output. However, competition from European and Asian countries posed a challenge to Canadian manufacturers' ability to innovate while maintaining market dominance[232].

However, it is essential to note that Canada experienced de-industrialization affecting businesses like chemicals and home appliances. Between the years 1945 to the 1990s Canada's economy shifted from industrial activity to services, including transportation, trade, and banking, employing around three-fourths of the workforce[233]. This transition occurred due to Canada's young age and shift from being a major producer of raw commodities for international trade. By the end of the Twentieth century, agriculture and mining employed less than 5% of the Canadian workforce, while manufacturing employed 20%[234].

3.3 The Evolution of the Economic System in Canada

The past three decades, the manufacturing sector in Canada has experienced both periods of expansion and others of regression. This trend can be traced back to the early 1980s. According to a report released by Canada's Economic Strategy Tables, the manufacturing industry in Canada has made an important role to the country's overall economic well-being as well as its innovative capacity. This sector employs 1.7 million individuals and accounts

[232] Balakrishnan, Jaydeep Janice, B. Eliasson, Factors Affecting The Evolution Of Manufacturing In Canada: An Historical Perspective, Timothy R.C. Sweet Revolve Business Consulting Ltd.30 Citadel Crest Link Nwcalgary, Alberta T3g 4w4 Canada, Https://Prism.Ucalgary.Ca/Server/Api/Core/Bitstreams/077f521f-1cac-45e9-B186-29c4be7e3757/Content.

[233] Webber, M. J., & Rigby, D. L. (1986). The Rate Of Profit In Canadian Manufacturing, 1950-1981. Review Of Radical Political Economics, 18(1-2), 33-55. Https://Doi.Org/10.1177/048661348601800103.

[234] Ibid.

for 42% of the total research and development activity in the private sector. The Annual Survey of Manufacturing Industries that was conducted by Statistics Canada indicated that the manufacturing industry was on the decline, with a 9.3% fall in total revenue in the year 2020 compared to the preceding year. This finding indicates that the manufacturing industry is in a state of decline (statistics of Canada).

The fact that the manufacturing sector was responsible for 10% of Canada's Gross Domestic Product in 2017 and had sales of $64.89 billion is further evidence that the industry has regressed compared to the other sectors, according to the Business Development Bank of Canada. The research did, however, bring to light some of the challenges that the sector is currently confronting, such as a shortage of educated employees, competition from low-cost countries, and the demand for innovation and the adoption of technology. These are just some of the concerns that were brought to light by the report. Considering what has been discussed so far, one conclusion that can be drawn is that the manufacturing industry in Canada has been subject to both growth and decline over the past three decades. Although it has made some positive contributions to the economy and innovation, it has also been subjected to a number of challenges and failures in recent years[235].

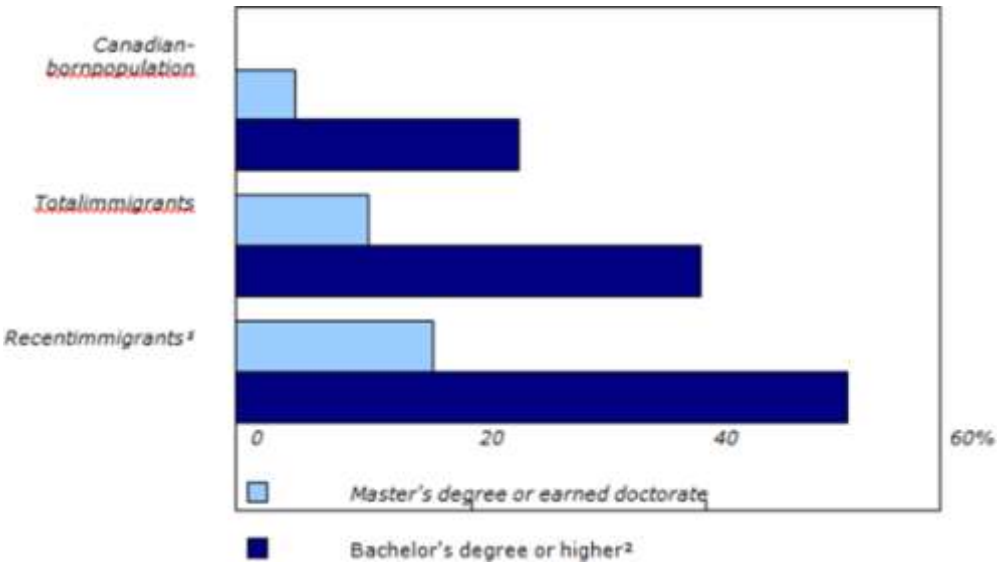
As it was pointed out previously, the manufacturing sector in Canada has experienced a decline over the past three decades, meanwhile the Canadian society has shifted to being a post- industrial society during this same time period. The percentage of Canada's gross domestic product that was contributed by the manufacturing sector dropped from roughly 25% to 21% between 1976 and 2005, according to a report by the government of Canada. At the same time, the percentage that was supplied by the service sector increased. The decline of manufacturing in Canada has been slower and steadier than it has been in other countries, and some companies have responded to the challenges by shifting their focus to industries that produce heavier and more robust equipment. Because of this, the industrial structure of Canada is now more comparable to that of the United States[236].

[235]Canada statistics official website https:// Www .Statcan. Gc.Ca/Search /Results/ Sitesearch? Q= Postsecondary %2520education&Fq=Stclac:2&Sort=Score%20desc&Rows=25&Page=.
[236] Https://Www150.Statcan.Gc.Ca/N1/Pub/11-626-X/11-626-X2019014-Eng.Htm.

In recent reports about the economy in the country , it appears that Canada is moving toward a model that is predominately dependent on service industries, such as the financial sector, the health business, and the education sector, all of which are growing increasingly. According to Statistics Canada, in 2016, the service industry was accountable for almost 70 percent of the country's gross domestic output. In addition, the workforce in Canada has a high education level, which is a characteristic that is unique to post-industrial economies. However, the manufacturing sector continues to play a big part in the Canadian economy.

In addition to the decline in the manufacturing sector and the growth of the service sector, there are a number of other indicators that suggest Canada has made the shift towards a post-industrial society.One of these contributing components is the growth of the information-based economy. The work force in Canada holds a high level of educational attainment due to the considerable number of population that possesses degrees from post-secondary institutions. According to Statistics Canada's findings, in 2019, one third of Canadians in the age group of 25 to 64 had earned a bachelor's degree or higher. Canada has been able to establish a knowledge-based economy, one in which the invention of new knowledge and its dissemination are two of the most essential drivers of economic expansion, thanks to the highly educated workforce that the country possesses.

Figure 15 Economic Impact of PSE in Canada



Source(s): Statistics Canada, Census of Population, 2016.

The growth of the creative sector is an essential factor that should be taken into consideration. The production of goods and services in industries such as design, advertising, and the media are examples of sectors that are increasing to accompany the promotion of products. As a result of the growth of Canada's creative economy, industries such as the production of movies and television shows, the design and development of video games, and the creation of digital media have been developed in the country. Post-industrial economies are distinguished from traditional industrial economies by their dependence on knowledge-intensive production processes and the need for highly skilled workers[237].

To boost creativity the Canadian government has implemented strategic measures and programs aimed at fostering educational advancement, research, and academic excellence. For instance, the government provides substantial funding for research in Canadian post-secondary institutions, particularly in the field of education, with Social Sciences and Humanities Research Council (SSHRC) funding for education projects exceeding $27 million in the academic year 2010-2011 (ElAtia et al., 2012). Additionally, the government's support for higher education contributes to the development of technological capabilities, aligning with the national innovation systems approach, which emphasizes the importance of education, skills, work, innovation, and production for economic development (Kruss et al., 2015).

The expansion of Canadian creative economy has been influenced by several factors, including measures taken by the Canadian government, advances in technology, and the presence of an adequate work force. One of the most important elements that has been driving Canada's creative economy ahead in recent years has been government policies that encourage and support the expansion of the cultural sector. These policies have been put into place for long time. To promote this sector the government with the help of the private sector initiated programs encompassing grants, subsidies, and various other types of aid. The federal government of Canada has provided considerable monetary contributions to the country's artistic and cultural communities. For instance, since 2007, the Canada Council for the Arts, a federal entity that is responsible for providing financial support for the arts, has invested over $2.5 billion CD in a variety of Canadian artists and cultural organizations around the country . These investments have been of great assistance in the growth of a flourishing cultural sector,

[237] Lipsey, et al., (2006) Op. Cit., pp.345-6.

which has been an essential component in the development of the creative economy in certain fields[238].

One may say that Canada has been a pioneer in the development of "*environmentally friendly technologies"* as well as industries that are responsible for their impact on the environment[239]. The country has set goals for the reduction of emissions of greenhouse gases and has pledged large resources to the development of alternative and renewable sources of energy[240].

Because of the emergence of these companies, there are new employment opportunities available for people who have a high level of skills, and Canada has been helped to become a leader in the transition toward an economy that produces less carbon because of these developments, such an achievement could not be possible without the help of higher education institutions (fisher et al., 2014).

To put it another way, markers of Canada's transition toward a post-industrial society include the growth of the service sector, the knowledge-based economy, the creative economy, and sustainable sectors. Post-industrial economies are distinguished from traditional industrial economies by their dependence on knowledge-intensive production processes and the need for highly skilled individuals in certain fields of work. These types changes are the primary responsibility of the post-secondary institutions.

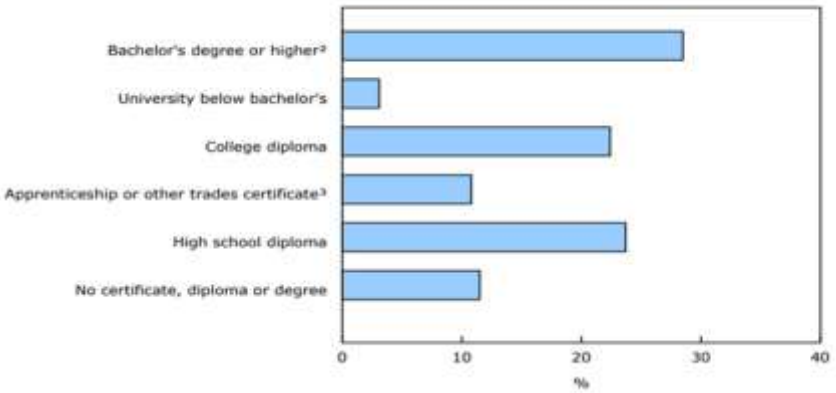
In addition, recent research and publications provide evidence that advancements in technology have been a key contributor to the growth of the creative economy. As a result of the expansion of digital technologies, new methods of creative expression have evolved. Additionally, improvements in software and hardware have made it easier for artists to make high-quality work at decreased costs, which has allowed more people to enter the creative economy. This has resulted in an increase in overall economic activity. Nothing of this could have been achieved without the collaboration of educational establishments at the postsecondary level in Canada[241].The nation has a highly performant educational system, and

[238] Https://Canadacouncil.Ca/.
[239] Canada's Green Planfor A Healthy Environment, Minister Of Supply And Services Canada 1990,Cat. No. En21-94/1990e,Isbn 0-662-18291-X, Https://Cfs.Nrcan.Gc.Ca/Pubwarehouse/Pdfs/24604.Pdf.
[240] Ibid.,p.15.
[241] Scott Metcalfe, Amy , Tara Fenwick, Knowledge For Whose Society? Knowledge Production, Higher Education, And Federal Policy In Canada, High Educ (2009) 57:209–225doi 10.1007/S10734-008-9142-4, Published Online: 9 May 2008._ Springer Science+Business Media B.V. 2008.

there are a large number of faculties and colleges that provide programs and degrees that are relevant to the creative industries and the arts. In addition, Canada has a huge population made up of people from a variety of different ethnic groups. This has resulted in the growth of a broad cultural landscape, which has, in turn, contributed to the expansion of the creative economy[242]. The expansion of the creative economy in Canada has been driven by policies adopted by the federal government, improvements in technology, and the existence of an educated labour force. These factors have served to contribute to the growth of a vibrant cultural sector, which, in turn, has contributed to the expansion of other industries such as the film industry, the music business, and the digital media sector.

The Canadian government and policy-makers furthered the implementation of human capital investment and concentrated the national investment efforts on education and training. The fact is that one way to determine how much of an investment a country makes in a particular student is to look at the amount of money that is spent on education for a child on a yearly basis. The public expenditure on primary to tertiary educational institutions in Canada in 2018 was USD 11,285, which is higher than the average of USD 10,000 among OECD nations. This figure is calculated when public-to-private transfers are taken into consideration[243].

Figure 16 Educational Attainments and Diplomas among Canadian workforce



Source: Canadian Statistics website

[242] Amy Scott Metcalfe , Ibid.
[243] Viennet , Romane And Beatriz Pont, Education Policy Implementation: A Literature Review And Proposed Framwork OECD Education Working Paper No. 162, Directorate For Education And Skills, 8 December 2017.

The number of institutions available in both public and private institutions has an effect on the allocation of resources among the various tiers of education and types of educational institutions. Education costs in Canada totaled USD 11 854 per student in 2017, which is USD 1 400 more than the OECD average of USD 10 454, which stands at USD 10 454. When it comes to postsecondary education, Canada paid a total of $24,496 per student, which is $7,431 more than the average amount spent by OECD countries. The amount of money spent on public educational institutions is often more than the amount of money spent on private educational institutions per student in most countries that are members of the OECD. The gap is substantially wider in Canada, where the total expenditure on public schools from basic to tertiary level amounts to USD 15,347 per student, but the total expenditure on private institutions amounts to USD 7,891 per student[244].

Between the years 2012 and 2017, the amount of money that was spent on education for each student in OECD nations rose at an average annual growth rate of 1.6% throughout all levels of education, from primary school through postsecondary education. During this period, the total amount of money that Canadians spent on educational institutions climbed at an average annual pace of 1.8%, while the total number of students increased at an average rate of 1% annually. As a direct result of this, the amount of money that was spent on each individual student went up at an annualized rate that was on average of 0.8%[245].

The percentage of overall expenditures on educational institutions in Canada that goes toward capital costs is comparable to the average for the OECD. This is true from the elementary school level all the way up to the postgraduate level. The percentage of total spending on education that goes toward capital costs is the same throughout all levels of primary, secondary, and post-secondary non-tertiary education, coming in at 8% across the board. This percentage is also the average across all OECD countries. The cost of capital accounts for 10% of total spending at the tertiary level, which is slightly less than the average of 11% across all OECD nations[246].

[244] Ibid.
[245] Romane Viennet And Beatriz Pont Op.Cit,2017.
[246] Https://Www.Oecdilibrary.Org/Docserver/C4e44aa2en.Pdf?Expires=1724354333&Id=Id&Accname=Guest&Checksum=Ae7b5db7df29238c50f39dbb8c7e4892.

It is important to note that paying faculty members and other staff working in educational institutions their salaries takes up the majority of the money that is currently being spent on education at all, including elementary, secondary, and postsecondary. In 2017, Canada allocated 75% of its total spending toward employee compensation, which is a much higher percentage than the average of 74% across all OECD countries, of which Canada is a member. Staff salaries typically account for a lesser proportion of current expenditures at tertiary institutions than they do at secondary schools. This is because the costs of facilities and equipment at this level are higher than those at other levels. In Canada's postsecondary institutions, staff salary accounts for 66% of current expenditures, whereas at non-tertiary levels, it accounts for 81% of such expenditures. Across the board, the percentage is 68% for tertiary education and 77% for non-tertiary education in all of the countries that comprise the group[247].

Eventually, the labour market outcomes of graduates from higher education institutions in Canada are crucial for understanding the economic impact of higher education. It is obvious that individuals with higher education qualifications have favourable employment prospects, higher earnings, and more promising career trajectories compared to those with lower levels of education[248] . Moreover, graduates in the labour market enhance overall productivity through the application of their advanced skills and efficiencies, ultimately benefiting the economy. We shall add that the value of higher education is not limited to the economic sphere but extends to society as well. Graduates supply cultural and educational capital that "*lays a strong foundation for the education of future generations"*.

It is of the utmost necessity to acquire a deeper comprehension of the idea behind the knowledge economy as well as to provide clarification regarding this concept. A "knowledge economy"[249] is an economic system in which the production of knowledge and the use of that knowledge are the basic drivers of growth and development. A "knowledge economy" also may be referred to as a "knowledge-based economy[250]". In the 1980s, economists first began

[247] Viennet And Pon, Op., Cit.pp.359-63.
[248] Küttim, M., Hartsenko, J., And Riivits-Arkonsuo, I. "Added Value Of Post-Secondary Education In Estonia." 2019.
[249] The Concept Was First Used By The Economist Fritz Matchlup In 1962.
[250] Langlois ,Richard N., From The Knowledge Of Economics To The Economics Of Knowledge: Fritz Machlup On Methodology And On The "Knowledge Society", Research In The History Of Economic Thought And Methodology,Volume 3, Pages 225-235,Copyright 0 1985 By Jai Press Inc.

using the phrase "knowledge economy" to describe the modern business environment. It is a shift away from traditional economies that are centred on manufacturing or agriculture toward economies that are more knowledge-based and innovation-driven[251]. In an economy that is founded on the accumulation of knowledge, the dissemination of that information and the application of that knowledge are each considered as important engines of economic expansion, competitiveness, and social progress, respectively[252].

In recent years, the concept of a knowledge economy has taken on an increasing level of importance because many nations are making efforts, and are competing in a world that is both more globalized and more technologically advanced. Investing in education, research and development, and the infrastructure of information and communication technology are all examples of policies and initiatives that have been established by several nations to bring forward a knowledge- based economy.

As far as the Canadian case the economy started being founded on the application of knowledge based on highly educated labour. Henceforth educating and training population is essential to the development and maintenance of a knowledge- based economy like Canada's. The country's workforce meets or exceeds these requirements as it could be demonstrated via the statistics concerning the population and Knowledge. According to the Organization for Economic Co-operation and Development, Canada has one of the highest rates of post-secondary education attainment in the world, with over 56% of adults aged 25-64 holding a post-secondary degree; because of this percentage, Canada is one of the top three countries in terms of the highest rates of people who have completed their post-secondary education. Furthermore, the Canadian government sustains a continuous investment on knowledge-based economy[253].

[251] Ibid.
[252] Dale Kirby, Strategies For Widening Access In A Quasi-Market Higher education Environment: Recent Developments In Canada, High Educ (2011) 62:267–278.
[253] Knowledge Economy, An Economy Dependent On Human Capital And Intangible Assets, Such As Proprietary Technology, Written By Cfi Team, Published August 20, 2020,Updated May 15, 2023,Knowledge Economy - Overview, Characteristics, Examples (Corporate finance institute. Co).

To start with a work force that is highly educated and skilled, as well as one that is able to develop knowledge, apply knowledge, and spread knowledge, is required for a knowledge-based economy to function properly. According to economists, education and training are essential pillars in the construction and maintenance of a knowledge-based economy that is competitive[254](Leydesdorf, 2006).

Moreover, the position of technologies of information and communication (also known as ICTs) are the second pillar of a knowledge based economy: The operation of a knowledge economy cannot function well without the use of information and communication technologies. They make it feasible to develop, transmit, and utilise information across national boundaries as well as industry barriers. Additionally, they make it easier for people to collaborate with one another and think of new solutions (Leydesdorf, 2006) . According to the OECD Canada is among the top ten of the countries having the highest ICTs integration.

Moreover, a primary focus on the protection of intellectual property and the development of new kinds of innovation constitutes the third important component of the knowledge based economy. In fact, in an economy that is driven by the accumulation of information, new types of intellectual property and other new kinds of property are highly sought. This involves the development of brand-new technologies, products, and services in addition to the protection and commercialization of intellectual property through the utilization of patents, copyrights, and trademarks[255].

Furthermore, start-ups companies, as well as entrepreneurship and the growth of new businesses are as important as the three first features. To say it in another way, it is an additional advantage of a knowledge economy since it fosters the establishment of start-up enterprises and entrepreneurial endeavours, both of which are recognized as key engines of economic expansion and innovation[256]. For the Canada start-ups are enjoying a continuous progression since the last thirty years(see appendix page 223).

[254] Loet Leydesdorf,The Knowledge-Based Economy: Modeled, Measured, Simulated' (2006),Universal Publisher Boca Raton ,Florida, pp.2-10.
[255] Loet Leydesdorf, Op., Cit.,p.8.
[256] Ibid.

Besides, collaborating with others and fostering relationships are two of the most important factors in determining the success of a knowledge economy. They contribute to the production and distribution of information, as well as the facilitation of innovation and the building of social capital. In addition, they contribute to the development of social capital[257].

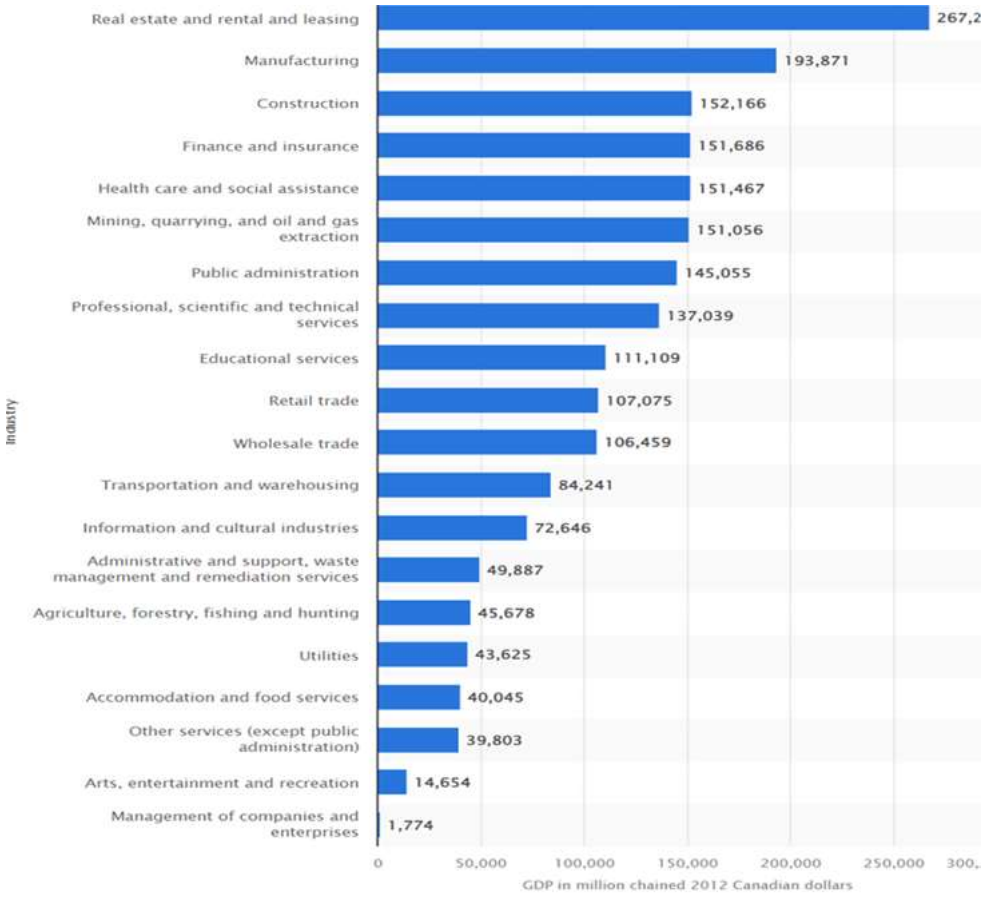
In Bell's, he argued that the industrial society, which relied on physical labour, would be replaced by a new type of society based on the development of services and knowledge. This innovative form of society would be knowledge-based and services provider. Bell divided the characteristics of post-industrial society into three main groups: a shift away from manufacturing and towards the supply of services, the pre-eminence of businesses based on information production and dissemination, and the creation of a new class structure. In a post-industrial society, the production and dissemination of knowledge would become the primary factor in economic expansion and society progression. This would lead to the formation of new companies focusing on research, development, and innovation. A new social order would emerge, governed by a small group of highly educated professionals and knowledge workers. We would attempt to transplant these characteristics to the Canadian society to figure out the common features with Bell's assumptions.

When investigating the Canadian case, over the previous decades, we observe that there has been a distinct transfer from the manufacturing sector to the service sector, which lends weight to Bell's idea of the transition to a post-industrial society. To illustrate one may use the example of the United States, there has been no discernible transition from the manufacturing sector to the service sector since the USA economy is built upon regions specificities and federal state intervention, ie that in the USA not all states have shifted towards post-industrialism , many remain either agricultural or industrial . However, in the year 2016[258], Statistics Canada estimates that the contribution of the services sector to the gross domestic product (GDP) of Canada was roughly 70%, while the contribution of the goods-producing sector, which includes manufacturing, was approximately 30%.[259]; this proves that the Canadian economy is different from the one prevailing in the USA.

[257] Powell, Walter W. And Kaisa Snellman, The Knoledge Eeconomy, Annu. Rev. Sociol. 2004. 30:199–220 Doi: 10.1146/Annurev.Soc.29.010202.100037 Copyright C 2004 By Annual Reviews.
[258] Https://Www.Bankofcanada.Ca/Wp-Content/Uploads/2016/11/Press_281116.Pdf.
[259] Official National Canadian Statistics Website.

When it comes to employment prospects, the services sector has emerged as the most important driver of job development in Canada. This is because the services industry employs more people than any other sector. By the year 2020, the service sector will employ around 80% of Canada's workforce, while the manufacturing sector will employ the remaining 20% of the country's workforce.

Figure 17 Contribution of Service Economy in Canadian GDP 2012



https://www.statista.com/statistics/594293/gross-domestic-product-of-canada-by-industry-monthly/

This transition away from an economy that is oriented on commodities and manufacturing toward one that is based on services is not something that is unique to Canada; in fact, many other industrialized countries have gone through similar process. On the other hand, it is the expansion of the service sector that has been principally responsible for Canada's economic growth. The main sectors which contributed to the growth of the Canadian economy has been made by a variety of industries, including finance, healthcare, and professional services.

One may assert that the shift from manufacturing to services in Canada is a good illustration of the transition from an industrial society to a post-industrial one, as predicted by Bell. This shift is occurring in many countries throughout the world. This transformation has offered many benefits, such as higher-paying jobs and greater economic growth; but, it has also caused concerns, such as income inequality and job polarization. Despite these difficulties, making this change has resulted in a number of positive outcomes that will be demonstrated later in this research work.

3.5 The Role of Canadian Knowledge-Based Economy in Social and Economic Development

It is an evidence that the sustained economic growth of post-industrial societies has been driven by the knowledge economy, which has been, in return, benefited from this growth . This reason behind consists in the fact that sectors of these economies are dependent on knowledge, health industry and the technology sector, which have become an increasingly prominent component and lucrative sectors at the global scale. People with advanced degrees who are able to create new knowledge, grow it, and put it to use are needed in these fields in order to increase innovation and production.

To start with we may assert that improvements in productivity have also been brought about in post-industrial economy as a result of knowledge economy. These increases in production have been very considerable. This is why knowledge-based industries are typically highly automated, which permits better levels of both efficiency and accuracy within the production processes. One of the main reasons for this is knowledge-based industries have become increasingly competitive. In addition, knowledge workers often have a high degree of competence and are able to make better use of data and technology in order to maximize their job. This allows them to do more in the same amount of time. As for the Canadian case an acceleration of the use of automation and curriculum at the level of universities had to adapt to the new job market needs as pointed out by Lipsey et al.,(2006) who reported that starting from the 1990s more curricula had to be settled in the PSE to train a new work force fro the future needs .

It is, also, important to signal that the emergence of the knowledge economy in post-industrial society has, led to an improvement in the population's average quality of living.

This is the case across all OECD countries and Canada is no exception. This is because occupations in companies that are heavily reliant on information tend to pay higher earnings and give better benefits than more traditional jobs in manufacturing or agriculture. Additionally, the knowledge economy has been responsible for the development of new products and services that have contributed to an overall improvement in the quality of life for individuals. New medical treatments, mobile devices, and technology that generates renewable energy are a few examples of the kinds of advancements (Bell,1973).For the Canadian case an improvement in salaries was observed since the transformation of the economy. However this tendency concerns only some jobs and not in all sub-sectors of the service based economy as demonstrated by statistics of Canada.

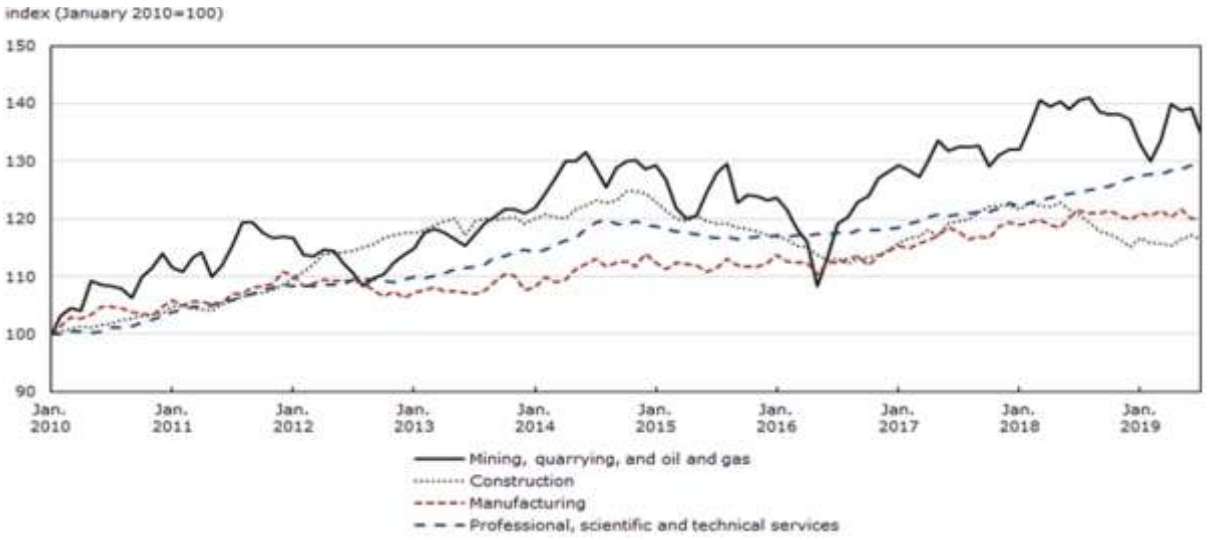
Another particular feature which might be worthy to mention is the one concerning the increase in the overall volume of innovation that is created as one of the outcomes of knowledge economy. This is because knowledge-based businesses place an emphasis on research and development, which leads in the production of innovative products and technology. This is one of the reasons why the academic institution put the stress on innovation to promote knowledge-based sector, since it costs more investment at innovation new products than chain production in factories. Thus, the Canadian universities adopted new strategies to boot innovation in their programs an curricula via the implementation of various programs such as ; the Lazaridis Institute for the Management of Technology Enterprises at Wilfrid Laurier University, which specifically aims to equip executives from Canadian star tup companies with skills. Additionally, the University of Toronto at offers programs such as the Master of Management of Innovation, which supplement education in core disciplines with management skills to better prepare students for innovation challenges (Lepsey et al. ,2006).Besides , one may mention the myriad of laboratories , in all fields, to boost innovation and researched granted by government finance. In addition, knowledge workers often have a high level of education and are trained to think critically as well as creatively, both of which contribute to the formation of an atmosphere that supports innovation. Thus this became the PSIs role to train highly skilled students in the post – industrial society (Bell,1973).

The development of a knowledge-based economy in post-industrial societies has helped them become more capable of successfully competing on a global basis. This is why companies that rely on intellectual capital are frequently in a better position to successfully compete in a

global market. This is because having access to low-cost labour is not always a benefit, and businesses that rely on intellectual capital are frequently in a better position to do so. In addition, brand new company models and strategies have emerged as a direct consequence of the expansion of the new economy. Thus, many companies in pharmaceuticals, nano-technology, semi-conductors and many other sectors in innovation are situated in the Ontario-Quebec corridor.

As for the economic the contribution of HE and according to the most recent data available,(see the following figure) ,Canadian universities and other institutions of higher education are responsible for a sizeable portion of the nation's overall gross domestic product. According to research that was issued by the Canadian Bureau of International Education in 2018, international students in Canada contributed an estimated $21.6 billion CD to the country's GDP and supported around 170,000 employment for the middle class of the country[260].

Figure 18 GDP by Sectors of Economy (2010-2019)



Source: Statistics of Canada

[260] Https://Www150.Statcan.Gc.Ca/N1/Pub/11-626-X/11-626-X2019014-Eng.Htm.

Furthermore, as demonstrated in the following table, the amount of money spent on research and development (R&D) in Canadian higher education sector increased by 4.6% between the 2018/2019 and 2019/2020 academic years, bringing the total to $15.8 billion CD (Statistics Canada). Research and development (RD) efforts lead to greater economic outputs as well as increased productivity, both of which, in the end, add to the GDP of the country. The innovations that are developed as a result of these efforts also contribute to increased economic outputs .To phrase it another way, the higher education institutions in Canada make a sizeable contribution to the gross domestic product of the country through the expenditures of international students in addition to the research and development activities carried out by these institutions[261].

Tableau 3 Theoretical Teaching Vs Vocational Teaching in PSE

Comparison of teaching-oriented university with traditional university (balanced budget scenarios)

	Teaching-oriented university		*Traditional research university*
Strategy for reaching a balanced budget	*Preferred strategy: offer small classes and lower tuition for students*	*Alternative strategy: offer very low tuition and allow class sizes to increase*	*Increase class sizes*
Cumulative surplus/ debt after seven years	none	none	none
Annual undergraduate enrolments at maturity	10,000	10,000	10,000
Student tuition per year	$4,800	$2,900	$5,300
Average class size	44	78	78
Share of teaching performed by full-time faculty	70%	70%	70%
Teaching load of full-time faculty (one-semester courses per year)	8	8	4

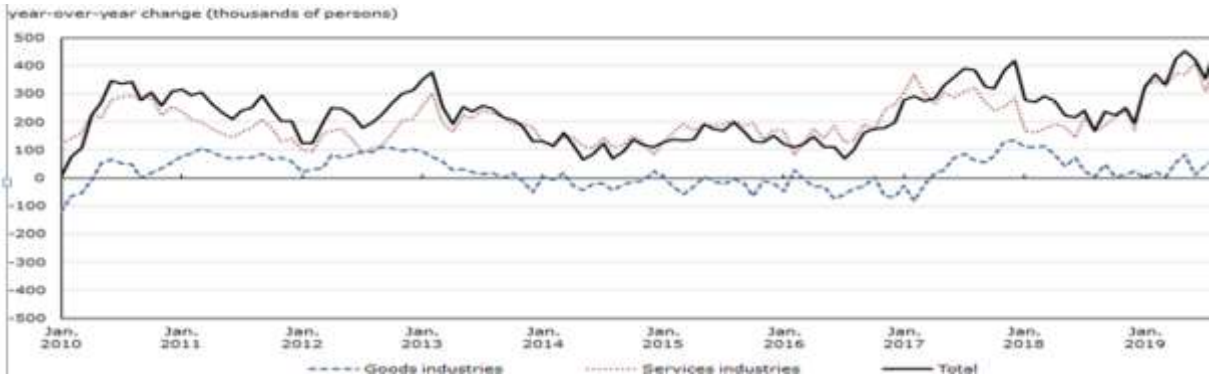
Source: (Fisher 2014)

[261] Ibid.

3.6 Higher Education Role to the Changing Society

It is a fact that institutions of higher education in Canada can be viewed as major contributors to the transition towards a post-industrial society. This is one of the assertions made by the National Statistics Institution. Then human capital, beyond the achievements attained in schools, is an essential component of any modern economies as well as any societies. It enables socioeconomic mobility, improves health outcomes, contributes to the advancement of social cohesion, and helps maintain a highly qualified workforce. It not only leads to an increase in well-being and economic prosperity, but it also leads to betterment in the expenditures of healthcare and social services. This is because it leads to more people staying healthy and having more people prospering economically. The whole population will get the benefits of this. The evolution of Canada into a post-industrial society can be attributed, in large part, to the contributions the implementation of human capital and the contribution of higher education institutions in the country which have made to research and development during the country evolution. The higher education institutions have been recognized for the role played in the shift that is currently taking place. From the 2018/2019 academic year to the 2019/2020 academic year, the total amount spent on research and development in Canada's higher education sector rose by 4.6%, reaching$15.8 billion CD (Statistics Canada is the source of this information). The research and development activities that result in the production of innovations lead to higher levels of productivity as well as larger economic outputs, both of which, in turn, add to the GDP of the country[262].

Figure 19 Employment by Sector (2010-2019)



Source: Statistics Canada

[262] Https://Www.Bankofcanada.Ca/Wp-Content/Uploads/2016/11/Press_281116.Pdf.

In addition, international students in Canada have made a significant contribution to the economy of the country, assisting in the maintenance of close to 170,000 jobs for Canadians in 2016 and spending an estimated $21.6 CD billion yearly in 2018 on tuition, accommodation, and other expenses. This has helped to keep Canadians employed in the sector related to higher education. This has helped to produce a workforce that is highly trained and diverse, which has been an essential contributor to the transition that the country is making from an industrial society to a post-industrial one[263].Henceforth, their active role should be acknowledge and their efforts and reforms in both the manner and the content (curricula) have led to an increase in both economic outputs and productivity. In addition, students from other countries have made a sizeable investment in the economy of the nation, which has led to the development of a labour force that is both highly qualified and diverse in its composition.

For internationalizing the education that is provided at postsecondary education institutions in Canada, there has been an emphasis placed on expanding the number of students who come from other countries to study there. When opposed to studying in the United States or the United Kingdom, where there is supposed a higher financial burden to be supported, studying in Canada may be seen as a more desirable and financially secure alternative by international students as it is seen to be of a higher quality with less cost[264]. It is possible for international students to make progress toward their goals of obtaining permanent residency and, eventually, citizenship in Canada while they are pursuing their higher education in Canada. Also benefiting from this change are postsecondary educational institutions in Canada, notably their ability to increase tuition fees for international students without being subject to regulating measures equal to those that apply to students who are Canadian citizens or permanent residents (Maru, 2018)[265]. This has the potential to be problematic from both an ethical and a quality point of view. Both perspectives are important to consider[266]since it could be perceived as discriminatory and unfair.

[263] Ibid.
[264] Bruneau, Op., Cit., p.25.
[265] Maru, S. (2018, June 11). Canada's Post-Secondary Schools Exploiting International Students, Says Recruiters. Cbc News. Retrieved August 11, 2019 From Https://Www.Cbc.Ca/News/Canada/Windsor/International-Student-Recruiter-Institution-Exploitation-1.4668831.
[266] Maru,(2018), ibid.

We should mention too, as the number of students from other countries who choose to pursue their education in Canada continues to rise, there is reason to consider whether the international students who are enrolled in postsecondary programs in Canada are benefiting from the increased efforts that postsecondary institutions (PSIs) are making to increase their international outreach and recruitment efforts. For Canadian public service institutions (PSIs) to be certain that the benefit of uncontrolled international student fees is not just enjoyed by PSIs on one side, an investigation of the academic and career outcomes of international students is required. This will allow PSIs to be certain that the convenience of unregulated international student fees is not only enjoyed by PSIs on one side but also by foreign students as well[267].

Audits of the services and programs that educational institutions provide to international students should be performed on a regular basis by each institution, and these audits should involve both international students who are enrolled in the institution as well as recent alumni[268].

The following graph from the statistics of Canada shows a rise in the expenditure of international students and their contribution to the GDP during the year 2017-18.

Figure 20 Spending of International Students Compared to Canada's Services and Merchandise Export 2017 and 2018

	2017 Value (billions)	2017 International Student Spending as a % of Exports	2018 Value (billions)	2018 International Student Spending as a % of Exports
Total annual spending – all international students	$18.50	n/a	$24	n/a
Canada's exports in services	$122.30	15.13%	$128.2	18.72%
Canada's exports in merchandise	$546.10	3.38%	$584.4	4.11%

Source: Statistics of Canada

[267] Lipsey et al. (2006), pp.421-23.
[268] Ibid.

3.7 The Structural Reforms to Face Funding Challenges

Recent alterations that have been made to the structure of the higher education system in Canada have been carried out with the intentions of extending access to educational opportunities and raising the general quality of the teaching that is provided. The establishment of performance-based funding in several different provinces is one of the most significant adjustments that has been implemented. The reform offers colleges incentives to improve their performance in a variety of areas, including the quantity of research they do, the number of students they retain, and the proportion of those students who go on to graduate. Students now have the chance to acquire an education of a high standard from any location in the world because to the growth of innovative learning opportunities (online). This is yet another shift that has been made, and it is one of the many changes that have occurred[269].

In addition, Canada's system of higher education has been giving more attention to promoting equality, diversity, and inclusiveness among its students and faculty in recent years. This entails trying to improve the representation of underrepresented groups in higher education, such as Native American people and women working in STEM-related fields. To be more specific, this is referring to the field of higher education that are having less important number of the two communities mentioned. In addition, there have been efforts made to improve support for the mental health of students and to address issues around well-being on campus. These efforts have been made to improve the quality and quantity[270].

Moreover, there has been a push to promote experiential learning choices including as internships and co-op programs to provide students with the opportunity to gain real-world experience and practical skills during their academic careers. In conclusion, there have been efforts undertaken in Canada's higher education sector to increase internationalization in recent years.[271] These initiatives involve raising the total number of international students that enroll at the institution as well as the total number of international programs that are developed. The most recent modifications that have been made to the higher education system in Canada have been implemented with the goals of enhancing the quality of the education that is provided, expanding access to the system, fostering fairness, diversity, and inclusion,

[269]Lavoie, Marie, Harmonising Higher Education And Innovation Policies: Canada From An International Perspective, Higher Education Quarterly, 0951–5224 Doi: 10.1111/J.1468-2273.2008.00406.X Volume 63, No. 1, January 2009, pp. 3–28.
[270] Marie Lavoie,op.cit.,p.9.
[271] Ibid.

and providing students with the skills and experience they will need to function effectively in the real world.

There is evidence to suggest that modifications made to higher education in Canada have helped to the rise of the country's universities in the rankings of universities all over the world. The Times Higher Education World University Rankings 2022 places the University of Toronto as the best university in Canada and the Eighteenth best university in the world. Canada is home to a total of 31 educational institutions that are placed among the top 1000 universities in the globe. This illustrates that both the education provided in Canadian universities and the research that is conducted there are of an extremely high grade[272].

It is essential to note that Canadian educational institutions have been recognized for their social and environmental impact, as well as their commitment to ecologically responsible practices. Queen's University was ranked first in Canada and fifth globally for its contribution to the United Nations' Sustainable Development Goals. York University was also ranked in the top 35 for creating a sustainable and inclusive world. These rankings not only add to the overall world ranking of Canadian institutions but also reflect the positive impact they have on other regions. The country's universities have moved up in the rankings of universities worldwide, demonstrating their commitment to environmental responsibility and positive social effect.[273]

Figure 21 Cost per Students in spendings Ontario PSE Institutions (2012)

	Teaching-oriented university	*Traditional research university*
Teaching and related (including academic administration, classroom support, clerical support, curriculum development, distance education)	$5,500	$9,100
Academic services (including library, student services, recruitment, bursaries, and information technology)	$2,200	$2,200
Institutional services (including administration, facilities, capital equipment, renovation, debt interest, and contribution to capital costs)	$2,200	$3,000*
Total	**$9,800**	**$14,200**
Memoranda:		
Cumulative surplus/debt after seven years	$27 million surplus	$167 million debt
Annual undergraduate enrolments at maturity	10,000	10,000
Student tuition per year	$5,300	$5,300
Average class size	44	44
Share of teaching performed by full-time faculty	70%	70%
Teaching load of full-time faculty (one-semester courses per year)	8	4

Source Fisher et al., 2014

[272] Https://Www.Timeshighereducation.Com/World-University-Rankings/2021/World-Ranking
[273] Ibid.

To start with the issue of funding is crucial and essential since according to many observers the funding situation at universities in Canada is uncertain[274]. Some universities have been forced to make concessions to their operating budgets while others are fighting for their ability to remain financially viable[275]. This has led to concerns about the standard of education, the accessibility of resources, and the ability of institutions to successfully compete on a national and[276]global scale.

It is unquestionable that universities are at the avant-garde of the postindustrial society; it was observed that over the last three decades there was a tendency of recruitment at the level of universities to meet the growing demand. However, in Canada there is a mismatch between the number of people who have obtained their PhD and the number of posts that are open in academia and other fields. There is also a gap between the number of people who have earned their PhD and the number of positions that are open in other fields.[277]. In addition, there is a growing issue regarding the rising cost of higher education[278]. According to the findings of a the Canadian statistics, the number of doctoral degrees that have been awarded in the country has increased by thirty percent over the last decade, but the number of academic posts that are currently available has remained the same. As a direct result of this, an important number of highly qualified people who have acquired their PhDs but are having problems finding work in their respective fields of study[279].In the conclusion of the survey mentioned above we may read the following:

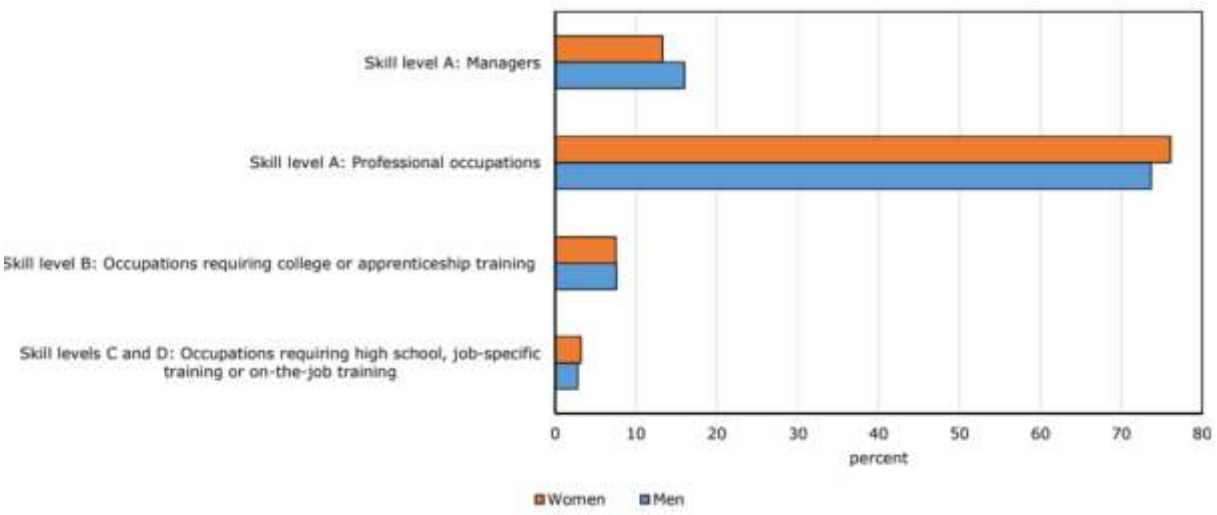
> With increasing numbers of students enrolling in PhD programs and a declining number of tenured positions at universities, doctoral graduates who remained in the Canadian labour market are increasingly engaged in alternative career paths. This study examined the types of occupations that graduates from Canadian doctoral programs held outside academia in 2016 and the task content associated with these jobs[280].

[274] Fisher et al., (2014), Op.cit., p.291-295.
[275] Ibid.
[276] Ibid.
[277] Peters, Diane, The Mismatch Continues Between Phd Holders And Their Career Prospects ,Hhttps://Universityaffairs.Ca/News/News-Article/The-Mismatch-Continues-Between-Phd-Holders-And-Their-Career-Prospects/.
[278] Ibid.
[279] Https://Www150.Statcan.Gc.Ca/N1/En/Pub/36-28-0001/2022012/Article/00002-Eng.Pdf?St=J8wme9gs.
[280] Bonikowska, Aneta, Kristyn Frank And Marc Frenette,Occupational Profile And Work Tasks Of Canadian Phds: Gender And Field Of Study Differences, Https://Www150.Statcan.Gc.Ca/N1/En/Pub/36-28-0001/2022012/Article/00002-Eng.Pdf?St=J8wme9gs, Catalogue No. 36-28-0001issn 2563-8955, December 22, 2022.

In addition to the scarcity of open positions in the academic world, there is also a lack of employment opportunities in fields outside of academia that require postgraduate degrees. When they enter the workforce, a large number of persons who have received their PhDs discover that their expertise and experience are not in high demand, which can result in either underemployment , unemployment or to seek less qualified jobs particularly in services.

There have been several ideas made regarding how to improve career planning and support for PhD candidates in an effort to find a solution to this challenge. This involves developing programs to aid PhD graduates in moving into employment outside of academia and providing more information about career options outside of academia.

Figure 22 Doctoral Graduates Workforce outside Academia (2016)



Source:Https://Www150.Statcan.Gc.Ca/N1/En/Pub/36-28-0001/2022012/Article/00002-Eng.Pdf?St=J8wme9gs[281]

[281] Https://Www150.Statcan.Gc.Ca/N1/En/Pub/36-28-0001/2022012/Article/00002-Eng.Pdf?St=J8wme9gs.

3.8 The Interplay between Higher Education and the Canadian Economy : Public Funding and Policy Influence (1994-2020)

The relationship between higher education and the economy is symbiotic, with each influencing the other's evolution and outcomes. Over the past three decades, higher education has played a central role in shaping the Canadian economy, contributing to economic growth, innovation, and societal well-being according to statistics and experts analysis.

Economic Growth and Innovation are the most determinant elements to be analyzed. In fact, higher education institutions in Canada have been at "*the forefront of fostering economic growth by equipping students with the skills and knowledge necessary to thrive in a competitive global economy"*[282]. The HE institutions are at the *avant-guard* for innovation, advancements in technology, healthcare, and environmental sustainability beside providing the necessary skills for the new economy. According to a report by the Conference Board of Canada (2020), post-secondary education contributed approximately $55 billion CD to the national GDP in 2018, representing around 3.2% of the total GDP[283]. Many scholars and policy makers have stressed the importance of the development of research and development (R&D) activities within universities to boost the economy. Canadian universities are responsible for nearly 40% of the nation's R&D output, much of which directly benefits the economy through technological advancements and the creation of new industries (Statistics Canada, 2021). Policy-makers have emphasized the importance of university-industry collaboration, noting that such partnerships enhance innovation capacity and drive regional economic development.

Furthermore, higher education has also contributed to the Canadian economy by developing a highly skilled workforce[284]. The demand for advanced skills and competencies is increasing, and universities have to respond by offering programs aligned with market needs. The Higher Education Quality Council of Ontario (HEQCO) reported that university graduates have higher employment rates and earnings than those without post-secondary education, with a bachelor's degree adding an estimated $1.5 million to an individual's lifetime earnings[285].

[282] Https://Www.Conference-Board.Org/Ca.
[283] Ibid.
[284] Canadian Statistics.
[285] The Higher Education Quality Council Of Ontario, A Practical Guide For Work-Integrated Learning: Effective Practices To Enhance The Educational Quality Of Structured Work Experiences Offered Through Colleges And Universities, Https://Heqco.Ca/Pub/A-Practical-Guide-For-Work-Integrated-Learning-Effective-

In the following figure we may notice the difference in the earning of workers according to their level of attainment.

Figure 23 Salaries and Level of Studies

Median annual earnings of women and men aged 25 to 64 who worked full time and full year as paid employees, by highest level of education and province or territory, 2015

Highest certificate, diploma or degree	High school diploma	Apprenticeship certificate	College diploma	Bachelor's degree
	dollars			
Women				
Canada	**43,254**	**38,230**	**48,599**	**68,342**
Newfoundland and Labrador	33,382	36,031	46,358	70,994
Prince Edward Island	34,391	33,784	43,332	60,157
Nova Scotia	35,025	38,547	41,188	59,551
New Brunswick	35,434	32,516	41,312	65,219
Quebec[1]	38,487	34,436	45,081	63,305
Ontario	44,928	37,510	49,649	70,832
Manitoba	42,596	37,560	46,646	65,647
Saskatchewan	44,820	42,571	51,820	73,996
Alberta	51,169	49,305	57,580	80,054
British Columbia	45,563	43,327	48,353	62,985
Yukon	59,706	57,910	65,552	77,605
Northwest Territories	75,322	76,044	84,075	104,929
Nunavut	88,064	78,080	94,571	117,888
Men				
Canada	**55,774**	**72,955**	**67,965**	**82,082**
Newfoundland and Labrador	50,121	73,800	71,088	83,115
Prince Edward Island	42,454	53,829	52,992	67,149
Nova Scotia	48,401	60,943	59,236	72,962
New Brunswick	45,895	58,631	57,922	74,252
Quebec[1]	48,344	53,177	61,450	75,107
Ontario	55,216	72,135	67,576	85,645
Manitoba	53,615	73,086	65,524	76,677
Saskatchewan	62,199	86,059	78,176	84,825
Alberta	69,774	92,580	87,983	97,733
British Columbia	59,180	75,344	69,513	77,168
Yukon	64,789	82,125	80,595	88,387
Northwest Territories	87,721	100,531	101,668	115,579
Nunavut	83,968	102,656	105,344	124,160

1. Quebec provides vocational trades training and issues a trades certificate called DEP/DVS (Diplôme d'études professionnelles/Diploma of vocational studies) offered at the high school level.
Source: Statistics Canada, Census of Population, 2016.

Source: Statistics of Canada[286]

It is, also, essential to note that the influx of international students is boosting the Canadian economy. These students contribute to the financial vitality of the institution (tuition fees) but also they add to the cultural diversity and talent pool. Many of them are choosing to remain in Canada after their graduation or post-graduation. The economic impact of international students was estimated at $21.6 billion CD in 2018, supporting over 170,000 jobs (statistics

Practices-To-Enhance-The-Educational-Quality-Of-Structured-Work-Experiences-Offered-Through-Colleges-And-Universities/.

[286] Https://Www12.Statcan.Gc.Ca/Census-Recensement/2016/As-Sa/98-200-X/2016024/98-200-X2016024-Eng.Pdf.

Canada, 2019).The following figure from the Canadian office of international students shows the tendency for the same year.

Figure 24 Spendings by International Students and Values

	Value ($billions)	International Student Spending as % of Exports
Total spending by international students	$37.3	-
Canada's exports in services	$173.0	22.2%
Canada's exports in merchandise	$779.1	4.8%

Source: Economic Impact of International Education in Canada[287]

We shall add beyond direct economic contributions, higher education institutions is playing a vital role in regional development. Higher education institutions often act as economic anchors in communities, providing employment, entrepreneurship, and they contribute to the local economies in the context of Canadian territories through various outreach programs. The University of Toronto's Impact Report (2020) highlighted the institution's role in supporting over 60,000 jobs and generating $15.7 billion in economic activity in the Greater Toronto Area alone[288]. Moreover, higher education has had a profound social impact, contributing to social mobility and equality. The accessibility of post-secondary education in Canada has increased over the years, with targeted initiatives aimed at underrepresented groups (as seen previously). This has not only enhanced individual economic outcomes but also contributed to the overall social fabric of the nation (Finnie, 2016).

Just as higher education has contributed to the economy, economic trends and policies have profoundly influenced the structure and funding of higher education in Canada.The Canadian economy has directly impacted public funding for higher education. During periods of economic prosperity, investments in higher education have generally increased. However, economic downturns have often led to austerity measures, affecting the funding landscape for universities and colleges. The 2008 financial crisis, for instance, led to cuts in government

[287] Kunin, Roslyn, And Associates, Inc, Economic Impact Of International Education In Canada— An Update Of 2022 Impact Final Report, Https://Www.International.Gc.Ca/Education/Assets/Pdfs/Rka-International-Student-Impact-2022-En.Pdf.
[288] Fisher et al., (2014), p.122.

spending on education, compelling institutions to seek alternative revenue. Additionally, the economic policies of successive governments have also shaped higher education. For example, the shift towards a knowledge-based economy in the 1990s and early 2000s led to increased federal and provincial funding for research and development. The introduction of the Canada Research Chairs program in 2000 is a testament to this policy shift, aiming to attract and retain top academic talent and promote world-class research [289].

One may cite the economic conditions that have also influenced tuition fees and financial accessibility for students. In fact, rising tuition fees have been a contentious issue, driven partly by reduced public funding and partly by the growing costs of delivering higher education. Despite these increases, the Canadian government has implemented various financial aid programs, such as the Canada Student Loans Program (CSLP) and various provincial grants, to ensure higher education remains accessible[290]. The increasing reliance on tuition fees and private funding has led to debates about the commercialization of higher education. Scholars like Paul Axelrod have critiqued this trend, arguing that "*it undermines the public good aspect of higher education and shifts the burden onto students and their families.*[291].

The interplay between the economy and higher education is a crucial aspect of a nation development. To understand the contribution of the Canadian economy to higher education we shall limit ourselves at examining direct financial investments, the broader economic impact, and the effectiveness of funding models. This last section aims to provide a comprehensive analysis of how the Canadian economy supports higher education and explores the implications for institutions and policymakers.

According to Canadian Council on Learning, 2007, the Canadian economy contributes to higher education through different ways and manners . It is obvious that many economic sectors privat or public are tax-payers and money providers. It should be added that the financing system includes government funding, private sector investments, and philanthropic donations. Furthermore, Federal and provincial governments provide financial support to

[289] Slaughter, Sheila And Barrett Jay Taylor, Higher Education,Stratification, And Workforcedevelopment Competitive Advantage In Europe,The Us, And Canada, Higher Education, Springer 2016, Switzerland, pp.257-62.
[290] Https://Www.Canada.Ca/En/Employment-Social-Development/Programs/Canada-Student-Loans-Grants.Html.
[291] Ibid.

institutions through grants, subsidies, and student financial aid programs[292].Private sector ,on the other hand, investments are of high importance since they give a oxygen bowl during national and international crisis. Businesses and industries are, also, contributing to research initiatives and infrastructure development[293]. It is noteworthy to add that philanthropic donations from individuals and organizations enhance institutional resources and support specific projects[294].

Beyond direct financial support, the Canadian economy contributes indirectly to higher education. Higher education institutions are employing thousands workers across the country (Statistics Canada).Furthermore, The presence of universities and colleges stimulates local economies through spending on goods and services, as well as by attracting students, and other jobs at the peripheral of students and academics environment[295]. Moreover, the research and development activities conducted within higher education institutions have broader economic implications. Innovations and technological advancements resulting from academic research often lead to new business opportunities, contributing to economic growth and competitiveness[296].

We shall, also, highlight the fact that the funding models for higher education institutions in Canada vary according to provinces, regions and institutions. As an illustration, universities in Ontario have had to face tremendous shifts in funding due to changes in provincial policies and tuition fee regulations[297]. Conversely, institutions in other provinces may face different financial pressures or opportunities.

Moreover, the Canadian government supports higher education via Canada Social Transfer (CST). The CST provides provinces with financial assistance for post-secondary education, ensuring that universities and colleges can maintain accessibility and quality. The following aspects are to be mentioned: first, the federal government supports higher education through targeted investments in research and development (R&D), which contribute to both economic growth and innovation. Second, provincial governments, while having primary responsibility

[292] Https://Www.Oecd-Ilibrary.Org/Education/Evidence-In-Education/The-Canadian-Council-On-Learning-Canada_9789264033672-7-En.
[293] Clark,D. et al., (2011),op.cit., pp.101-16.
[294] Ibid.
[295] Fisher et al.,(2010), op.cit., pp.89-92.
[296] Clark,D.,(2011),op. cit., pp.112-16.
[297] Ibid.

for higher education funding, rely on federal transfers to maintain accessible and affordable tuition .

One of the essential aspects in higher education consists in the collaboration between universities and private industry .The promotion of research partnerships, Canadian universities contribute to the development of new technologies, products, and services. These collaborations is the pillar of knowledge transfer between academia and industry, helping to commercialize academic research. The Canadian government encourages these partnerships through funding mechanisms such as the Natural Sciences and Engineering Research Council (NSERC) and the Social Sciences and Humanities Research Council, which support industry-research collaborations[298]. To achieve this goal, higher education institutions engage in technology transfer, innovation, and entrepreneurship activities via contract and agreements offering the exclusivity of the research outcome to the companies .This parternship stimulates investment in research[299] .

According to Romer et al., (2017) to look for international examples is essential. In fact when compared Canadian approach to higher education funding with that of other countries, it appearsthat both strengths and areas for improvement. For instance, countries like Germany and the Netherlands have implemented tuition-free or low-cost higher education models, which could provide insights for Canadian policymakers. The effectiveness of different funding models can offer valuable lessons for improving the Canadian system. By examining international practices, Canada can explore new strategies to enhance accessibility, quality, and sustainability in higher education[300].

[298] Munro, D., & Maclaine, C. (2019). Fostering Innovation Through University-Industry Collaboration: The Role Of Canadian Universities. Policy Research Reports, 45(3),pp. 27-49.
[299] Munro, D., & Maclaine, C. (2019).Op.Cit., pp.28-32.
[300] Romer Christina D., And David H. Romer, (2017), New Evidence On The Aftermath Of Financial Crises In advanced countries, American economic review 2017, 107(10): 30723118https: //Doi.Org/ 10.1257/ Aer.20150320, pp.3072-116.

Conclusion

To sum up, the relationship between the Canadian economy and higher education is both dynamic and mutually reinforcing. It appears that Government funding is the spine bone ensuring that higher education remains accessible to a wide range of students while also supporting vital research efforts that drive innovation. The fact makes the Canadian post-secondary education inclusive. Higher education institutions in turn, do much more than educate—they have a key role in the nation's economic landscape, they create jobs, supporting innovation, and attracting international talent to fuel economic activity across multiple sectors and in different regions of the country.

At the heart of this connection are the strong partnerships that universities forge with the private sector and the socio-economic environment. These collaborations enable research to move beyond academic settings to real-world applications, pushing forward technological advancements that benefit industries and the broader economy and bridge the gap between the scientific elite and the financial one. In essence, these relationships contribute not only to advance knowledge but also to make it tangible into economic benefits.

Chapter Four : Findings, Discussions and Future Prospects

Introduction

Universities in Canada are facing a number of challenges when it comes to funding, such as having their budgets slashed, maintaining financial sustainability, assessing the impact on education quality, having access to resources, and being globally competitive. As a direct result of these challenges, some institutions have been forced to make adjustments to their budgets, while others are struggling to maintain their financial sustainability (as demonstrated by Canadian Statistics). This has led to concerns being raised about the standard of education, the accessibility of resources, and the ability of institutions to successfully compete on a global scale.

The difficulties in securing adequate funding that are faced by educational institutions in Canada are not anything completely novel. According to a report that was recently published by the Canadian Association of University Teachers (CAUT), the amount of money that the government donates to universities has significantly declined over the past three decades, with the amount donated per student declining by 21.2% between the years 2008 and 2018[301]. Because of this, educational institutions are under an increasing degree of pressure to rely on other sources of revenue, such as tuition fees, which have increased over the same period.

In addition to reductions in spending, universities have been compelled to make difficult decisions concerning the distribution of resources, which has resulted in reductions in the number of employees, the number of courses offered, and funding for research. As a direct result of this, there has been an increase both in the level of academic excellence as well as the capacity of institutions to successfully compete with other organizations on a worldwide basis (international rankings)[302].Ranking of universities is globally acknowledged. It is essential in a competitive world for attracting international students, funding opportunities, and enhancing reputation. Initially, there were only a few attempts to classify universities, but over the years, the methods for classifying universities and the number of such organizations have increased[303].

[301] From the website of Statistics Canada.
[302]Bound, John, et al., "A passage to America: University funding and international students." American Economic Journal: Economic Policy 12.1 (2020): pp.97-126.
[303] Ibid.

4.1 The Discussions of the Findings

We shall discuss in the coming section the points raised in this dissertation as they seem at highly important and having impacts on Canadian economy and society.

One should start by mentioning the international ranking of Canadian HE institutions that. In fact, in the mid-1950s, for example, there were only two international classifications for scientific institutions. By the end of the 1990s, as the world entered a neo- liberal sphere, there were more than a dozen criteria for ranking and 14 rating systems with an irrefutable international status that classified more than 7000 universities worldwide, to enhance competition among institutions of higher education. The two earliest and widely acknowledged classifications, the Tianjen and the Shanghai Classification, emerged in the mid-90s[304].

The top position held by any of the Canadian universities from year 2003 was from University of Toronto's rated first for 4 times. The decline is estimated by 1-3 positions every year, holding 18th position in year 2009 and 21st in 2019. From years 2013-2017, the position remained constant. The number of Canadian universities ranked below 500 increased from 30 in year 2010 to 36 in year 2020. However, results also signify that there is a positive trend of rising of ranks in the other non-reputable rankings - 0-579 for QS and 0-550 for HEEACT (Higher Education Evaluation and Accreditation Council of Taiwan). Nevertheless, Canadian universities still rank quite behind the US universities. The country rank dropped from consecutive 5th rank in year 2010-2011 to 8th in year 2019 in world ranking systems and there is an expected further drop of 9th rank by 2026[305].

The Q.S. World University Rankings and Times Higher Education World University Rankings are used to rank Canadian institutions, analyzing their history through archival documents. The rankings are based on the institutions' context, examining stability, instability, congruencies, and divergences. The rankings aim to investigate the impact of broader international/global processes on individual national institutions and the context of these rankings. In the Twenty-First, globalization has led to increased interest in higher

[304] Adam, E. "Reviving the sociology of organizations in higher education: the case of how global university rankings influence the strategic management of Canadian universities." International Review of Sociology, 2024. researchgate.net.
[305] Ibid.

education institutions being compared favorably[306]. Organizations like the Academic Ranking of World Universities, Times Higher Education World University Rankings, and Quacquarelli Symonds World University Rankings aim to create unifying systems to rank institutions on a global scale. These rankings provide prospective students with an overview of institutions and help them make informed choices about their studies. However, many institutional participants, particularly senior managers (in the private sector), remain unaware of the system, strengths, and weaknesses of these rankings[307].

Over the past decades, various global ranking systems have emerged, including the Academic Ranking of World Universities (ARWU), Times Higher Education World University Rankings, and Quacquarelli Symonds World University Rankings. ARWU was the first system, developed by Shanghai Jiao Tong University in 2003. The Times Higher Education World Reputation Rankings, developed by Price Waterhouse Coopers, focuses on annual surveys of academics worldwide. The QS World University Rankings, launched in 2004, were developed based on these datasets in response to the need of competition among international higher education institutions.

In 2004, the Times Higher Education World University Rankings developed an annual classification based on methodologies similar to QS World Ranking. This ranking questioned the calculation of the proportion of academic staff to international students. Times Higher Education World University Rankings, presently in its 18th edition (2022), ranks 1,750 of the top 20,000 academic institutions worldwide. It is the assessment and the opinion of academics, 89% of Times Higher Education World University Rankings' criteria consider quantitative variables such as the ratio of faculty staff (45% weight), prestigious academic awards, international research collaboration (30%), academic success (18%), and the income of research contracts between publicly funded institutions (7%)[308].

Thus based upon these criteria, a worldwide university ranking influences a university's identity and attracts students, researchers, and funding. Understanding factors influencing Canadian higher education institutions' (HEI) ranking is crucial. Academic reputation is the

[306] Fauzi, Muhammad Ashraf, et al.. "University rankings: A review of methodological flaws." Issues in Educational Research 30.1 (2020): 79-96. iier.org.au.
[307] De Wit, H. and Altbach, P. G. "Internationalization in higher education: Global trends and recommendations for its future." Policy Reviews in Higher Education, 2021.
[308] Hauptman Komotar, M. "Discourses on quality and quality assurance in higher education from the perspective of global university rankings." Quality Assurance in Education, 2020.

first measured factor influencing QS ranking. From 2011-2021, three Canadian universities (McGill University, University of Toronto, University of British Columbia) have become top-ranking institutions, while all mid-tier institutions (University of Alberta, Université de Montréal, University of Calgary, Western University, Queen's University, University of Ottawa, Dalhousie University, Simon Fraser University, Université Laval, Memorial University of Newfoundland) see a slowdown in ranking progress[309].

However, ranking universities has created a global concerns that arise over the harmful global education 'market' where institutions compete, presenting misleading images of their achievements, and promoting 'commodification and marketization' of education, impacting 'consumers' and increasing inequity in lifelong learning opportunities. This enhances the capitalistic perception of knowledge and changed the role of universities[310].

As Canada's position in worldwide ranking of universities improves, some Canadian institutions those were among the global top 100 before 2012 experienced broader and steeper decline in rankings, which were more pronounced in globally competitive indicators than in locally relevant indicators. The unintended consequences of broader and steeper decline are diverse responses of individuals and institutions in unstable academic environment. Consequently, global competition and local response to them makes academia less and less cohesive internationally. As a result, there is growing geographic disparities in the quality of scholarship, and the rising cost of higher education prevents academia from the improvement of quality[311].

Canada's higher education institutions are parts in internationalization activities, such as developing cross-border collaborative programs, building international partnerships, and planning foreign system expansion. Universities, in particular, are competing globally to attract international students. Canadian higher education institutions are member in university networks at the global level. These institutions are marketing and branding efforts to attract international students. At the national scale, the economic benefits of student mobility, as

[309] Meho, L. I. "Highly prestigious international academic awards and their impact on university rankings." Quantitative science studies, 2020. mit.edu.
[310] Gonzales, Leslie D., and Anne-Marie Núñez. "The ranking regime and the production of knowledge: Implications for academia." Measuring up in higher education: How university rankings and league tables are re-shaping knowledge production in the global era (2021): 75-101. ed.gov.
[311] Adam, E. "Reviving the sociology of organizations in higher education: the case of how global university rankings influence the strategic management of Canadian universities." International Review of Sociology, 2024. researchgate.net.

stated in the 2005 International Education Policy, have been providing the rationale and policy framework for the rapid internationalization of higher education institutions in Canada[312].

Finally to conclude this section of the inter-relationships between ranking and international students the following statistics are good to be remembered: in terms of market share among top destinations for international students, Canada maintained its place as the fourth leading destination in 2019, following the United States (with 51.5% market share), Australia (9.7%), and United Kingdom (9.2%). The combined market of these four holds 83.1% of the total degree-seeking international students worldwide. Because of the rapid growth in degree-seeking enrollments, China has surpassed Canada and became the third leading destination with 9.5% market share. However, Canada remains a net importer of degree-seeking international students from developing countries[313], as seen previously in this dissertation.

Higher education serves as a catalyst for internationalization, economic advancement, and societal progress. Public institutions emerged as the dominant mode of higher education provider in the second half of the nineteenth century, aiming to advance social equality, economic inclusion, and improved public welfare (functionalism). Canadian postsecondary institutions were created and funded by colonial offices in exchange for provincial control over higher education. It is essential to note that the public funding of Canadian higher education has evolved since the mid-1990s, with a focus on the decrease in allocation of public funding from the early 2000s to the mid-2010s.

However, with industrialization, urbanization, and state building, non-profits that complied with legal definitions of educational institutions emerged. Canadian higher education is neither entirely public nor privatized but rather occupies a middle ground between these two (as seen in chapter two). Public funding has become a crucial pillar and predominant funding source for post-secondary institutions in Canada, accounting for 51.9 percent of net revenues up to 2019. However, the rapid growth of private funding cannot be negated. Although private funding only accounted for 18.7 percent of net revenue in 2019[314], it comes in various forms

[312] Bound, John, et al.. "A passage to America: University funding and international students." American Economic Journal: Economic Policy 12.1 (2020): 97-126. nih.gov.
[313] Bound, John, et al.. "The globalization of postsecondary education: The role of international students in the US higher education system." Journal of Economic Perspectives 35.1 (2021): 163-184. aeaweb.org.
[314] Sin, C., Antonowicz, D., and Wiers-Jenssen, J. "Attracting international students to semi-peripheral countries: A comparative study of Norway, Poland and Portugal." Higher Education Policy, 2021. oslomet.no.

and was anticipated to become the fastest-growing source of funding[315].Canadian higher education institutions have been funded through two main mechanisms: public funding and private investment. Public funding has come from federal, provincial, and territorial governments, while private investment has come from tuition fees, donations, and endowment fund income[316]. Thus, they have to guarantee social equality, economic inclusion, and improved public welfare, with the expectation that all Canadians would be given financial access to higher education.

The rise of Indigenous institutions is creating a real challenge since they have particular needs and they suffer from a lake of private investment. To solve this issue the local governments in the territories rely massively on direct natural resources extraction companies donations.

Deriving from various socio-economic problems, free-to-access higher education in Canada has come under extreme financial strain. Public funding has massively dropped post economic crisis of the 1970's, so that provinces now pay, on average, only 56% of higher education expenditures in public institutions, down from 90% in the early 1970[317].Henceforth, dis-investment in Canadian higher education institutions has been exacerbated by public policy measures restricting non-tuition revenue for education and rising costs due to knowledge economies and 'massification'. As a response, institutions have turned to private revenue sources, including philanthropic gifts, which have seen a significant increase in their share of total revenue since the mid-1990s. This has given increased influence to external actors with specific interests in shaping public education's future[318].This fact accelerated the shift towards knowledge based economy which in turn contributed to the emergence of service based economy.

According to the Canadian Statistics office private and public funding often overlap, with Canadian higher education viewed as less accessible due to increased dependence on private tuition fees since the beginning of the twenty-First because of liberal policies. However,

[315] Kurnaz, Musab, and Terry A. Yip. "The Canadian Income Taxation." Proceedings. Annual Conference on Taxation and Minutes of the Annual Meeting of the National Tax Association. Vol. 113. National Tax Association, 2020.
[316] Busch, L. "Knowledge for sale: The neoliberal takeover of higher education." 2023.
[317] Chofer, E., Ramirez, F. O., and Meyer, J. W. "The societal consequences of higher education." Sociology of Education, 2021. sagepub.com
[318] Raddon, Mary-Beth. "A Generosity Gap? Comparisons with the United States." The Business of Hope: Professional Fundraising in Neoliberal Canada. Cham: Springer International Publishing, 2023. pp.77-92.

widening participation by offering diverse programs can also promote democratization of knowledge spaces and diversification of public higher education systems. The social implications of "massification" efforts and privatization initiatives should be assessed in term of the participation of different social strata in the higher education landscape, rather than focusing on equity. This highlights the need for a comprehensive understanding of the social implications of these initiatives and the inclusiveness generated by the conflict theory. In this research an attempt was made to explore the relationship between public and private funding in Canadian higher education institutions, focusing on the sustainability of public funding and the potential role of private funding in complementing or replacing it, given the diverse funding landscape and societal shift.

The results show that in the recent decades, Canadian higher education institutions receive funding from various sources, with public funding accounting for 40% and private funding accounting for 60%. The distribution of funding sources varies by institution type, with public universities having the highest combined public funding share (61%), followed by public colleges (56%), and private non-religious career colleges (53%). Private funding revenue is highest for private religious universities (64%). As government funding has decreased, tuition fees have a complementary role. Since the system in Canada is decentralized, the distribution of funding sources is also influenced by institution contexts, such as age, locations, population, and graduate programs[319]. Funding distribution for public universities in Canada from 1998 to 2002 shows a net beneficial impact on the private sector. Equating subsidies gives both industries a fair playing field. The change in public to private provision of educational services resulting from the decline in financing by the Canadian government from the late 1960s has affected the educational field leading to decline in spending at the provincial level. This has prompted a shift from public to private provision of educational services, affecting the education sector. The decline in public funding raises questions about how markets adjust to the exit and how it adapts to the newest conditions. The public funding is in fact at the heart of any reform policy and by extension to the transformation from the traditional model as theorized by functionalists to a revolutionized funding system in which the needs of higher education are substantially leading to marketization of knowledge.

[319] Adam, E. "op.,cit.,pp.315-26.

Besides, tuition fees are the second largest source of revenue for Canadian higher education institutions according to the findings of the research. However, over the past three decades, the proportion of government funding has declined in Canada, while private sources have increased. There are unfair imbalances between tuition fees charged to Ontario and Quebec students compared to the other provinces. Nevertheless, the HE institutions in these two provinces are the most attractive in terms of enrollment.

Thirdly, endowments and donations are other funding sources for higher education institutions. Prestigious Canadian institutions are more favoured since they can amass larger endowment funds and donations, often interpreted as a measure of their wealth and success, most of the time this HE are situated in urban industrialized centers. Institutions outside the Great Lakes corridor are disadvantaged in this form of funding.

There have been suggestions for more sustainable funding methods that reduce the universities' reliance on tuition fees, in addition to ideas for increased money from the government for universities. These proposals have been made in order to address the challenges that have been presented. In addition, educational institutions are looking at new possible sources of financial assistance, such as partnerships with businesses and donations to charitable organizations[320].

Once analysing the given data, it appears that there is a dilemma over funding in Canada that should be discussed briefly. In fact, one would be curious about the extent to which the private sector contributes to the funding of the Canadian education system at the postsecondary level. The economy of Canadian commercial sector contributes to the funding of the nation postsecondary education system in a various ways. According to the statistics, private money in the form of donations and endowments has become an increasingly important source of revenue for Canadian universities. This trend is expected to continue in the future. In the year 2021, people from over 250,000 households in Canada, as well as foundations, trusts, corporations, and other types of organizations, gave a combined total of over 1.7 billion Canadian dollars to support post-secondary education in the country. This comes to just under $1,700 Canadian Dollars for each student attending full-time[321].

[320] Raddon, Mary-Beth. Op.cit.,pp. 77-92.

[321] Bound, John, et al., op. cit., pp. 97-126.

The corporate sector provides a contribution to the funding of higher education in a variety of different ways, including the provision of monetary aid in the form of individual donations and the formation of partnerships and alliances in the field of research. Collaboration between private firms and academic institutions is common practice in the process of creating new products and technology. In some instances, commercial firms grant financial assistance to academic institutions for the purpose of conducting research in exchange for the right to access any intellectual property that is generated by the research[322].

However, it is crucial to bear in mind that public financing continues to be the primary source of funding for Canadian universities, with the federal and provincial governments providing the bulk of the funding for research and teaching respectively. This fact should not be forgotten because it is the case that public funding continues to be the primary source of funding for Canadian universities.

One should investigate the question of how student funding at higher education institutions in Canada develops since it is impacted by a number of different elements. Because it provides both loans and grants to students, the Canada Student Loans Program is an essential source of funding for students in Canada. This is because it is designed to help students manage the financial commitments that are associated with their post-secondary education by helping in the form of loans and grants. Thus, the Canada Student Loans Program is responsible for providing funding for about 60% of full-time students loans and grants, and the provinces or territories are responsible for covering the remaining 40% of the cost[323] .

However, it is becoming increasingly difficult for students in Canada to afford to pursue higher education as a result of rising tuition prices as well as rising costs of living. Number of students in Canada are struggling with high amounts of debt and are under a great deal of financial pressure; some of these students have even decided to stop their education because they are unable to afford to continue it [324].

Thus to remedy to this situation, there have been proposals for more sustainable funding methods that reduce the reliance on tuition fees, as well as requests for greater government funding for higher education. In addition, there have been calls for additional government

[322] Ibid
[323] Theresa Shanahan, et al., pp.57-115.
[324] C. Carney Strange et al.op.,cit.,pp.215-20.

support. Certain provinces have moved to implement performance-based funding models, which distribute supports based on specific performance criteria such as graduation rates and research output. These models have been adopted in certain provinces[325].Students , also, could benefit from endowments and donations, more than 1.7 billion Canadian Dollars was donated to charity causes by individuals, foundations, trusts, businesses, and other organisations in 2019 alone. Even though there are ongoing issues with funding for students in higher education in Canada, there are also measures being made to alleviate these issues and provide greater aid to students.

The emergence of unprecedented information technologies in the 1980s started to shape a different kind of society. Many saw in such radical innovations a re-organization of society across the globe, a new networked economy, a new culture, a new social order, or even a new form of civilization as 'predicted' by Bell. A lot of debate was provoked by these transformations, whether they were positive or negative, whether they were continuing trends or ruptures with the capitalist doctrine and laissez-faire policy and whether it adopts functionalist principals of conflictual aspects. It is ,also, time when higher education institutions (HEIs) from all over the world, aided by national, regional, and international policies, began a shift leap into what is known as the "post-industrial world", an entry that involved almost all dimensions of their activities (technology, pedagogy, research, governance, funding, expanding demands for access, quality, and accountability). Canadian higher education was no exception to this transformation.

In the 1980s and 1990s, a national strategy focused on global networking of higher education spaces, originating from Ottawa. This led to the development of national research, innovation, and initiatives. This led to the rise of new administrative structures, positions, titles, offices, and policies in higher education institutions. The World Bank and OECD published studies on post-industrial university reforms. The conclusion of the studies highlighted that higher education and post-industrial societies have close relationships to one another as a result of the shift toward a knowledge-based economy and the emergence of technology have both placed a greater priority on education and the development of skills. The fact is that in post-industrial countries, there is a growing demand for workers who not only have a high level of education but are also able to adapt technologies and industries .

[325] Theresa Shanahan, op. cit., pp.57-115.

Higher education has become a crucial component in the formation of new economic sectors and the extension of old ones in societies transitioning out of the industrial age. Institutions of higher education are at the forefront of research and development, acting as incubators for new ideas and technologies. They also contribute to the creation of a highly trained labor force capable of driving innovation and entrepreneurialism across various business sectors. However, the increasing cost of education and the rapid pace of technological change create challenges for higher education institutions in keeping up with changing needs.

As seen in this work, the Canadian economy experienced three major shifts between 1867 and 1945. The first was the formation of an internally-integrated system of nation-states, consisting of agriculture-based exporting countries and a dominant core of manufacturing-based countries. Post-world-war 1 compromises facilitated income redistribution, leading to regional inequalities. The second shift occurred inter-wars, with global market pressures and macroeconomic interventions affecting income distribution. The third shift occurred post-world war2, with the emergence of a new system of medium-to-large nation-states. Canada's early policies promoted local industrialization, enabling it to become among the most advanced economies by the 1960s.

4.2Canada between Industrial or Post-Industrial Society

Canada as a nation that has reached the level of industrialization is debatable since it relies on raw materials export. However, consulting the national statistics concerning economy, Canada satisfies the requirements necessary to be categorized as an industrialized nation. The process of industrialization took place in Canada in the second half of the 19th century and the early part of the twentieth century. As a direct consequence of this period, Canada established a solid manufacturing sector and developed a big exporter of natural resources including timber, minerals, and agricultural goods. Today, Canada features highly developed mixed economy, with the service sector serving as the primary driver of economic activity. This industry is responsible for the employment of around 75 percent of Canada's workers. Canada is one of the major industrialized countries in the world, and as such, it is a member of the Group of Eight (G8), which also includes the United States of America, Germany, the United Kingdom, Italy, and France. Russia is also a member of the G8.

We shall highlight ,briefly, that during the past forty years the major contributors in Canadian economy, as given by the Statistics of Canada, mentioned in the appendix section , resulted as follows: .

Firstly, the Canadian economy relies heavily on the service sector, which accounts for over 70 percent of the country gross domestic product (see figure 12). This makes the tertiary sector the principle contributor to the economy of Canada. Most of the workforce could be found in retail sector, hotel industry, education sector, healthcare sector, and financial sector.

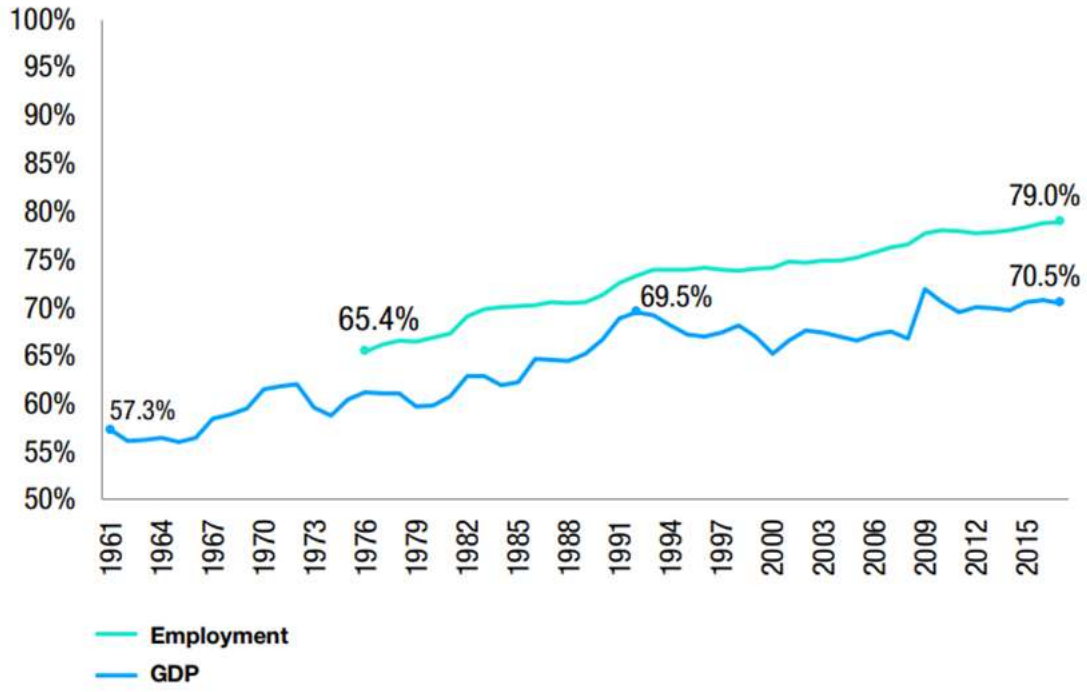
The second macroeconomic contributors are the natural resources; in fact the last forty years, resource-based industries in Canada, such as forestry, mining, and the extraction of oil and gas, are among the principle sources of income in the country economy. This is mostly attributable to the Canadian rich stock of natural resources. However, in recent years, as a response to growing worries and in the light of conflict theory regarding climate change and the protection of the ecosystem, there has been a trend toward methods of resource extraction that are friendlier to the environment. This fact was not possible without the help of higher education which provided with programs to innovate in the energy production and to protect the environment with substantial help from energy companies in the R&D to solve the problem of the ecosystem protection.

In the third position manufacturing: Even though it has seen declines over the course of the past few years, as demonstrated in the graphs in the appendixes, with the acceleration of the de-industrialization, Canadian manufacturing sector continues to play a vital role in the overall economy of the country. The aerospace and automobile manufacturing industries in Canada are both booming, with the aerospace industry taking the lead over the automobile manufacturing industry. However, both industries are benefiting from R&D higher education programs to develop the industries.

Therefore, technology and sciences are having more and more portion in the Canadian context. For instance, the technical sector in Canada has witnessed tremendous expansion during the last forty years, with major cities such as Toronto, Vancouver, and Montreal emerging as *tech hubs*. It is not a coincidence that the Sci-Tech are situated in these cities since they share in common the fact of having the top 10 universities in the country and they are all well-ranked at the international level.

Consequently, the changes that have occurred in the economic landscape of Canada over the last four decades, have all in common the higher education sector which plays the role of the locomotive in the transition towards post-industrial society. We may attest that Canada underwent an economic shift between the early 1980s and 2015, as demonstrated by Canadian Statistics , particularly the decline of manufacturing employment and the rise of the services sector. In 1981, more than 45 percent of Canadian jobs were in manufacturing and related fields. By 2015, this share had fallen below 25 percent. At the same time, the services sector experienced substantial growth, rising from roughly 51 percent of total employment in 1981 to more than 72 percent in 2015[326].

Figure 25 Service Economy Share (1961-2015)



Source :https://www.international.gc.ca/trade-commerce/assets/pdfs/state_of_trade-commerce_international/special_feature-2018-article_special-en.pdf [327]

[326] Morissette, René, The Changing Job Landscape,1981 to 2019, Published by authority of the Minister responsible for Statistics Canada, https://www150.statcan.gc.ca/n1/en/pub/11-626-x/11-626-x2020005-eng.pdf?st=thPAuM-N.

[327] https://www.international.gc.ca/trade-commerce/assets/pdfs/state_of_trade-commerce_international/special_feature-2018-article_special-en.pdf retrieved on July 2024.

The transition from a manufacturing to a service-based economy has had a profound impact on the Canadian economic landscape. As highlighted by Beyers and Lindahl, (1970) , the rapid growth of services in regions has led to changes in the composition of service industries, affecting the nature of employment and output. This transition has been driven by various forces, including differences in the rate of productivity improvement between service and goods producing sectors, as well as changes in production processes within different service sectors[328]. For instance, industries like telecommunications which relies heavly on research and development program have experienced capital deepening, leading to improvements in labour productivity in Canada. These shifts have implications for higher education, as they necessitate the development of new skills and knowledge areas to meet the evolving demands of the service economy in telecommunication[329].

However, the examination of employment shifts among provinces, cities, and occupations offers reasons to question the reasons behind the unbalanced labour force, since it was found that the emergence of post-industrial society took time and varied more at regional levels than commonly assumed. Canadian service industries were concentrated in larger cities. To say it in another way 'the unlucky' regions, out of the Great Lakes corridor, suffered from the de-industrialization and at the same time did not find alternative industries. Services offered an alternative way out of industrial decline, but the social structuring of service employment proved to be a complex process, simultaneously widening and narrowing the divide between larger and smaller cities and US-Canadian borders.

In the following explanation, one may understand the contribution of the American Canadian economic dynamism is central to the Canadian economy: most of the import from Canada to the US are in form of raw material and services (health and education)[330].According to the statistics the estimated value of goods and services traded between the United States and Canada in 2019 was $718.4 billion CD, with exports being $360.4 billion CD and imports reaching $358.0 billion. The amount of exchange makes the region one of the most dynamic in the world and provides Canada with an immense source of revenue. Canada is home to several automotive US manufacturers, including General Motors, Ford, and Fiat Chrysler, and

[328] Beyers, B.(1970) ,W. and P. Lindahl, D. "Services and the new economic landscape.
[329] Driving Canada's productivity: The impact of the telecom sector and its role in improving productivity, https://canadatelecoms.ca/wp-content/uploads/2024/06/Driving-Canadas-Productivity.pdf.
[330] https://councilgreatlakesregion.org/the-great-lakes-economy-the-growth-engine-of-north-america/#:~:text=The%20area%20is%20home%20to,globally%20for%20its%20manufacturing%20prowess.

as a result, the vehicle sector is prospering and necessitates a whole organization as retail, insurance, transportation, promotion and so on. It means that for one direct job in the automotive industry for indirect jobs are created in the service economy. According to the Canadian Vehicle Manufacturers Association CVMA there are around 125,000 people directly employed in the automotive industry in Canada, while the industry is indirectly responsible for the maintenance of 400,000 additional jobs.

The aerospace industry is the second largest contributor in manufacturing sector. Canada is home of a number of prominent aerospace companies, such as Bombardier, Pratt & Whitney Canada, and others. It is responsible for the employment of 85000 people and it generates an annual revenue more than $25 billion[331] CD. It is worthy to note that a number of Canadian firms and universities are actively working in aerospace research at the forefront of technological improvement, the sector is also a key source of innovation and research and development.

4.3Factors in the Development of Post-Industrialization in Canada

We shall start by highlighting the policies that the government of Canada implemented in the 1970s and 1980s due to a succession of economic crisis in that period. Even though they contributed to an increase in economic competition and efficiency, they were also responsible for the closure of a huge number of industrial units and the loss of jobs. This had a significant negative impact on the communities that were hit. In fact, the reforms introduced by the liberal government accelerated the transition from goods-manufacturing economy to a service based economy.

Canadian industrial sector has been struggling to survive in post-crisis periods, with secondary sector contributing less to GDP since the 1970s. Oil and gas field services are suffering from the fastest decline in last two decades due to shifting market conditions caused by reduced oil prices and the emergence of renewable energies. The service sector has become the largest contributor to Canadian economic output, on the expense of traditional

[331] Canada Statistics.

sectors which are suffering contraction or regression. To say it in another way the decline in the primary and secondary sectors implies a direct progression of tertiary sector[332].

Even though this transition took place in Canada during the last quarter of the Twentieth century. a considerable number of Canadians continued to rely, according to the statistics of Canada, on manufacturing sector salary. Unlike many OECD members, Canada did not experience a de-industrializing process[333].However, the changing demographics of Canadian population (seniors) necessitates a focus on whether labor demands are for skilled or unskilled individuals. The current workforce demands for educated and highly trained individuals are being met, especially in fields like healthcare, computer technology, skilled trades, accountants, lawyers and teachers. The number of young immigrants, inner and outter migration, is growing at the fastest rate in Canada. Postsecondary education (PSE) is often seen as a secure and satisfying pathway to employment. Therefore, it is crucial to assess the current workforce demands for educated and highly trained individuals in Canada and this could not be possible without the implementation of human capital. A focus on countries and with other historical, cultural and economic background should be given as examples.

4.4 International Perspectives to comprehend the Role of Human Capital to the Economic Development

The crucial role of human capital in promoting service and knowledge-based economies across different countries is essential to be highlighted. Human capital, defined as the knowledge, skills, and abilities that individuals possess, is viewed as the foundation for effective service delivery and economic growth[334]. This is supported by the human capital theory, which emphasizes the significance of knowledge acquired by individuals in contributing to economic development[335]. As businesses and economies shift towards service-based and knowledge-based models human capital in driving innovation, productivity, and competitive advantage becomes prominent. Thus, it is essential to refer to the developments and practical applications in different countries.

[332] Lipsey R G. & Alice O. Nakamura,(2001)pp.250-64.
[333] Ibid.
[334] Issaka, A., Ganu, J., and Arthur, S. "The Role of Human Capital Management in Enhancing Service Delivery in Organizations." 2018.
[335] Ibid.

The implementation of human capital to promote a service economy and knowledge-based economy is underpinned by the human capital theory, which has gained attention from international organizations and specialists. According to Matei and Ceche, "*human capital encompasses both the economic value added by the labor force and the continuous dynamism of knowledge, abilities, skills, and experience, emphasizing investments in education and training"*[336]. Tamilina (2012) provides a comprehensive conceptual framework for human capital composition and formation mechanisms, defining human capital as the capabilities of an organization's employees and managers relevant to their tasks and their capacity for continual learning. He identifies eight interdependent elements of human capital(motor skills, information gathering and processing skills, communication skills, experience, knowledge, social skills, and values, beliefs, and attitudes)[337]. Additionally, the European Union conceptualizes human capital as comprising knowledge, skills, and competences, further emphasizing the multi-dimensional nature of human capital. This fact extends beyond economic benefits to include non-economic advantages such as better lifestyles.

Additionally, in the context of a knowledge and service economy, human capital is essential for sustainable competitive advantage and employees' efficiency .[338]Furthermore, the investment in human capital has implications for the job market and employment opportunities, as it aligns the supply of training with job applications. This underscores the importance of human capital in not only enhancing service delivery but also in driving economic growth and optimal social output. Therefore, understanding and applying human capital theory is fundamental in the strategic promotion of service and knowledge-based economies. We shall ,in the following section, highlight the role of human capital in enhancing economies in some countries according to international organizations mainly the World Bank and the OECD. The studied cases are located in different continents having different socio-economic background and with particular historical developments.

Firstly, the United Kingdom (cradle of industrialization) has made strides in implementing human capital to strengthen its service and knowledge-based economy. A key factor in the UK's economic improvement has been the expansion of higher education and increased

[336] Matei, A. and Ceche, R. "Assessment of Human Capital and Development. Contributions from Structural Funds." 2018.
[337] Tamilina, L. "Explaining human capital composition and formation mechanisms: a new conceptual framework of analysis." 2012.
[338] Mincer, op.cit.,pp.6-12.

competition in product and labor markets[339]. Furthermore, the UK's productivity growth has been influenced by the expansion of higher education, with 'intangible assets' accounting for a significant portion of productivity growth from 1995-2007[340]. This underscores the positive influence of skills supply and utilization, particularly the expansion of higher education, on productivity growth within the UK. However, according to Mired (2012) regional disparities are still persisting resulting from political miss-calculation in de-industrialized regions. It appears that only big metropolitan centers benefited from human capital implementation[341].

Germany, as the second example old industrialized nation in Europe, has effectively utilized human capital to boost its service and knowledge-based economy, focusing on the concentration of skilled individuals in agglomerations. This strategy aligns with agglomeration theories, emphasizing the importance of knowledge workers' concentration for interaction processes. Germany's rapid human capital accumulation is linked to its macroeconomic growth, demonstrating its commitment to nurturing a knowledge-based economy[342].

In Asia, as seen in chapter one, South Korea pioneered the implementation of human capital to solve unemployment and low productivity in small and medium enterprises (SMEs). One such policy is the Training Levy-Rebate Incentive Scheme, where enterprises pay training levies as part of their unemployment insurance fees. Employers have the autonomy to choose training institutions and methods and are eligible for reimbursement of training expenses. This initiative aligns with the national agenda and aims to support disadvantaged groups, particularly in SMEs[343]. Thus, the country has one of the lowest unemployment rate in the world and it is one of the most technologically advanced in terms of Hitech and automatization[344].

[339] Besley, T., Coelho, M., and Van Reenen, J. "Investing for prosperity: skills, infrastructure and innovation." 2013.
[340] Rincon-Aznar, A., Forth, J., Mason, G., O'Mahony, M., and Bernini, M. "UK Skills and Productivity in an International Context." 2015.
[341] Mired,H. (2012), op.,cit.
[342] Growe, A. "Human capital in the German urban system – Patterns of concentration and specialisation." 2010.
[343] Woo LEE, K. and Kumar SAHU, D. "Training Levy-Rebate Incentive Scheme and SME Training Consortium Program to Address Unemployment and Low Productivity in SMEs – A Korean Policy Case." 2017.
[344] OECD reports.

The Chinse model has not to be neglected since the country has made efforts in post- cultural revolution in leveraging human capital to advance its service and knowledge-based economy. In fact the Chinese government, since the 1980s, has prioritized investments in education and skill development to nurture a knowledgeable workforce capable of driving the service economy forward. Additionally, the emphasis on human capital has contributed to reducing regional inequalities, as individuals with enhanced skills and knowledge have greater opportunities for economic participation and advancement. This strategic focus on human capital is a key factor in China's transition towards a more service-oriented and knowledge-based economy, positioning the country for sustained economic growth and competitiveness in the global market making it the second largest economy in the world[345]. However, it is worth not mention that the Chinses economy is mainly an industrialized one.

Singapore (as studied in chapter one) has been successful in utilizing its human capital to promote its service economy and knowledge-based economy through a corporatist arrangement that involves the government, business, and labor with the impulse of policy-makers. Singapore's skills development institutions have tripartite governing boards, promoting consensus and investment in high-growth sectors. The enterprise union structure and industrial relations regulations facilitate cooperative labor-management relations and innovation. This high-skill strategy contributes to Singapore's economic development and human capital promotion. Singapore's success in skills development can serve as a model for other nations, especially through public-private partnerships and collaboration to enhance workforce preparedness[346].

Brazil has made intensive efforts on human capital to advance its service and knowledge-based economy. The software industry in Brazil has experienced substantial growth, becoming the world's 7th largest market with a value of $7.7 billion USD in 2001, primarily driven by the domestic industry, which accounted for 98% of its total value[347]. However, the reliance on the domestic market has presented challenges, such as potential '*stifling effects'* on industry development. Despite this, Brazilian software firms are still using the domestic

[345] Kang, L. and Peng, F. "Economic Reform and Productivity Convergence in China." 2013.
[346] Kuruvilla, S., L Erickson, C., and Hwang, A. "An Assessment of the Singapore Skills Development System: Does It Constitute a Viable Model for Other Developing Nations?." 2001.
Kuruvilla, S. and Chua, R. "How Do Nations Develop Skills? Lessons from the Skill Development Experiences of Singapore." 2000.
[347] J. Junquiera Botelho, A., Stefanuto, G., and Veloso, F. "Slicing the knowledge based economy: Tales from the software industry in Brazil and beyond." 2004

market to build competitive positions[348]. Furthermore, a study examining Brazil's convergence process from 1985 to 2004 emphasized the significant role of human capital in explaining economic growth (Antonio Cravo and Soukiazis, 2011). Different levels of human capital have varying impacts on per capita GDP growth, depending on the development levels of the regions[349].

The Russian model gives another perspective since the country was for decades under Marxist communist domination that impacted greatly all sectors of economic activities (Elvir Munirovich and Eduard Aleksandrovich, 2015). Besides, the country had great educational potential, there has been inefficient utilization of human capital, leading "*to lagging economic development compared to other nations"*[350]. However, the economic crisis has prompted a more rational approach, encouraging the use of new technologies and addressing contemporary challenges in human capital development. Investment in human capital is expected to contribute not only to economic growth but also to the development of social capital, leading to increased economic welfare of the nation. Furthermore, Russia is rich in human capital, as evidenced by its high educational level and scientific development[351].Despite challenges such as insufficient investment in high technology production and limitations in occupying prospective market niches, Russia remains a world leader in certain scientific and educational parameters such as military equipment, medical health care and aerospace industry[352].

In the African continent three examples may attract attention, Rwanda (as seen in the first chapter, Ethiopia and Nigeria. Nigeria has struggled with challenges related to human capital development and its impact on economic growth, one has to bear in mind that Nigeria is depending heavily on oil industry : in fact the country was not able for decades to build an alternative to its fossil energy dependence source of income. The country has focused on physical capital accumulation which has led to an imbalance in the development of human

[348] Ibid.
[349] Antonio Cravo, T. And Soukiazis, E. "Human Capital Thresholds And Economic Growth In Brazil." 2011
[350] Elvir Munirovich, A. and Eduard Aleksandrovich, O. "Integration of industrial and educational sphere in modernization of economic relations." 2015.
[351] Marina, L. "The economic meaning of 'intangible capital' (according to World Bank research)." 2010.
[352] Ibid.

resources. This has resulted in inadequate infrastructure, weak policy environments, and limited private sector development, impacting negatively the overall economic progress[353] .

To address these issues, there have been calls for public-private partnerships to drive human capital development in Nigeria. Nigeria aims to enhance human capital, foster economic growth, and address neglect in critical sectors like healthcare and education through collaborative efforts[354].

Henceforth, one may attest that human capital is crucial for a nation's competitive position in the global knowledge and service economies. Countries have adopted strategies to promote these economies, including investment in education and training, research and development, and collaboration with foreign firms, government, and universities. Active adoption of these strategies can intensify economies and improve competitiveness. Scandinavian countries, Singapore, South Korea, Hong Kong, and Taiwan have been actively investing in education and training for over a decade, preparing for the shift to a global service economy and knowledge-based economy since the 1980s.

The central point is being the investment in education and training as a strategy for promoting a service and knowledge-based economy through the development of human capital. According to Ndiaye (2018) , investment in human capital involves a closer link with the job market, increasing the chances of finding employment "*by aligning the supply of education and training with job applications"*[355]. This concept views education as an investment in future capital, akin to savings, and integrates into economic growth. Additionally, they emphasize the role of technical vocational education (TVE) in sustaining national development through enhanced productivity of human capital. They stress the need for well-equipped TVE institutions with qualified teachers to enable graduates "*to acquire the necessary skills for gainful employment, highlighting the importance of a better-skilled labor force for sustainable development*".[356]

[353] O. Anyanwu, S., Adam, J. A., Obi, B., and Yelwa, M. "Human Capital Development and Economic Growth in Nigeria." 2015.
[354] Akande, E. "Framework for Human Capital Development in Nigeria: A Public-Private Partnership Approach" 2010.
[355] Ndiaye, B. (2018), op.,cit.,pp.87-92.
[356] Ibid.

Innovation , research and development play a very important role in using human capital for service and knowledge-based economies. According to Issaka et al., (2018), human capital, which includes knowledge, skills, creativity, and experience, is very important for businesses to stay ahead of the competition and run efficiently. Also, the ability to innovate is a key part of human development competitiveness, especially in the education sector[357]. Therefore, the interplay between innovation, research, and human capital is pivotal in driving economic growth and enhancing service economy in various countries.

Policy-makers and government are the ones responsible in shaping the implementation of human capital for promoting service economy and knowledge-based economy. The different cases studied demonstrate that human capital is a political decision and not an academic discussion of businessmen discussions. The scholars may have their say by analysing and proposing models and strategies but they could not implement human capital[358]. Additionally, the transformation towards knowledge-based economies necessitates institutional changes involving both the public and private sectors.

Furthermore, the development of a knowledge-based economy is characterized by structural transformations where knowledge becomes the central source of innovation and growth. Therefore, the role of government policies in fostering an environment adequate to the development and utilization of human capital cannot be neglected in the context of promoting service and knowledge-based economies.

The countries studied above have all in common strong technological infrastructures. According to Tsaurai, and Ndou,(2019) , technology education is essential for human capital development and economic growth. Countries need to invest in education to equip individuals with the necessary skills and knowledge required for rapid economic development. This investment in education contributes to the continuous improvement of employees' knowledge, skills, and abilities, making *human capital a vital input for organizations*[359]. Additionally, scholars emphasize the need of ICT in human capital development, particularly in developing nations[360]. The availability and adaptation of basic infrastructure, including ICT tools, are

[357] Issaka et al.. (2018) op.cit., pp.36-49.
[358] Ibid.
[359] Tsaurai, Kunofiwa; Ndou, Adam (2019) : Infrastructure, Human Capital Development and Economic Growth in Transitional Countries, Comparative Economic Research. Central and Eastern Europe, ISSN 2082-6737, De Gruyter, Warsaw, Vol. 22, Iss. 1, pp. 33-52,https://doi.org/10.2478/cer-2019-0003.
[360] Ibid.

essential for creating skilled manpower and positively impacting the standard of living and education level. Therefore, the development and integration of technological infrastructure are critical for promoting human capital and driving economic growth in various countries[361].

According to Jomo K.S, Anis Chowdhury, Krishnan Sharma, Daniel Platz (2016)Public-private partnerships should not be neglected in the process of the implementation of human capital for the advancement of service and knowledge-based economies. They emphasize the collaboration between public and private sectors in human capital development as essential for economic progress. The authors highlight that investing in human resources development yields greater value than investing in other forms of capital, making it imperative for both sectors to prioritize human capital development[362]. Furthermore, They argue that effective human capital management strategies enable organizations to build and enhance the capacity of their employees, ultimately leading to better productivity. The authors suggest that investing in the development of employees' skills is crucial for providing quality service, especially in economies experiencing a surge in service industries[363].

In conclusion, the case studies and analyses presented in this section highlight the pivotal role of human capital in driving the transition towards service and knowledge-based economies. The examination of various countries experiences reveals the consequences of promoting human capital to drive economic progress. As emphasized by the scholars, efficient management of human resources is crucial for improving service economy, which is a vital aspect of transitioning to service and knowledge-driven economies. Overall, the synthesis of these findings illustrates the importance of countries placing human capital development at the top of their agenda in order to promote service and knowledge-based economies. This has implications for policy, education, and organisational practices.

The exploration of human capital implementation in different countries has uncovered key findings that highlight the fundamental importance of human capital management in both developing and developed nations. In addition, Karazijienė and Jurgelevicius propose an

[361] Ibid.
[362] Jomo KS, Anis Chowdhury, Krishnan Sharma, Daniel Platz (2016), Public-Private Partnerships and the 2030 Agenda for Sustainable Development: Fit for purpose? DESA Working Paper No. 148 ST/ESA/2016/DWP/148.
[363] Ibid.

expanded understanding of human capital as "*an intangible resource at the macro level"*[364]. They distinguish human capital into "*qualitative, quantitative, and value orientation dimensions"*, highlighting its connection to economic productivity and the individual abilities that contribute to production. The importance of skills, experience, and educational attainment in enhancing individual earnings and productivity is emphasised by these dimensions, which are obtained through education and work experience[365].These have important consequences for policy-making and strategic planning in service and knowledge-based economies. According to them human capital promotes "*sustainable competitive advantage and improve service delivery in organisations"*[366].

4.5 Canadian Higher Education Institutions as a Driven-Force of Post-Industrial Society: Political Implication and Societal Debate

Eventually, in the case study one shall investigate the role of post-secondary institutions in Canada which are self-governing and have the authority to oversee their own operations (according to the autonomy giving by the Constitution), including the academic programs they offer, the research they undertake, and the faculty members they recruit. They are, in fact, at the avant-guard of human capital implementation and the driven-force of the post-industrial society . Universities in Canada have a decentralized financial management system. This autonomy allows them to make decisions suited to their circumstances and requirements, enabling them to achieve their missions and goals. Their legal framework, internal governance systems, and government-university relationships contribute to this autonomy, which can vary between institutions and provinces. However, Canadian universities have traditionally had a greater degree of autonomy compared to other countries seen previously in this chapter. To exemplify universities located in five different provinces in Canada found that university autonomy "*appears to be declining in the face of increasing government regulation and accountability measures*" (AUCC).However, according to studies conducted by the end of the 1990s by the Association of Canadian Universities came to the conclusion that the level of government participation in universities in Canada was among the lowest in the world. The studies found that Canada ranked among the top three countries with "*the least*

[364] Karazijienė, Zaneta and Jurgelevicius, A. "Expanded Concept of Human Capital as Intangible Resource at Macro Level." 2019.
[365] Ibid.
[366] Karazijienė, Zaneta and Jurgelevicius, A, 2019, op.cit.,pp.74-85.

amount of government involvement".[367] In spite of this, public universities in Canada are largely self-governing and autonomous institutions that are recognized as being "not-for-profit."[368]

In addition, colleges are obliged to account to the general public for how the money they get from the government is used. This accountability is communicated to the government through a number of requirements for reporting, such as yearly reports, and time to time audit[369].Even though universities in Canada enjoy a high degree of autonomy on the whole; there is a constant argument and discussion regarding the appropriate balance between autonomy and government oversight and control[370].

We shall start from the following assumptions; the service sector is made up of a vast number of different industries, such as finance, retail, tourism, health care, information technology, and many others. The service sectors mainly the Knowledge labour and 'theoretical competency' are becoming an increasingly essential factor in the success of service-based firms. This fact necessitates a series of reforms to meet the new needs.

To Rewrite "Social Contract" ,as asserted by Robert Reich (1991), is an important step to mark the modern age and the new economy this is why a new social contract that he called the "New Deal for Globalization" should be presented . This contract involves a re-thinking the system of education and training, the social welfare, and a focus on innovation and creativity[371]. The New Deal for Globalization is intended to provide the post-industrial society with the skills and resources it needs in order to thrive. The New Deal for Globalization is intended to smooth the negative consequences that would appear within the new economic model in the post –industrial society.

[367] Association of Universities and Colleges of Canada. (2011). Trends in higher education: Volume 1 — enrolment. Ottawa, ON: Author. Retrieved August 11, 2019 from https://www.univcan.ca/wp-content/uploads/2015/11/trends-vol1-enrolment- june-2011.pdf.
[368] Ibid.
[369]Ibid.
[370] Clark et al.,(2011), op.,cit.,pp.100.-03.
[371] Powell, Jason et al.,(2009), The Welfare State in Post-Industrial Society A Global Perspective, Springer, Dordrecht Heidelberg, pp.236-40.

Besides, the term ‘’network society” was coined by Manuel Castells as a way to describe the post-industrial society is characterized by the decentralization of power which is the case in Canadian higher education from the origin which is considered by many scholars and academics as an anomaly.

The network society relies on new information and communication technologies to facilitate the exchange of knowledge and ideas. In Canada the network society is characterized by the emergence of new social movements and the increasing importance of cultural identity (chapter two) represented in HE system.

4.6 Discussions on Current Challenges and Future Prospects of Canadian Post-Industrial Society

In general, these theoretical frameworks present post-industrial society from a variety of perspectives; nonetheless, they all emphasise the importance of knowledge, invention, and creativity in the process of defining the path that the economy and society is taking and will be developed in the future.

It is essential to keep in mind that the fundamental objective of higher education in Canada, or elsewhere, is not to make a profit or to achieve a certain ranking. Rather, the fundamental objective of higher education in Canada is to provide students with an education of the highest possible quality and to prepare them for the workforce of the future[372]. The primary concern of the Higher education institution is knowledge and not profit-making. The shift towards post-industrialism has provoked a shift in the conception of knowledge making it tangible measurable and commercial. This is why restructuring in the higher education sector is so important for both policy-makers and academics to center the role of higher education institution as knowledge provider not a financial institution.

On the other hand, there have been some changes made to the way that higher education is oriented and market-oriented in Canada, with the goals of elevating the ‘standards’ and the ‘quality’ of education to meet the needs of changing society. However, this is not possible without risk taking as market-oriented activities should obey the capitalist and neo-liberal doctrine with certain degree of social and economic injustice. The tendency of deviating the role of higher education, from teaching-learning, knowledge provider institution and research

[372] Association of Universities and Colleges of Canada. (2011)

and innovation 'temple', to a pure capitalist institution, or capitalist agent, could represent a real danger for post-secondary institutions, since it may lead to some anomalies in the institutions and the society.

The knowledge- based economy pushed provinces to adopt a new funding model that is dependent on their performance. This strategy allocates funding to educational institutions based on how well they do in a variety of categories, including the quantity of research they produce, the number of students, and the proportion of degrees and programs. As a consequence of this, universities have been encouraged to improve their performance in these areas, which has led to an increase in the amount of research[373].

Additionally, the rise in the number of international students attending schools in Canada has added to the country's already multiculturalism and opened up new avenues for the exchange of cultural ideas and educational experiences. This has contributed to Canada's standing as one of the most diverse countries in the world. (annual reports of ACCU).

Moreover, the expansions of the digital economy as well as the rise of new technologies are a key element in the process by which the economy of Canada is shifting to a service-based one. The expansion of the digital economy has led to the birth of new service-oriented industries that are reliant on the technology. For example, the creation of software has become a sizable industry in Canada, and a great number of companies and organizations are responsible for its development. Besides, E-commerce is yet another area of the service economy that has witnessed phenomenal growth in Canada[374].

Additionally, the field of digital marketing is booming in Canada as a growing number of businesses are turning to online mediums such as social media and search engines to communicate with the clients they are seeking to attract[375]. As a result of this new employment opportunities have emerged in a variety of disciplines, including the management of social media platforms, the optimization of search engines, and the development of content. The urban centers such as Toronto, Ottawa and Montreal are becoming the new digital research hubs imitating the patterns of the Silicon Valley[376].It is,

[373] Ibid.
[374] https://s202.q4cdn.com/805890769/files/doc_downloads/reporting/Digital-Commerce-How-Canadian-Businesses-are-Growing-and-Trading-Internationally.pdf.
[375] Ibid.
[376] Ibid.

then, important to note that digital economy is the trend for the Twenty-First post-industrial features. It is essential too, to acknowledge the fact that Canadian higher education institution pioneered and championed the e-learning as early as 1993-1997, to serve the needs of scattered population in the Northern territories[377].

On may consider that post-industrialism in Canada, like in other advanced economies, has brought about everlasting transformations in all the societal and economic components of nations experiencing the shift towards the new model. In some countries it is perceived as the ultimate stage of capitalism and the shift towards post-industrialism (USA and Canada); in other nations it is the outcome of di-industrialization (UK) and the third segment are emerging nations. Be as it may , all the options are concomitants to create a new economic model and to enhance the shift towards post-industrialism. However, these shifts have also introduced several challenges and problems that are worth examining to cease the celebration of the new model as being idealistic and safe. It is essential to note that the post-industrialism is the continuum of capitalism which found a new 'modern way' to survive and to perpetuate the inequalities. Capitalism is, by virtue, built upon disparities, and in the new model it found its 'eternity'. Marx predicted the end of capitalism with general crisis, but history has attested that capitalism could survive via reforms.

Notwithstanding the various virtue of post-industrialism, this new model is charactirized by the growing gap between the wealthy and the poor. As the economy transitions from manufacturing to knowledge-based and service-oriented industries, high-paying jobs (white-collar) are concentrated among those with advanced education and skills that they could benefited from their high standards of living, while others are left behind in lower-wage, less secure service jobs.

According to Banting, Keith, and John Myles (2013) the transition to a post-industrial economy has altered the job market, they argue that in the industrial era, manufacturing jobs provided stable, well-paying employment. The jobs were often requiring limited or midium levels of education and training but offered '*job security and benefits*'[378].

[377] McGreal, R., et al.,(2017), E-Learning in Canada, Journal of Distance Education Technologies, 5(1), 1-6, itation and similar papers at core.ac.uk provided by Athabasca University Library Institutional Repository, https://core.ac.uk/reader/58774770.

[378] Banting, Keith, and John Myles (2013),Inequality and the Redistributive Fade politics, UBC Press Vancouver.

However, as the economy has increasingly relied on technology, information, and services,' *the nature of employment has shifted. High-paying jobs are now predominantly found in sectors that demand advanced education, specialized skills, and professional expertise'*.[379]For example, industries such as technology, finance, and advanced healthcare have become central to the Canadian economy. According to Canadian Statistics, they are among top ten well-paid occupations.

The service sector, according to data published by Statistics Canada, contributions made by the service industry to the economy of Canada over the last three decades, has been the single most important factor in determining the country's overall prosperity. It means that the other sectors were left behind and non-neglected part of the population suffered from the shift.

To be more precise, it is estimated that the contribution of the service sector to the gross domestic product of Canada would reach approximately 70% by the year 2020[380].This would represent an increase from its previous share of 63% in the year 1990[381]. However, within the context of post-industrial capitalism, it does not mean that the wealth redistribution has benefited equally among the working class and different social strata.

The second negative outcome, that one may report, is the one concerning a spectacular increase in precarious employment since they are characterized by lack of stability, temporary, part-time, or contract positions[382]. Sectors such as retail, tourism, and education have seen a rise in such precarious work, impacting workers job security and career trajectories. According to Crofford et al., this precarious situation affected women, immigrants, and younger workers. Under the name of job flexibility this new model threatens the economic safety of millions of workers[383]. In the following figure one may note the important number precarious jobs as compiled together in temporary/ part time combination representing more than 2 million workers out of the total 13 million, in 2002 statistics. The situation does not ameliorate since then.

[379] Ibid.
[380] Statistics Canada.
[381] Ibid.
[382] Cranford ,Cynthia J., et al., (2003) Precarious Employment In The Canadian Labourmarket: A Statistical Portrait, JUST LABOUR vol. 3 , https://www.yorku.ca/julabour/volume3/cranfordetal_justlabour.PDF.
[383] Vosko, Leah F. (2006), Precarious Employment: Understanding Labour Market Insecurity in Canada. McGill-Queen's University Press, pp.03-10.

Figure 26 Precarious Jobs in Canada

Form of Wage Work	Total Employees* Estimate (000s)	Firm Size Less than 20 Percent of Employees	Union Coverage Percent of Employees	Hourly Wages Mean	Hours per Week Mean
Full-time Permanent	9,693.9	17	34	$19.23	40
Full-time Temporary	1,002.5	26	31	$14.84	40
Part-time Permanent	1,679.7	28	26	$12.73	18
Part-time Temporary	689.8	29	22	$11.61	15
Total	13,065.8	20	32	$17.66	36

Source: Statistics Canada, Labour Force Survey 2002, Public Use Microdata Files.
*Employees aged 15 and over.

Source : Crofford et al., (2003)[384]

In 2019,after eighteen years, this situation did not change ,since the precarious jobs still represent one –third of the total of the entire working force representing 2,08 million workers.

Figure 27 Job Permanency in Canada 2019

Job permanency[6]	2019
Total employees, permanent and temporary	16,292.7
Permanent employees[7]	14,212.0
Temporary employees[8]	2,080.7
Seasonal job	416.7
Term or contract job	1,066.8
Casual job	539.6
Other temporary jobs	57.6

Source https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410007201[385]

In addition to that, scholars point out the following aspect; the mismatch between the knowledge and skills required for the labour market, and the skills that workers possess. Many Canadians, particularly those from disadvantaged backgrounds, struggle to access the education and training necessary for high-paying jobs in sectors like technology, healthcare, and finance (the problem of higher education funding)[386].

[384] Crofford et al.,(2003) op.cit.,p.14.
[385] https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410007201.
[386] Finnie, Ross, et al., Skills and Higher Education in Canada: Towards Excellence and Equity. McGill-Queen's University Press, 2012.

The process of relocating industries in the emergent economies accelerated the process of deindustrialization signalling the decline of manufacturing in the western countries and Canada is no exception .The shift toward service-based economy might be perceived as a solution but in fact it disrupted the economy of entire regions modelling the social structure and redefining the traditional industrialized nations paradigms.

The transformation of the economy into one that is based on services has also been greatly influenced by the process of globalization. Service providers in Canada have access to new opportunities to expand their businesses on a global scale as a direct result of the growth of international commerce and investment. The expansion of the service sector may be partly attributed to the fact that a significant number of service providers in Canada have taken advantage of the opportunity given by the said openings by promoting their products and services in international markets. This has led to the growth of the service sector.

Over and above that the post-industrialism has accelerated the growth of major urban centers like Toronto, Vancouver, and Montreal, meanwhile small towns and rural areas, particularly those dependent on manufacturing, resource extraction, and agriculture are facing economic decline[387]. The ultra- urbanization characterized megalopolis creates regional disparities and the concentration of services in this cities are accentuating the rural exodus to find better life with in fact is not taking into account socio-economic problems with real threat on human mental and physical health[388].

One should mention too, due to their long histories of industrial economic bases, traditionally manufacturing and resource-dependent cities are confronted with disadvantageous factors in the context of globalization and technological advancements since the early 1990s. The emergence of new structures of inequality, the growing polarization of the labour market structure, an over-reliance on a diminishing industrial base, and the growing marginalization of urban neighbourhoods dependent on these structures emerged as the most noteworthy concerns for the future socio-economic viability of industrial cities. As a matter of fact, cities such as Ottawa, Montreal and Toronto are perceived as success stories in the post-industrial

[387] Polèse, Mario. The Wealth and Poverty of Regions: Why Cities Matter. University of Chicago Press, 2010.pp.197-207.
[388] Ibid.

transition, cities such as St. Catharines-Niagara, Hamilton, London, Windsor, and Sudbury are increasingly marginalized and confronted with socio-economic decline[389].

A by-product among others of the transition towards a post-industrial society has been the shift of the Canadian rural population to urban settings[390]. Canadian rural population has decreased primarily due to industrialization adopted by government and private businesses, leading to a decrease in agriculture. Such policies have strengthened industrial concentrations, thus pushing the rural population to urban settings. The inner-migration caused and unbalance in the demographic distribution in Canada. Recent statistic figures show that more than 80% of Canadian population are concentrated around and in peripherals of the biggest cities.

It is an utmost to analyse the negative impact of post-industrialism on higher education institution since this work is largely devoted to depict the transformation of the Canadian society within human capital theory and mainly post-secondary education. In fact the most dangerous effect of the 'new model' is the rising costs of education in Canada that has made it difficult or even impossible for many students to afford the necessary credentials. This financial burden has led to higher levels of student debt and a growing divide between those who can access higher education and those who cannot. Even though, higher education is enjoying its highest rates of enrolments in Canada, but it is still submitted to the market oriented strategy of 'supply and demand' which makes it more and more unreachable for most students when it comes to best quality and services offered by HE institutions. As pointed out by Usher and Savino who sustained that tuition fees and education financing in Canada are financial barriers facing students. They emphasize "*the tension between the increasing importance of higher education and the rising costs that create obstacles for many individuals*"[391]. Successive Canadian government have addressed these issues by a series of reforms to make education more accessible and affordable respecting the principles of human capital and social capital investment to ensure the access to post-secondary education to all Canadian. This is why in terms of quantity Canada has the highest rate of graduates and university diplomas holders among OECD members (OECD reports), however, when it

[389] Polèse, Mario (2010), op.,cit.pp.56-9.
[390] Ibid.
[391] Usher, A., and Savino, M. (2006). A World of Difference: A Global Survey of University League Tables. Toronto, ON: Educational Policy Institute. https://files.eric.ed.gov/fulltext/ED499882.pdf.

comes to quality further investigations should be undertaken to assess the efficiency of HE institutions outcomes in Canada.

One of the negative side effects of the transition towards post-industrial society consists on the fact that the economic expansion and the rapid transformation of the economy boost the energy usage in transportation means, growing cities, commercial clusters (malls), tourism and leisure and many other sectors linked to post-industrial economy and heavy energy consumers. This fact provoked an increase in carbon2 emission and the alternation of the ecosystems in Canada with the acceleration of global warming. However, one should say that the ecosystem 'disruption' started long before the emergence of post-industrialism, and is the fact of capitalism, as asserted by Foster[392]. This is why, to solve this worldwide issue, the help of scientists and post-secondary institutions are needed.

Post-industrialism, as studied previously means a shift from manufacturing-based economy to knowledge-based and service-oriented economy; it has impacted all sectors, including higher education. It is true that the interplay between higher education institutions and post-industrialism has led to advancements in sciences-technology and knowledge, it is ,also, responsible of a number of issues and challenges for higher education institutions in Canada. An attempt will be made to list and analyse them according to scholars and academics research .

As seen previously, according to Usher et al., one of the most crucial impacts of post-industrialism on higher education in Canada is the increased financial pressure on institutions and students[393] , since knowledge became submitted to the market orientations. As the economy has shifted towards a service-based model, higher education institutions have faced funding cuts and reduced public support, leading to a reliance on tuition fees to cover operational costs. Students are increasingly submitted to the financial pressure since they need credits and loans from the banking system this the Damocles' sword impacts their studies, enhance their anxiety and contributes to their psychological well-being. This is fact is at the antipodes of what the human capital theory stipulates for human health security. Many students found themselves 'out of the lane'.

[392] Foster, John Bellamy. The Ecological Rift: Capitalism's War on the Earth. Monthly Review Press, 2010.
[393] Usher, A., and Savino, M. (2006).

Besides, the market-oriented education in post-industrialism influences the elaboration of programs and curriculum which are designed according to the need of the market. This may put pressure on higher education institutions which would be oblige to adapt and adopt themselves according to the market changes and needs. This fact may be responsible for institutional instability.

Furthermore, competitiveness, the capitalist spirit in the market-driven economy, has a negative impact on higher education which might lead to social Darwinism within academic institutions. This is why vocational and technical programs have gained prominence within Canadian higher education institutions. These programs are designed 'to equip' students with specific skills and practical knowledge that are *de facto* applicable in the workforce. For example, programs in fields like computer science, engineering, healthcare, tourism, and business often receive more attention and resources because they are seen as primordial to the post-industrial economy. They are said to be more productive and innovative as perceived by functionalism.

However, other academic fields seem to be the orphans or the victims of the post-industrialism such as some programs in arts and humanities since the focus is put on vocational and technical training. These fields, which include subjects like literature, philosophy, history, and the arts, are often seen as less directly connected to immediate job market outcomes. As a result, institutions may allocate fewer resources .The risk is to reduce program less support for students pursuing these disciplines[394].Even students engaged with vocational and technical programs may miss intellectual and cultural sprit that arts and humanities offer, since their overall educational development, including critical thinking, creativity, and cultural awareness might be altered in both personal and societal levels.

It is commonly assumed that the first task of post-secondary education is to forge intellectual spirits, this is a far reaching objective in a market-driven economy. One should add that Arts and Humanities in the market-oriented knowledge and economy are to be lucrative and money-generator since they should be part in entrainments and leisure industry[395].

[394] Slaughter, Sheila, and Gary Rhoades. Academic Capitalism and the New Economy: Markets, State, and Higher Education. Johns Hopkins University Press, 2004.
[395] Readings, Bill. The University in Ruins. Harvard University Press, 1996.

To conclude, the commercialization and market-driven approach to higher education have also contributed to a perception that universities in the West are becoming lucrative companies as any commercial brands since they are more business-oriented than educational institutions. The international ranking system is enhancing this perception since it is based of competition and defined knowledge as tangible and measurable. It appears that post-secondary education institutions are contributing to the progression of post-industrialism but in return the knowledge economy is deleting creating a gap between the said institutions among themselves and vis à vis the intellectual sphere. This transformation has led to the erosion of public trust in the value and purpose of higher education in the West since many 'big' universities seem to be 'untouchable' 'unfordable' like a high speed sport automobiles brands or certain luxury products. The cast system created among higher education institutions would generate, at a certain moment, a compromise between academics to determine the real role of higher education system.

We should say as future prospects, in spite the fact that the situation is irreversible, there are still some points that could be done to ameliorate the situation as the say goes 'the bottles is neither full nor empty', and even though post industrialism is the fruit of higher education it is still under development and continuous assessment. Future prospects within the Canadian context are to be noted.

The first one is the federal and provincial government future responses towards the way to enhance public funding and support; increasing public investment in higher education would alleviate financial pressures on institutions and reduce the cost burden on students, to ensure equitable access and address disparities in educational opportunities even in the most prestigious institutions to reduce the 'meritocratic elitist' conception introduced by capitalist knowledge conception of higher education .

Moreover, the field should be taken to analyse both policy-makers and academics conception to reach a balanced educational approach to install equilibrium between market-driven education and the socio-economic environment of the provinces and the regions in Canada. Besides, the need to have an in-depth scrutiny in the interdisciplinary programs should be undertaken to investigate the way of promoting a broad-based curriculum will help maintain the standards of the educational experience.

Another point that should be further studied is the one concerning the reinforcement industry-academic partnerships via developing stronger collaborations between the two fields. The need to analyse the inter-connections between the two fields and their interplay is crucial to determine the way the two sectors will operate in the future, to understand how can align educational programs with labour market needs. Besides, a study should be done to investigate the degree and the ways to ensure the independence of the higher education institutions from the intervention of private investment control and dictation. In fact research should address broader societal challenges.

In addition to, the ground should be taken to assess how institutions and policymakers will respond work together to the issues related to precarious employment and job market uncertainty, two phenomena that were amplified by post-industrialism and that have to be put under the lens of academics. Light should be put, too, on the way the Canadian government will be dealing to enhancing career services, offering internships and "co-op programs", and supporting initiatives that promote job security and stability.

There are, also, so many other fields vital to citizens well-fair such as, ecosystems preservation and new urban design to smooth the side-effects of rapid shift towards post-industrialism that could be investigated by the academic field. The focus would be also put on jurisdictions in Canada to respond to the challenges associated with a broadly conceived transition to a post-industrial society. Otherwise, the implications of such a transition may be unequally distributed and aggravate inequality, undermining social cohesion.

There are so many points that could be submitted to discussion in this dissertation , we shall limit ourselves to the followings :the impact of post-industrialism on higher education in Canada reflects a dynamic and evolving landscape, while the transition has brought about improvements and new perspectives, it has also highlighted areas of concern that require targeted interventions. We should adopt a balanced approach to address both the positive and negative aspects of this transition; stakeholders can work towards creating a more equitable, inclusive, and effective higher education system by adopting a permanent system(s) of analysing and assessing the effectiveness of the post-secondary institutions not only for the sake of international ranking and money-making but also for their harmonious integration into the local and national levels.

This chapter underscores the importance of continued research and dialogue to navigate the complexities of post-industrialism and its implications for higher education. As Canada continues to adapt to the changing economic and educational environment, ongoing efforts to address these challenges will be crucial in shaping the future of higher education and ensuring its role as a driver of innovation and societal progress.

Conclusion

This chapter has explored the multifaceted impact of post-industrialism on higher education in Canada, offering a comprehensive analysis of both its positive and negative dimensions. The findings reveal a complex interplay between economic transformations and educational outcomes, underscoring significant implications for policy, practice, and future research.

It is important to encourage investments in education and training because, as the economy shifts toward a knowledge-based and service-oriented model, individuals will require the acquisition of new skills and knowledge in order to retain their level of competitiveness in the labour market. This is why it is important to support investments in education and training. Investment in education and training programs should come from both governments and businesses so that individuals may better adapt to the changing economic situation.

The second point is to foster creative problem solving and an entrepreneurial attitude among students. In fact, innovation and entrepreneurialism are two of the most essential engines of economic growth in post-industrial economies like the United States and Japan as a model for the Canadian economy. It is the role of governments to enact laws and programs that support research and development, as well as to provide business owners with the resources and assistance they require to create and grow new companies. Additionally, it is the obligation of governments to provide entrepreneurs with the tools and assistance they require to meet the needs of the higher education institutions.

The unpredictable outcomes of post-industrial society are the ones of the responsibilities that could be added is to instil a sense of social and environmental responsibility: Societies that have made the transition out of the industrial age are experiencing and resolving social and environmental problems as they develop. One way to meet this burden is to instil a sense of social and environmental responsibility in the members of those societies which appears as a significant element in post-industrial societies. It is essential for individuals, businesses, and governments to work together to improve social justice and environmental practices.

One of the common features of post-industrial society observed during the last three decades is the fact to acknowledge the uniqueness of each person's culture, ethnicity, gender and religion. As post-industrial societies continue to become more diverse, it is essential to acknowledge the existence of multicultural diversity and to take the best from each individual

who contribute to the emancipation of each group. Both the public sector and the private sector, respectively, should adopt policies and programs that support diversity and inclusion in both the workplace and in society.

One of the common features of the post-industrial society is to encourage civic involvement and participation; thus, post-industrial culture has the potential to be more democratic and participatory than industrial societies were. Industrial societies discouraged civic engagement and participation. Industrial culture inhibits civic engagement and participation as direct outcome on inclusiveness and diversity. People should take an active part in the process of establishing their communities and campaigning for social change in their respective settings in post-industrial midst. The political process and decision-making should be opened up to citizens and governments should make it possible for citizens to engage in both processes by offering opportunities for them to do so.

These concepts, when applied to post-industrial cultures, place an emphasis on how important it is to be adaptable, creative, responsible, diverse, and participatory. If individuals and societies accept the changing norms imposed by post-industrialization, they may be able to handle the difficulties and opportunities presented by a rapidly changing economic and social landscape.

V. General Conclusion

It is economic and sociological evidence that Canada has entered in a post-industrial cycle as defined by Bell(1973). This assertion is supported by the Canadian statistics and referenced in this dissertation. It reveals that all the aspects of the transition are palpable in the Canadian reality. These aspects are to be found as follows; a shift from manufacturing to a service-based economy, increased emphasis on knowledge-based economy and technology, and a need for higher education institutions implication.

This dissertation has embarked on a wide-ranging exploration of Canadian higher education within the context of a 'new-model' post-industrialism society. It is outlined by the inter-connections between developing economic needs and educational actions and reactions. Over a detailed scrutiny of theoretical frameworks, an analysis of the current state of higher education in Canada, and an investigation into the economic segments engaged in educational institutions, this research has exposed both the challenges and opportunities that define the current educational environment in Canada.

The research should add that the thesis has attempted to examine the progress and contemporary state of PSE in Canada within the context of a post-industrial society. By constantly addressing the research questions and evaluating the four hypotheses, this research has provided analytical perceptions into the role of higher education in Canadian national development and its back-and-forth with economic dynamics and social milieu. Thus this work is articulated by four chapters using the empirical data provided by the official website of the Canadian statistics and relying on scholars' investigation and academic production devoted to the studied issues.

To start the investigation, the first chapter set the foundation by examining the theoretical keystones of human capital, functionalism, conflict theory, and symbolic interactionism within the landscape of post-secondary education institutions in Canada. This analysis reveals how the targeted theories collectively have shaped our understanding of the flexible strategies undertaken by PSE in response to post-industrial demands. It was, firstly, hypothesized that institutions assimilating technology and practical skills training affiliated better with labour market needs, a theory validated by the data, confirming the pivotal role of contemporary skills in academic curricula. Besides, an attempt was made to clarify the meaning and the use of two concepts; de-industrialization and post-industrialism that seem confusing for many. The results show that de-industrialization means a failure to transition towards the second.

In the second chapter, the investigation explored the current situation of Canadian higher education, detailing its, historical development, its structures, priorities, and challenges; it put the stress on the regional particularities. The second chapter underlined the important steps made in elaborating curricular offerings to meet technological advancements and market needs. However, the analysis also pinpointed tenacious challenges; funding disparities and accessibility, resounding the concerns of conflict theory regarding 'systemic inequalities' within educational admission and consequences on young adults.

Thirdly, chapter three scrutinized the active relationship between higher education institutions and the Canadian economy, concentrating on the way and the degree these institutions contribute to economic development via innovation and skill development. The second hypothesis presumed that a focus on human capital development within post-secondary institutions has led to boost economic outcomes, essentially in technology and innovation sectors via the research and development programs. This hypothesis was strongly supported, indicating a successful alignment of educational outputs with economic growth objectives.

The last chapter is the synthesizer of the research findings, giving some suggested recommendations meant to enhancing the quality of higher education in answering to the challenges of a knowledge-driven economy. The findings confirmed hypotheses three and four . It demonstrated that despite improvements, disparities in access to education continue to exists since it is a market-oriented economy submitted to the demand and supply doctrine. However, the above cited challenges, many institutions have adapted to the situation to show higher rates of student employability integration in the economy. The recommendations emphasize the need for continuous policy innovation to ensure higher education remains inclusive and responsive to both current and future economic landscapes. The last chapter encompasses a number of examples in different continent to demonstrate the efficiency of the implementation of human capital.

As Canadian higher education continues to navigate the complexities of a rapidly evolving global environment, the insights garnered from this dissertation offer valuable pathways for future research and policy formulation. The evidence supports a continued shift towards integration of practical skills with theoretical knowledge, alongside a strengthened commitment to addressing educational equity. For future research, longitudinal studies could

provide further empirical support for the sustained impact of these recommended strategies over time.

In today's post-industrial Canada, higher education faces a number of issues, including the following: an over taxing for the students which may result in exclusion of some brilliant and less fortunate students. In fact, many students find that the transition from secondary school to post-secondary study to be challenging and stressful since the financial aspects is uncertain and submitted to high profit making organizations.

In fact, The post-secondary sector has responded by investing in the "mobilization of knowledge" (Fisher:2014) and pairing entrepreneurial vision with fresh research coming out of the country's leading universities. The rise of the knowledge economy has, yet, to prove its 'revolutionary' qualities, but it has established the intellectual means and popular market for inventions, research and technological advancements.

As a result, skills have become more important, and educational levels determine job opportunities and remunerations. In this context, online learning offers the opportunity to examine and rethink teaching and learning methods. While the future of Canada postsecondary education is uncertain due to the changing patterns, the country entrepreneurs, cabinet ministers, and local governments can learn from the success of California Silicon Valley and England de-industrial process and emulate it by investing in research and development, innovation, and education especially higher education as a driven force .

Besides, the emergence of advanced information and technology has produced a demand for higher education. This need was formed by the combination of the two factors. Providing evidence that the program is of high quality in Canadian post-secondary education is a challenge.

As far as the future of Canada post-secondary system is unknown as it should be determined by uncertain parameters, and while it is still conceivable to invest in research and development, innovation, and education, the certainty of the future of the knowledge economy has not yet been established since the factor of time should not be neglected to assess its efficiency. In fact, the risk is to lose the post-secondary institutions for the benefit of the private sector and money making organization.

Moreover, wide and complex variety of PSE possibilities, the young of Canada is confronted with obstacles as they assess their increasingly broad and complex array of post-secondary education alternatives.

In order to solve these issues, Canadian provinces and territories, as well as Canadian institutions, are placing a priority on the mobilization of knowledge; they are also investing in research and development; innovation; and education; and they are analysing and rethinking teaching and learning techniques, including online learning. The role of the associations, students' organizations and the independent control institutions is vital to limit the unfairness of profit and profit making organizations.

As a result of the proliferation of advanced information and communication technology in post-industrial Canada, there has been an increase in the demand for higher education. The actual gross domestic product (GDP) of Canada's universities and colleges increased by more than 17 percent between 2007 and 2013, demonstrating that post- secondary education is a rapidly expanding industry in Canada centring knowledge economy at the heart of the post-industrial society in Canada.

On the other hand, many students find that the transition from high school to post- secondary school is difficult and stressful. Despite this, increasing the level of education should be a goal in Canada given that doing so typically results in increased employment rates. In comparison, the employment rate for those who have completed their high school education dropped to 51.7% (statistics of Canada).

As a direct consequence of this, there were 2.18 million post-secondary students in Canada in the year 2022 pursuing higher education. Overall, there has been a rise in the demand for higher education in post-industrial Canada. This can be attributed to the necessity of embracing new and more advanced forms of information and technology, as well as the recognition that higher education is necessary for ensuring continued economic success.

There are a number of factors that can be credited for the expansion of the postsecondary education sector in Canada, including the following:

The industry has developed over the years because of rising student enrolment, which has dropped in enrollment in other areas of the world, which has led to a net increase in overall enrollment. Moreover, an increasing tuition costs are representing factor that has contributed

to the expansion of the industry. International students represent a significant and rapidly expanding group in Canadian postsecondary education. The proportion of international students as a share of overall enrolments increased from 8.2% to 15.5% between 2009–10 and 2015–16.

It must be added that higher rates of employment are typically the result of obtaining postsecondary education. Hence, this point is important, according to the Labor Force Survey, the percentage of employed Canadians with a postsecondary degree is larger than the percentage of employed Canadians without such an education. This highlights the necessity of obtaining higher education qualifications in modern world, which is characterized by more complex information and technological systems. Higher education is becoming increasingly important as people strive to adapt to the knowledge and technology that is becoming available.

As demonstrated in this dissertation, the growth of the post-secondary education institutions in Canada could be connected to a number of different factors, including rising student enrolment, greater tuition fees, an increase in the number of international students, higher employment rates, and the requirement to incorporate new forms of information and technology. The latter are becoming more and more sophisticated. Higher education enjoys an essential role in the post-industrial society in Canada, and it has a huge impact not only on the economy but also on society and individual lives. Henceforth, in wider sense we shall assert the following; in nowadays post-industrial world, universities are fundamentally different, having functions that they did in the past. Indeed some of the ways in which universities have progressed (now more than ever), people look to PSE as a way to hasten the transition to a more sustainable future.

Effectively, the codifications of theoretical knowledge, in Canada or elsewhere, are the sources of innovation, and universities are positioned as the producer of the future workforce through the development of ‘transferable skills’ and professional competencies in North America and Europe; obtaining a college degree serves not only a practical but also a personal purpose, and doing so has both financial and social repercussions when compared to not having one.

Thus, universities have altered their concentration from being the owners and transmitters of knowledge to being the producers of the future workforce through the acquisition of transferable skills and professional competencies in post-industrial societies. It becomes clear that there is a considerable correlation between education and employment, and there is a requirement for a comparison study between the educational systems of Canada and the rest of the world. Canada proves to be the best example of a nation ability to accomplish its economic goals via the significant factor represented by tertiary education.

As final thought, the production of graduates equipped with the knowledge and abilities necessary in a post-industrial society has emerged as a primary focus in today educational institutions. They are also considered as a means to attain economic and social objectives, which is another reason why they are important.

In conclusion, this dissertation not only illuminates the current state and challenges of Canadian higher education but also provides a scholarly foundation for enhancing its role in national development. The findings advocate for a balanced approach to education reform, one that fosters both economic development and social equity, ensuring that the Canadian higher education system can effectively meet the demands of the post-industrial age.

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- https://www.canada.ca/en/women-gender-equality/commemorations-celebrations/royal-commission-status-women-canada.html
- https://www.collegesinstitutes.ca/by-the-numbers-exploring-womens-presence-in-canadian-colleges-and-institutes/ retrived on April 2024
- https://heqco.ca/women-in-academia-part-one/ retrived on april 2024
- https://www.cicic.ca/1286/qualifications_frameworks.canada

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- Encyclopedia of Sociology, Second Edition,(2000), Edgar F. Borgatta Editor-in-Chief University of Washington, Seattle ,MacmillanRhonda J. V. MontgomeryManaging EditorUniversity of Kansas, Lawrence
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- https://www.britannica.com/place/South-Korea
- https://www.collectionscanada.gc.ca/massey/index-e.html
- https://dictionary.cambridge.org/fr/dictionnaire/anglais/futurologyretrieved on 12/08/19
- https://www.international.gc.ca/trade-commerce/assets/pdfs/state_of_trade-commerce_international/special_feature-2018-article_special-en.pdf retrived on July 2024

VII. Appendices

Appendix 01 Constitution Act of 1867 and 1982 concerning Education

Existing powers or rights

(6) Nothing in subsections (1) to (5) derogates from any powers or rights that a legislature or government of a province had immediately before the coming into force of this section. [49]

EDUCATION

Legislation respecting Education

93. In and for each Province the Legislature may exclusively make Laws in relation to Education, subject and according to the following Provisions:

(1) Nothing in any such Law shall prejudicially affect any Right or Privilege with respect to Denominational Schools which any Class of Persons have by Law in the Province at the Union;

(2) All the Powers, Privileges, and Duties at the Union by Law conferred and imposed in Upper Canada on the Separate Schools and School Trustees of the Queen's Roman Catholic Subjects shall be and the same are hereby extended to the Dissentient Schools of the Queen's Protestant and Roman Catholic Subjects in Quebec;

(3) Where in any Province a System of Separate or Dissentient Schools exists by Law at the Union or is thereafter established by the Legislature of the Province, an Appeal shall lie to the Governor General in Council from any Act or Decision of any Provincial Authority affecting any Right or Privilege of the Protestant or Roman Catholic Minority of the Queen's Subjects in relation to Education;

(4) In case any such Provincial Law as from Time to Time seems to the Governor General in Council requisite for the due Execution of the Provisions of this Section is not made, or in case any Decision of the Governor General in Council on any Appeal under this Section is not duly executed by the proper Provincial Authority in that Behalf, then and in every such Case, and as far only as the Circumstances of each Case require, the Parliament of Canada may make remedial Laws for the due Execution of the Provisions of this Section and of any Decision of the Governor General in Council under this Section. [50]

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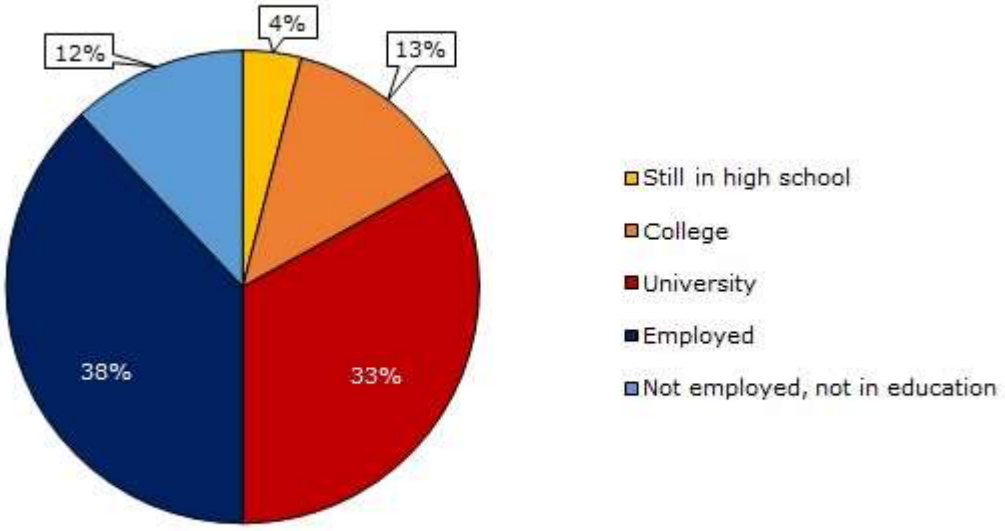
[49] **Added by section 50 of the *Constitution Act, 1982*.**

[50] **Alternative provisions have been enacted for four provinces. For further details, see endnote 4.**

Appendix 02
Canadian Statistics 2001-2016 on Higer Education and the Canadian Economy

Chart 1
Education and labour market activities of 18 to 24 year olds, Canada, 2021/2022



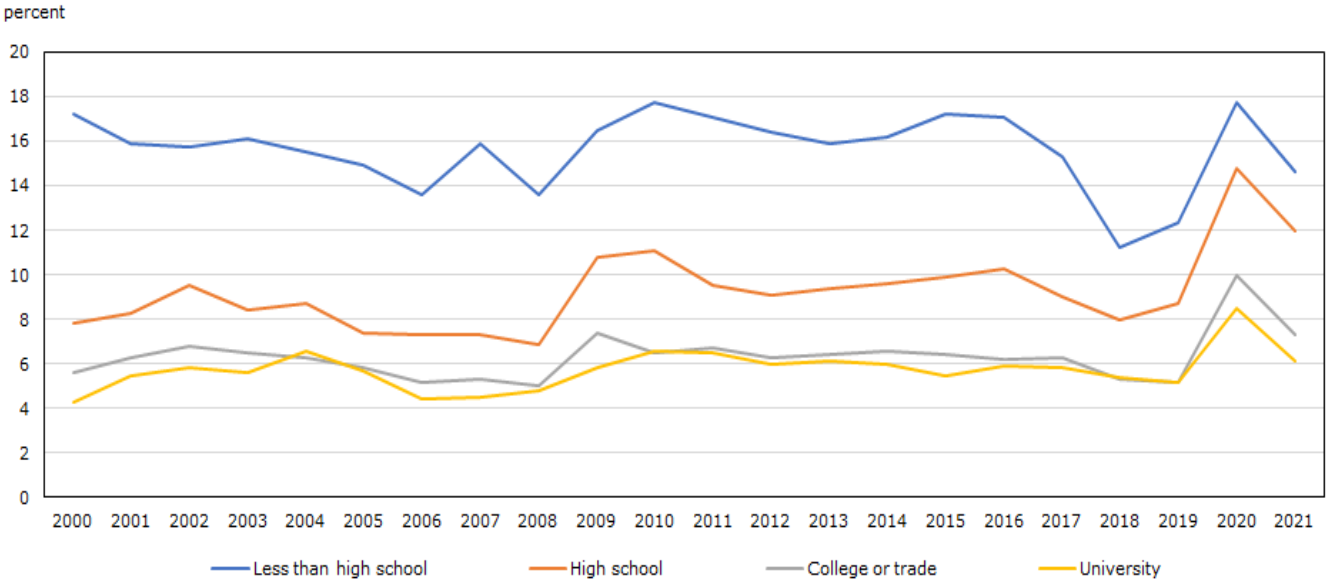
Note: The participation rate in apprenticeships cannot be added to this graphic, as it is not known how apprentices report their educational participation in the Labour Force Survey. The reference period for the education activities is 2021/2022, while the reference period for the labour market activities is 2022.
Source: Statistics Canada, tables 37-10-0103 and 37-10-0196.

x

https://www150.statcan.gc.ca/n1/pub/81-595-m/81-595-m2023004-eng.htm

Appendix 03 :Academic Facts About Economic Factors in Canada

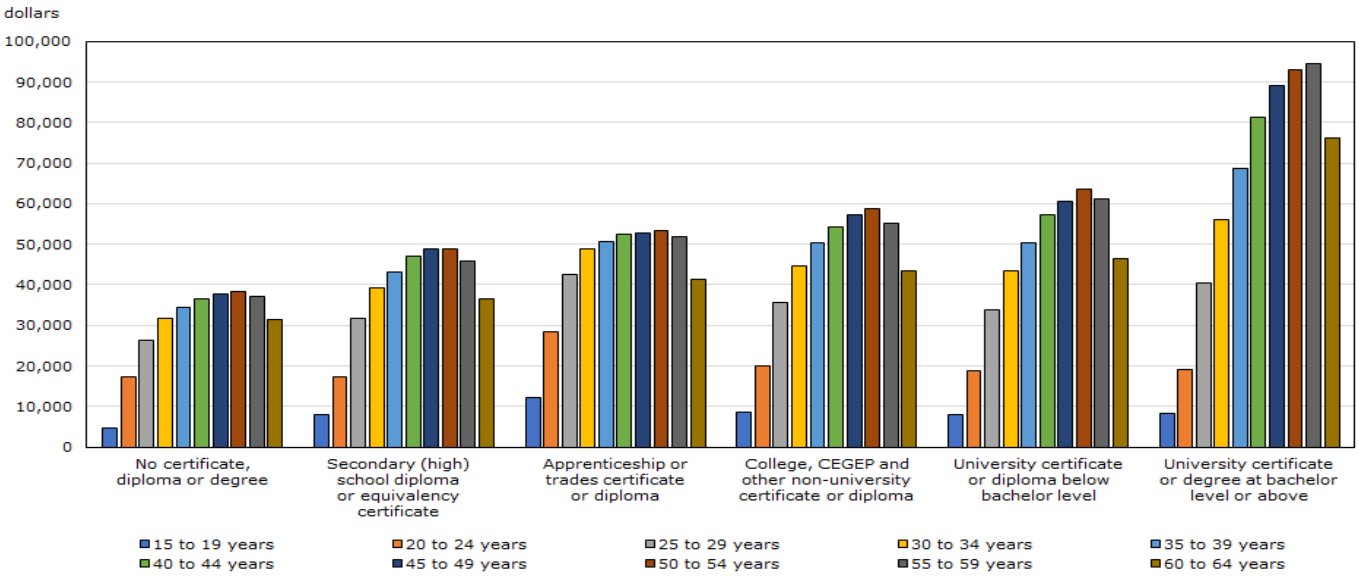
Chart 2
Unemployment rates of 25 to 29 year olds, by highest level of educational attainment, Canada, 2000 to 2021



Source: Statistics Canada, table 14-10-0362.

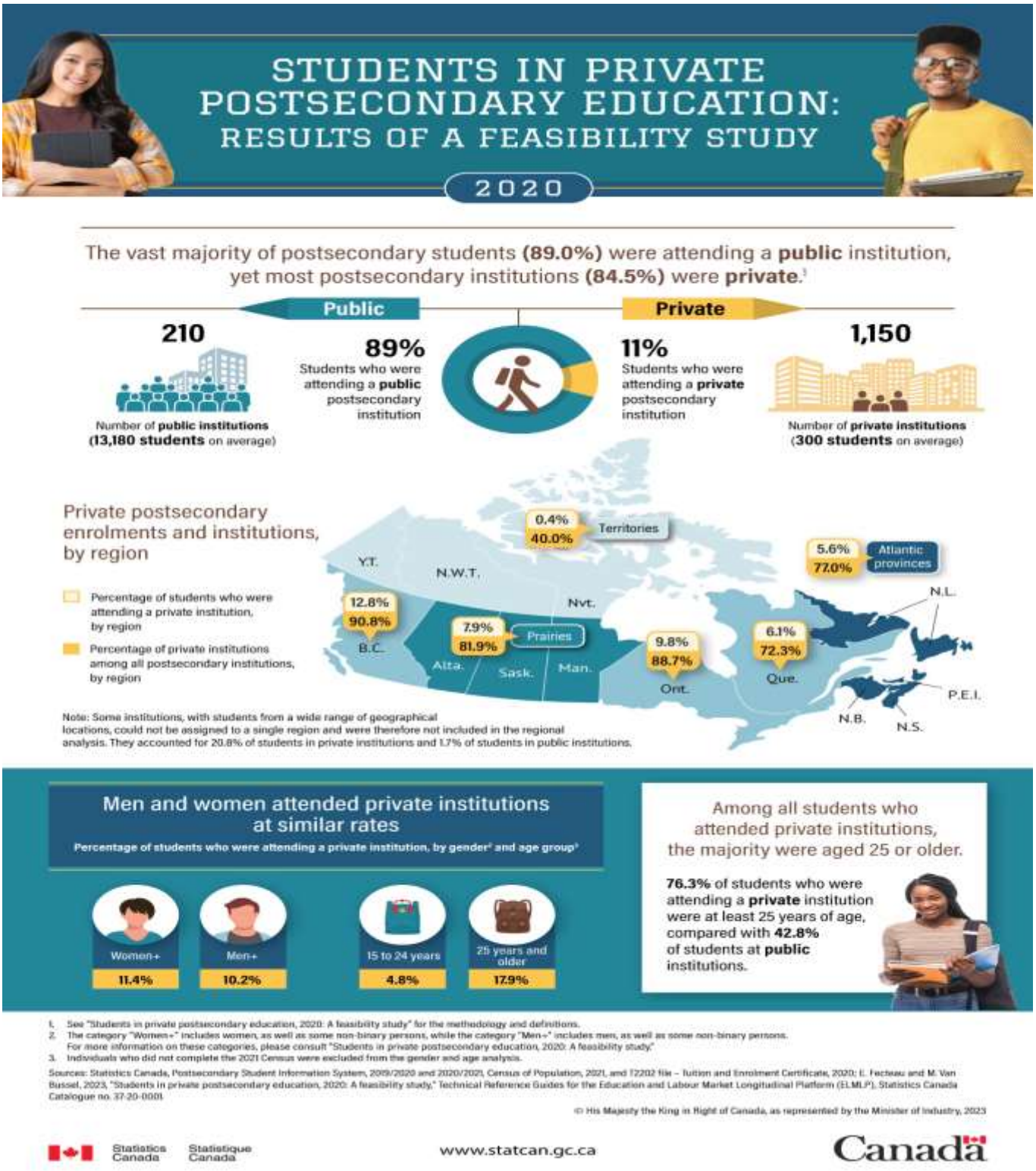
https://www150.statcan.gc.ca/n1/pub/81-595-m/81-595-m2023004-eng.htm

Chart 3
Average earnings or employment income of workers by age group and highest level of educational attainment, Canada 2016



Source: Statistics Canada, table 37-10-0152.

Appendix 03: HE Private Institutions in Canada : A Description



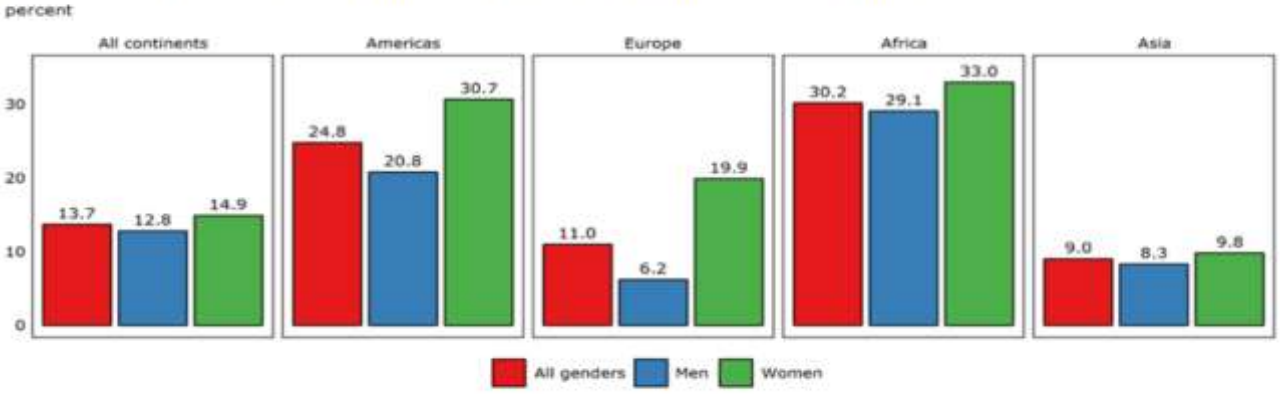
Appendix 04: Immigrants HE Qualifications (2010-2019)

Table 1
Categories and exclusions, for immigrants admitted to Canada in 2010

Categories and exclusions	Count	Percent
Total immigrants and refugees	**278,210**	...
Economic immigrants, principal applicant	76,170	27.4
Economic immigrants, spouse and dependent	110,010	39.5
Immigrants sponsored by family	64,310	23.1
Refugees	24,390	8.8
Other	3,330	1.2
Economic immigrants, principal applicant	**76,170**	...
Outside of core working age (25 to 54 years old)	2,840	3.7
Studied previously in Canada	8,340	10.9
Did not file taxes in Canada in any year between 2011 and 2019	6,040	7.9
Economic immigrants, principal applicant, study population	58,950	77.4
Economic immigrants, principal applicant, study population	**58,950**	...
Graduated in Canada (2010 to 2019)	8,060	13.7
Did not graduate in Canada (2010 to 2019)	50,890	86.3

... not applicable
Sources: Statistics Canada, Longitudinal Immigration Database (IMDB), 2010, Postsecondary Student Information System (PSIS), 2009/2010 to 2019/2020 and T1 Family File (T1FF), 2011 to 2019.

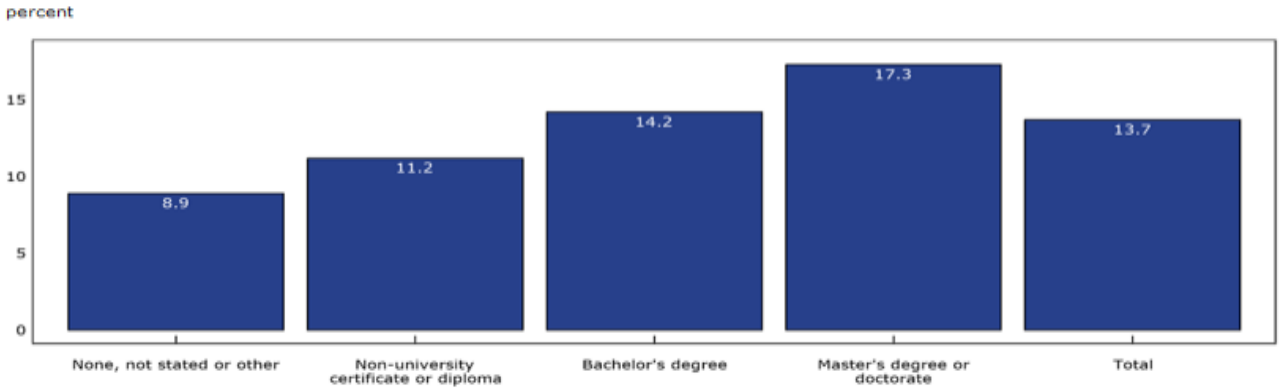
Chart 1
Proportion of principal applicants admitted to Canada in 2010, who obtained a Canadian educational qualification between 2010 and 2019, by continent of birth and gender



Note: The United States was excluded from the category "Americas". Certain regions were excluded due to low counts.
Sources: Statistics Canada, Longitudinal Immigration Database (IMDB), 2010, Postsecondary Student Information System (PSIS), 2009/2010 to 2019/2020 and T1 Family File (T1FF), 2011 to 2019.

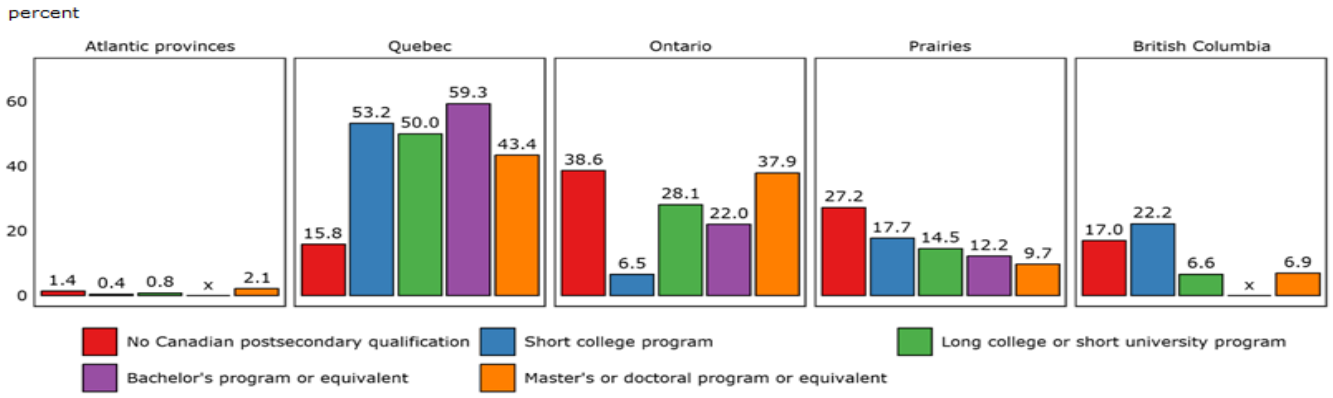
Appendix 05 : Qualifications and Admission in Canada According to Diplomas (2010-2019)

Chart 2
Proportion of principal applicants admitted to Canada in 2010, who obtained a Canadian educational qualification between 2010 and 2019, by educational qualification at admission



Note: The "None, not state or other" category for the educational qualification at admission includes "secondary or less", "formal trade certificate or apprenticeship", "some university – no degree" and "some postgraduate education – no degree".
Sources: Statistics Canada, Longitudinal Immigration Database (IMDB), 2010, Postsecondary Student Information System (PSIS), 2009/2010 to 2019/2020 and T1 Family File (T1FF), 2011 to 2019.

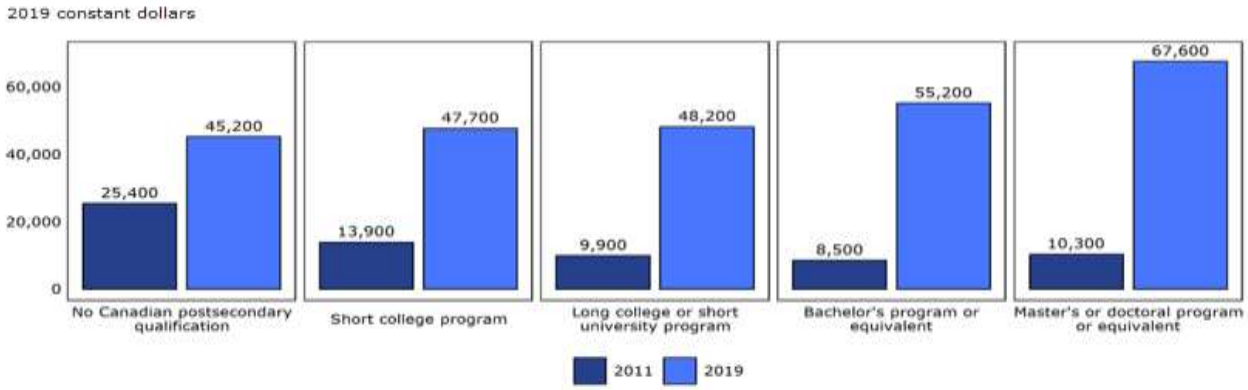
Chart 3
Proportion of principal applicants admitted to Canada in 2010, who resided in each region in 2019, by Canadian educational qualification



x suppressed to meet the confidentiality requirements of the *Statistics Act*
Note: The region of residence is as per the information available on the 2019 tax form. Individuals who did not file taxes in 2019, who did not file taxes in Canada or who filed taxes in the territories were excluded from this chart.
Sources: Statistics Canada, Longitudinal Immigration Database (IMDB), 2010, Postsecondary Student Information System (PSIS), 2009/2010 to 2019/2020 and T1 Family File (T1FF), 2011 to 2019.

Appendix 6 : HE Qualifications and Salaries Concordance (2010-2019)

Chart 4
Median employment income for principal applicants who had a bachelor's degree at admission to Canada in 2010, by educational qualification obtained in Canada between 2010 and 2019, 2019 constant dollars



Note: Individuals who did not file taxes in 2011 and in 2019 are excluded from this analysis.
Sources: Statistics Canada, Longitudinal Immigration Database (IMDB), 2010, Postsecondary Student Information System (PSIS), 2009/2010 to 2019/2020 and T1 Family File (T1FF), 2011 to 2019.

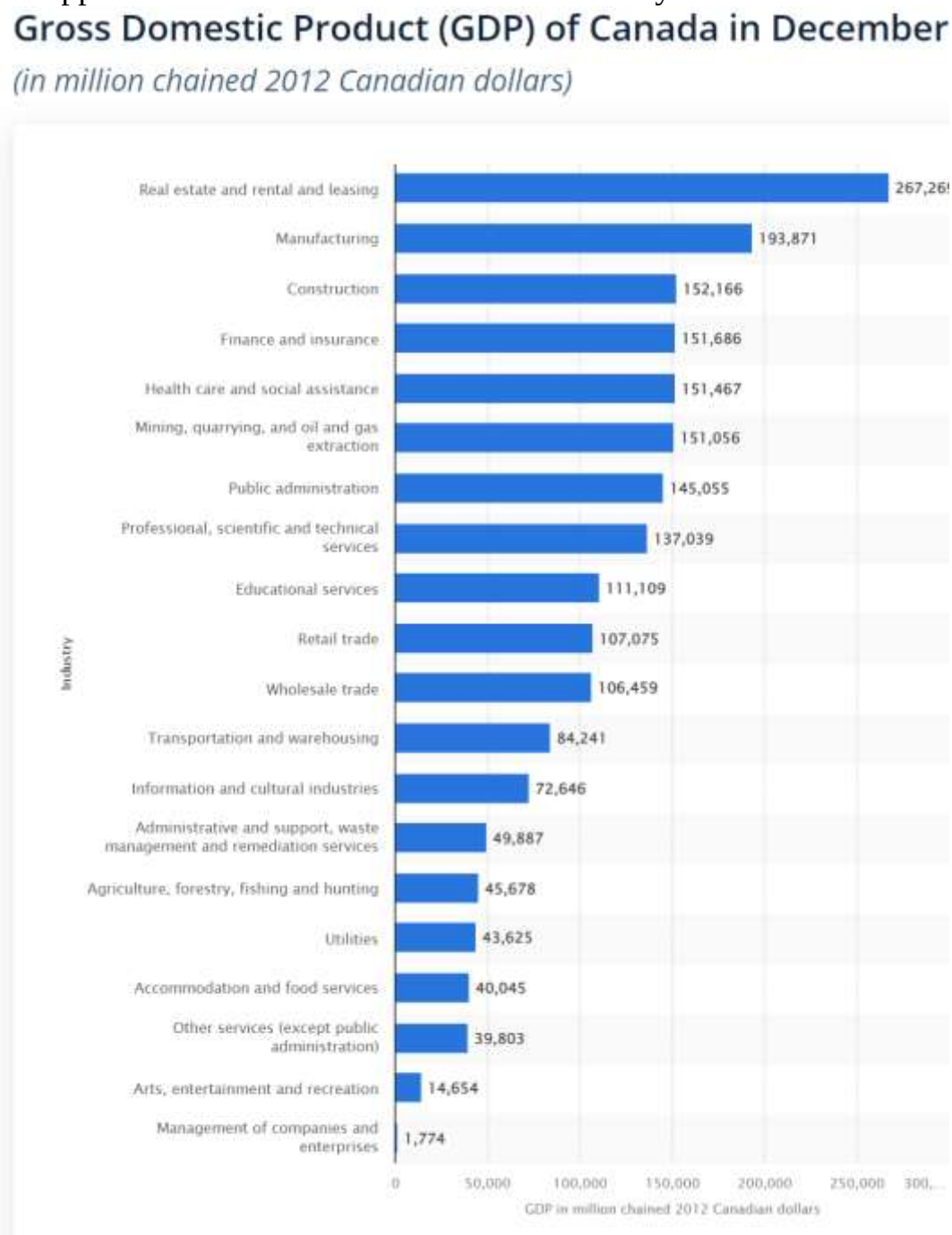
Concordance table between the International Standard Classification of Education groupings (ISCED) and the Classification of programs and credentials, for the principal applicants who obtained a Canadian educational qualification after admission

ISCED	ISCED Renamed	Classification of programs and credentials	Coun
Post-secondary non-tertiary education (ISCED 4)	Short college program	Career, technical or professional training certificate	95
		Career, technical or professional training short credential	161
		Other career, technical or professional training credential	1
Short-cycle tertiary education (ISCED 5)	Long college or short university program	Career, technical or professional training diploma	112
		Post career, technical or professional training program certificate	18
		Post career, technical or professional training program diploma	1
		Undergraduate certificate	117
		Undergraduate diploma	1
		Undergraduate short credential	:
		Undergraduate associate degree	:
		Other postsecondary diploma	:
Bachelor's or equivalent (ISCED 6)	Bachelor's program or equivalent	Undergraduate degree	92
		Post-baccalaureate non-graduate certificate	:
		Post-baccalaureate non-graduate diploma	4
		Master's certificate	:
		Master's diploma	33
		Other master's-level credential	:
Master's and Doctoral or equivalent (ISCED 7 and 8)	Master's or Doctoral program or equivalent	Master's degree	142
		Doctoral-level diploma	:
		Doctoral degree	17
		Professional degree	:

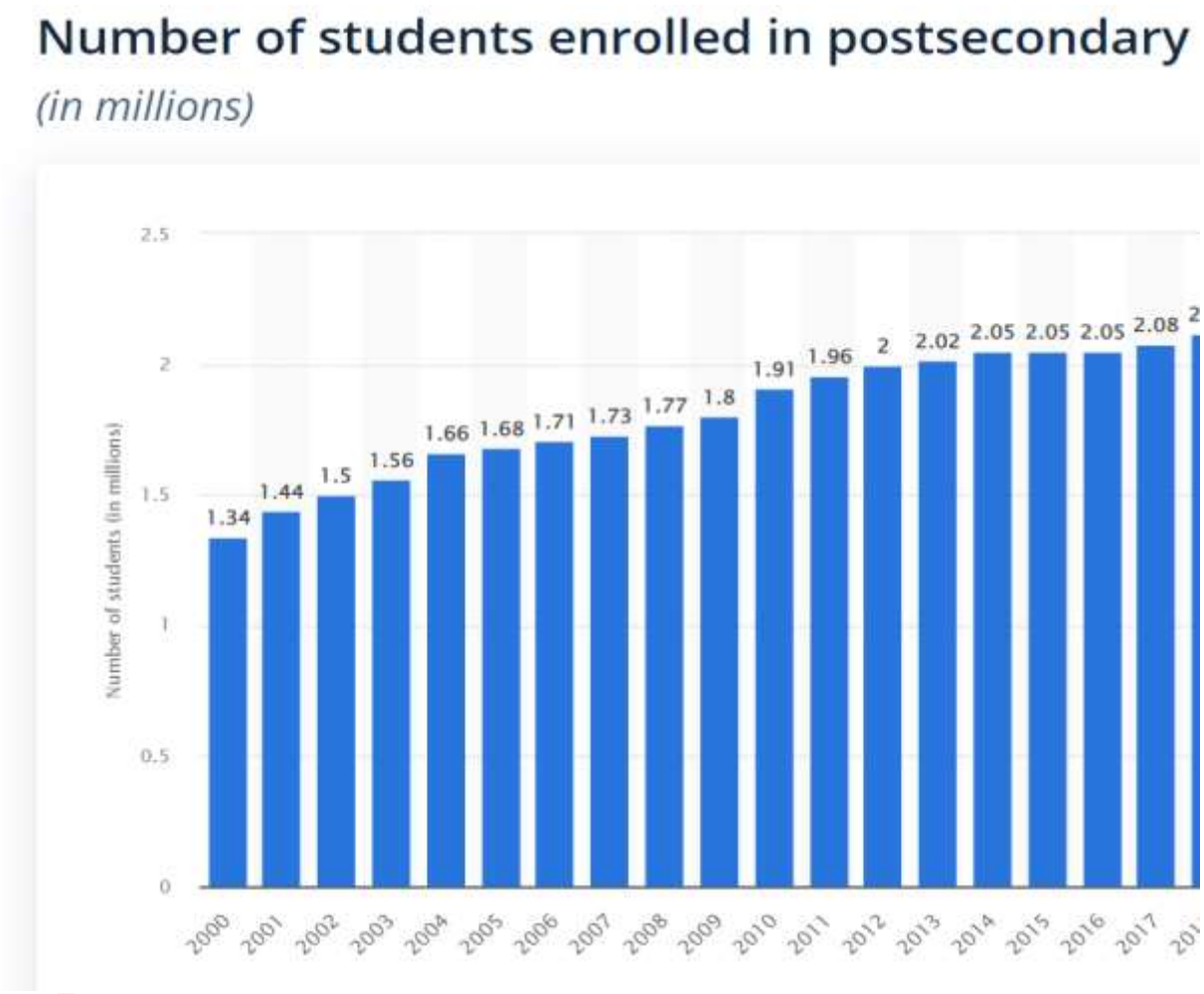
x suppressed to meet the confidentiality requirements of the *Statistics Act*

Sources: Statistics Canada, Longitudinal Immigration Database (IMDB), 2010, Postsecondary Student Information System (PSIS), 2009/2010 to 2019/2020 and T1 Family File (T1FF), 2011 to 2019.

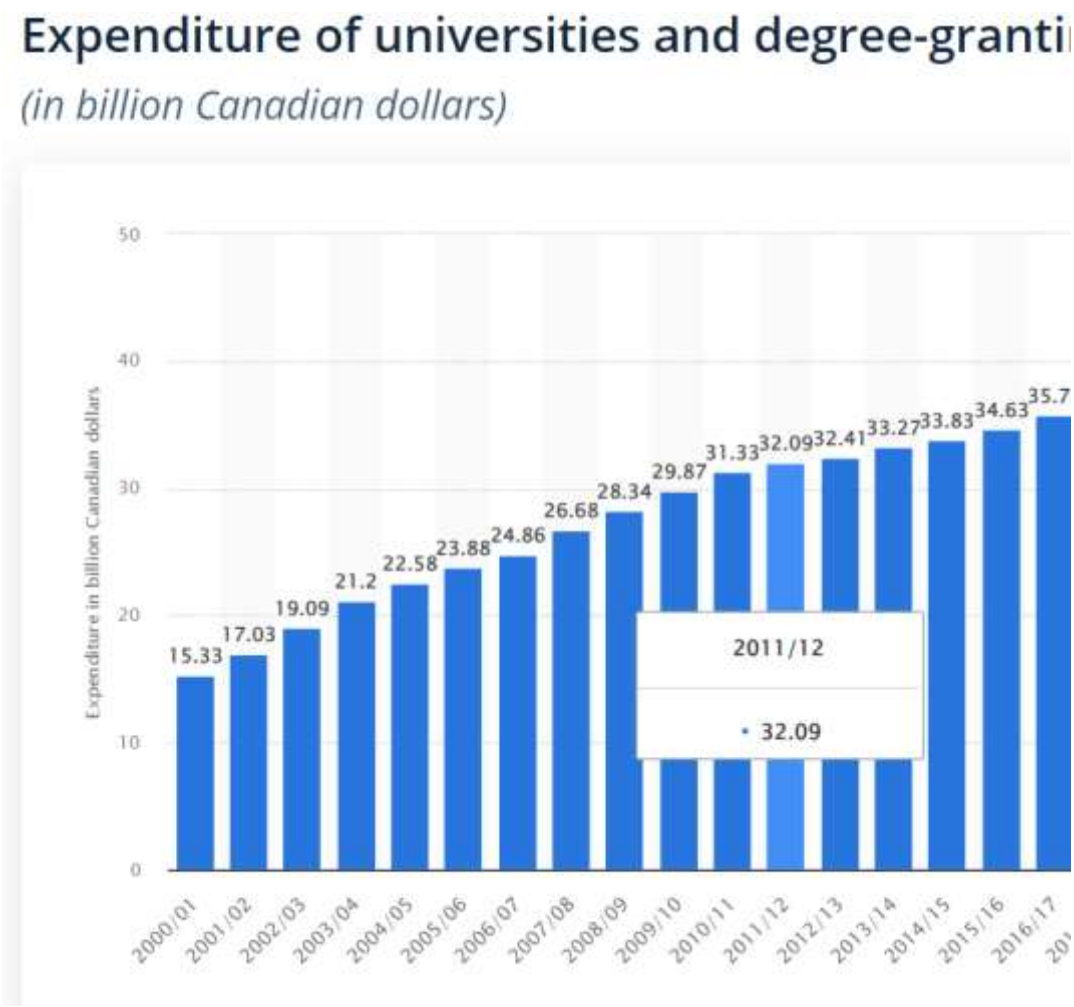
Appendix 7 :Contribution Of Service Economy In Canadian GDP



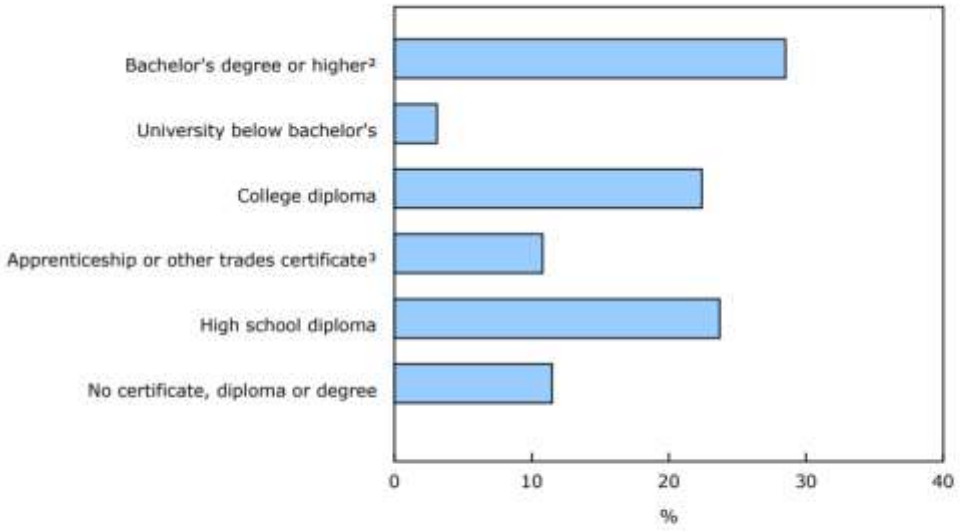
https://www.statista.com/statistics/594293/gross-domestic-product-of-canada-by-industry-monthly/



https://www.statista.com/statistics/447739/enrollment-of-postsecondary-students-in-canada/



https://www.international.gc.ca/education/report-rapport/impact-2018/index.aspx?lang=eng



1 Educational attainment refers to a person's highest certificate, diploma or degree.
2 The term 'Bachelor's degree or higher' corresponds to the category 'University certificate, diploma or degree at bachelor level or above' in the 'Highest certificate, diploma or degree' classification.
3 This category includes those with a Certificate of Apprenticeship, a Certificate of Qualification or a journeyperson's designation, as well as those with a non-apprenticeship trades certificate.
Source(s): Statistics Canada, Census of Population, 2016.

Appendix 8 International Students Economic Contribution

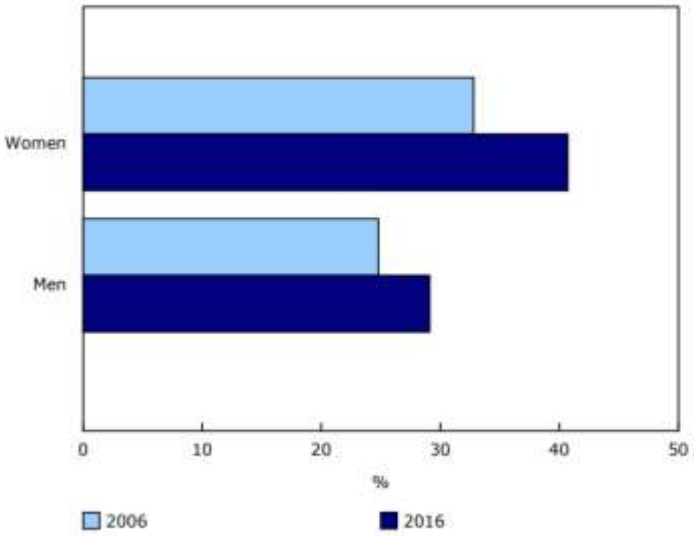
Source: Computed by Canmac Economics, Statistics Canada I-O Model

Summary Table 3: Comparison of international education services, as measured by total spending by international students, and Canada's service and merchandise exports, 2017 and 2018

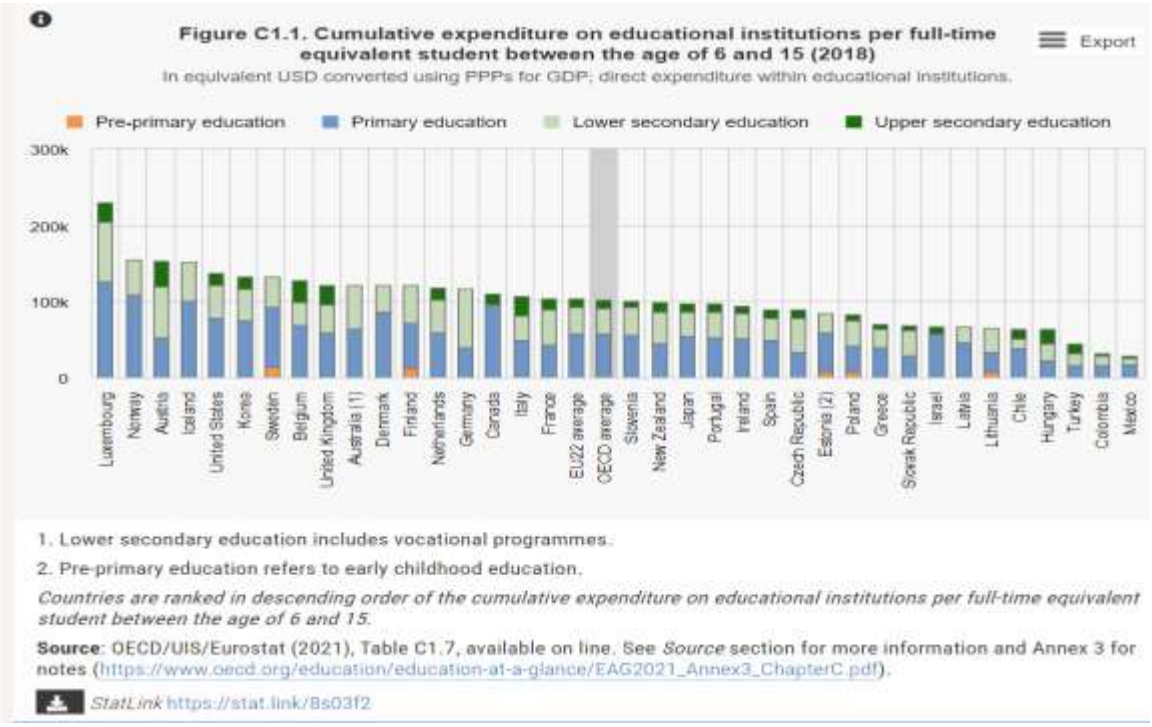
	2017 Value (billions)	2017 International Student Spending as a % of Exports	2018 Value (billions)	2018 International Student Spending as a % of Exports
Total annual spending – all international students	$18.50	n/a	$24	n/a
Canada's exports in services	$122.30	15.13%	$128.2	18.72%
Canada's exports in merchandise	$546.10	3.38%	$584.4	4.11%

Appendix 9: Different Populations represented in Canadian Higher Education

Percentage of women and men aged 25 to 34 with a bachelor's degree or higher[1], Canada, 2006 and 2016



1. The term 'Bachelor's degree or higher' corresponds to the category 'University certificate, diploma or degree at bachelor level or above' in the 'Highest certificate, diploma or degree' classification.
Source(s): Statistics Canada, Census of Population, 2006 and 2016.



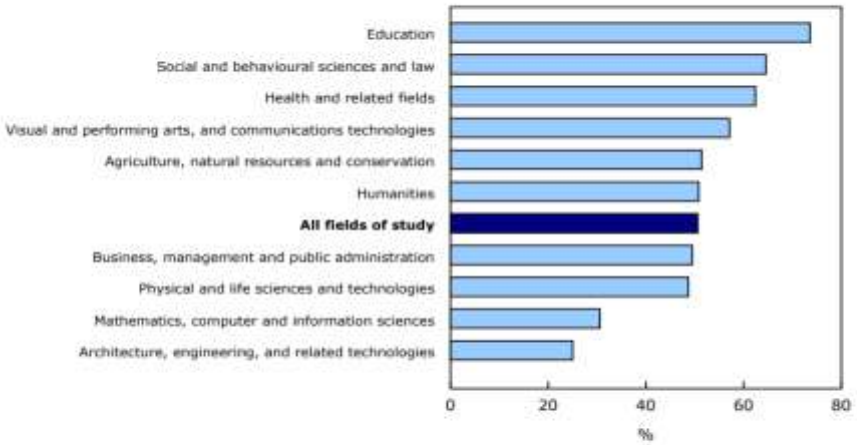
1. Lower secondary education includes vocational programmes.
2. Pre-primary education refers to early childhood education.

Countries are ranked in descending order of the cumulative expenditure on educational institutions per full-time equivalent student between the age of 6 and 15.

Source: OECD/UIS/Eurostat (2021), Table C1.7, available on line. See *Source* section for more information and Annex 3 for notes (https://www.oecd.org/education/education-at-a-glance/EAG2021_Annex3_ChapterC.pdf).

StatLink https://stat.link/8s03f2

Chart 4
Fields of study[1] ranked by percentage of women among young people aged 25 to 34 with an earned doctorate[2], Canada, 2016



1 Primary groupings in the Classification of Instructional Programs, 2016. The fields 'personal, protective and transportation services' and 'other' are excluded from the detailed categories but are included in 'all fields of study.'
2 Excluding non-permanent residents.
Source(s): Statistics Canada, Census of Population, 2016.

Even though more young men are obtaining degrees at the bachelor's level or above over time, their increase has been at a slower pace than for young women. Close to 3 in 10 (29.1%) young men aged 25 to 34 had a bachelor's degree or higher in 2016, up from one-quarter in 2006.

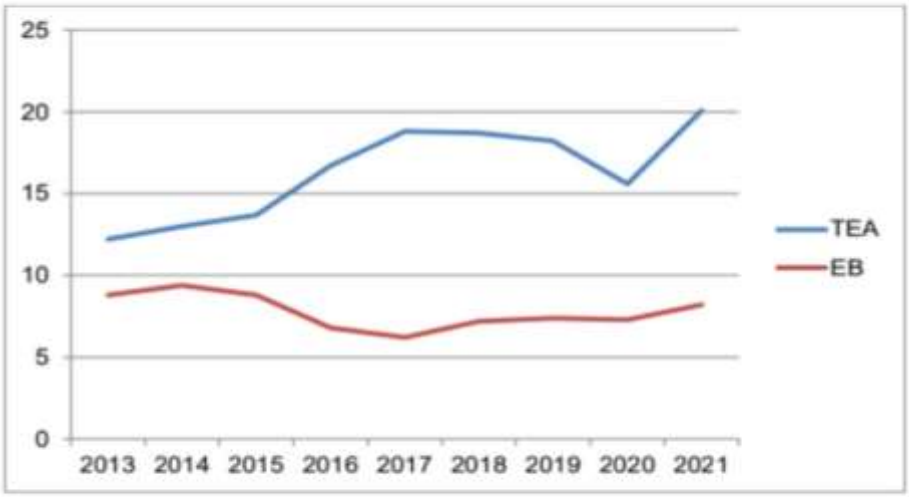
Canadians are equipping themselves for the jobs of today

The census data make it possible to examine the earnings of Canadians with various educational qualifications and to look at how young graduates are doing in the labour market, including the relationship between their field of education and their job. These topics are covered in the articles from the *Census in Brief* series on education, including "Does education pay? A comparison of earnings by level of education in Canada and its provinces and territories," "Are young bachelor's degree holders finding jobs that match their studies?," and "Is field of study a factor in the earnings of young bachelor's degree holders?".

Among Canadians aged 25 to 64 with postsecondary qualifications, 81.4% were graduates in fields important for building a strong social infrastructure, such as education, communications, justice, health and others. Contributing to the advancement of Canada's science and technology competitiveness, 18.6% of working-age Canadians with postsecondary qualifications graduated from science, technology, engineering and mathematics (STEM) fields.

Appendix 10 Evolution of Entrepreneurship among HE Qualification Degrees Holders

The graph below shows the evolution in Canada since 2013 using the GEM database.



Source: GEM Canada

TEA (Total early stage entrepreneurship activity) is a combination of two numbers – nascent entrepreneurs, those actively starting up a business and owner managers of a business less than 3.5 years old.

EB (established businesses) are owner managers of a company more than 3.5 year old.

In both cases the numbers refer to the percentage of the adult population (age 18+) engaged.

The TEA rate has crept steadily upwards since 2013, with a dip in 2020 due to COVID, while the EB rate has remained fairly constant.

Statistics Canada data confirms that the number of firms, adjusted for population growth, has remained roughly constant since 2014.

https://www.gemconsortium.org/news/economic-growth-and-entrepreneurship-increases-in-canada

Appendix 11: Comments of the Canadian National Statistics Office on Major Facts about the Canadian Higher Education Population and Institutions

Young engineering and computer and information sciences graduates are likely to work in occupations closely related to their training

Among all young bachelor's degree holders aged 25 to 34 from STEM fields, those from engineering and computer and information sciences were the most likely to bring their skills to the sector of the labour market closely related to their training, with 7 in 10 working in science and technology occupations. Men were more likely to study engineering or computer and information sciences than women: over 5 in 20 young men with a bachelor's degree graduated from these fields of study, compared with under 1 in 20 young women with a bachelor's degree.

Women are the majority in health fields and very likely to find work that matches their studies

With an aging population, health care skills are increasingly important for the labour market. In 2016, most graduates in health fields at all levels of education were women and they were finding work that matched their studies. For example, women accounted for 92.7% of young nursing graduates aged 25 to 34 at the bachelor's level and 64.4% of young graduates with medical degrees.

About 95% of young nursing graduates worked in health occupations. Further, the earnings of young nursing graduates were as high as young engineering graduates. The median earnings of young women with a nursing degree were $75,027 in 2015, while those for young women with a degree in engineering were $75,023. The difference in earnings between these two fields among men was also very small. This reflects the strong demand for the skills of nursing graduates in an aging society.

Women also accounted for the majority of young graduates aged 25 to 34 in health fields at the college level. For example, about 65% of young college graduates in fields related to health diagnostic and treatment technologies (such as mammography and MRI technicians) were women. Furthermore, 85.1% of young employed women with a college diploma in these fields worked in health occupations.

Over half of recent immigrants have a bachelor's degree or higher

Immigrants contribute to Canada's economy by bringing their skills and high levels of educational attainment. Canada's immigration system highly values education. In recent years, new programs have made it easier for international students who have completed their postsecondary education in Canada to immigrate into the country. As of the 2016 Census, 4 in 10 immigrants aged 25 to 64 had a bachelor's degree or higher. In comparison, just under one-quarter of the Canadian-born population aged 25 to 64 had a bachelor's degree or higher. Recent immigrants who landed in the five years prior to the 2016 Census were especially well-educated, with over half having a bachelor's degree or higher. Recent immigrant women were more likely than recent immigrant men to have a bachelor's degree or higher in 2016. The reverse was true in the 2006 Census.

The percentage of all immigrants with a master's or doctorate degree is twice that of the Canadian-born population. Among immigrants aged 25 to 64, 11.3% had a master's or doctorate degree compared with 5.0% among the Canadian-born population. Recent immigrants were even more likely to have a master's or doctorate degree, with 16.7% of them holding these graduate degrees in 2016.

Close to one-third of refugees have upgraded their educational credentials in Canada

For the first time, the census included information on the admission category under which immigrants to Canada have arrived. The Canadian immigration system has three broad goals: to attract educated and skilled immigrants, to reunify families, and to provide humanitarian and compassionate refuge. Immigrants admitted under the refugee category face particular challenges as they are not admitted based on education, language or other assets, and may not have all of the skills required to find employment in their new country.

Close to one-third of refugees (31.5%) who have received their permanent resident status, upgraded their educational credentials by completing their highest postsecondary qualification in Canada. When looking only at those who arrived as adults (aged 18 and older), about 22% upgraded their education with higher qualifications in Canada, slightly more than immigrants admitted under either the economic or family categories, both at about 20%. The majority (71.1%) of refugees who immigrated to Canada as adults and upgraded their educational qualifications in Canada completed a trades or college diploma. In comparison, among economic immigrants who upgraded their education in Canada, the majority (56.5%) completed a bachelor's degree or higher.

The largest provinces have the highest proportion of university graduates

University graduates tend to live in large urban centres—or census metropolitan areas (CMAs)—where universities are often located and jobs for these graduates may be more plentiful. Ontario, British Columbia, Alberta and Quebec are the four provinces with the largest urban centres in Canada, and they, along with Nova Scotia, had the highest proportions of the adult population aged 25 to 64 with a bachelor's degree or higher among the provinces in 2016.

Quebec had the highest percentage (63.2%) of young STEM graduates aged 25 to 34 who worked in science and technology occupations, followed by Newfoundland and Labrador (57.7%) and Alberta (55.7%). Compared with all other provinces, these three provinces had a higher proportion of STEM graduates from 'engineering.' As discussed previously, engineering graduates were very likely to work in science and technology occupations. Other factors, such as the high demand for STEM graduates in the resources sector in Alberta and Newfoundland and Labrador and in the aerospace and high tech sectors in Quebec, likely also contributed to STEM graduates in these regions finding work related to their fields of study.

Compared with other provinces, resource-rich provinces such as Alberta and Saskatchewan had the highest proportions of men aged 25 to 64 with an apprenticeship certificate in the skilled trades. Due to the high demand in these provinces, these men were paid well. In Saskatchewan, men with an apprenticeship certificate were paid more than men with a bachelor's degree. In Alberta, men with an apprenticeship certificate earned only 5% less than men with a bachelor's degree and more than men with a bachelor's degree in every other province.

Yukon was second only to Ontario in the proportion of the adult population aged 25 to 64 with a bachelor's degree or higher, and the proportion of men with an apprenticeship certificate in the skilled trades in Yukon was as high as that of Alberta. A large proportion of these graduates completed their education elsewhere, indicating that many were drawn to Yukon for job opportunities. For example, 78.3% of the adult population with postsecondary qualifications in Yukon completed their education elsewhere, the highest percentage in any province or territory.

The Atlantic provinces have the highest proportion of college graduates

At 28.5%, Newfoundland and Labrador had the highest proportion of the population aged 25 to 64 with a college diploma as their highest educational qualification in 2016. This was followed by the other three Atlantic provinces: Prince Edward Island (28.2%), New Brunswick (26.1%) and Nova Scotia (25.9%). At 24.7%, Ontario ranked fifth.

Two of the top 10 urban centres with the highest percentages of college graduates were from the Atlantic provinces: St. John's (29.4%) and Moncton (29.2%). The remaining eight were all in Ontario: Greater Sudbury (34.2%), Belleville (32.7%), Oshawa (31.6%), Peterborough (31.6%), Barrie (31.0%), Brantford (30.3%), Kingston (29.6%) and Thunder Bay (29.3%).

Overall in Canada, smaller urban communities—or census agglomerations (CAs)—had a higher proportion of the population with a college diploma than large urban centres. The highest proportion was in the smaller urban community of Carleton Place (35.5%).

Among large urban centres, Ottawa has the highest proportion of university graduates

With many jobs in the public sector and high technology, Ottawa—the Ontario part of the Ottawa-Gatineau CMA—was the large urban centre with the highest proportion of the adult population aged 25 to 64 with a bachelor's degree or higher (43.5%) in 2016. This was followed by the CMAs of Toronto (40.9%), Calgary (38.3%), Vancouver (37.5%) and Halifax (35.2%). The CMAs of Calgary and Kitchener–Cambridge–Waterloo had the highest proportions of STEM graduates at the bachelor's level or above, as they offer many jobs in the resource and IT sectors.

In celebration of the country's 150th birthday, Statistics Canada is presenting snapshots from our rich statistical history.

150 years of education

The educational portrait of Canadians has changed considerably in the 150 years since Confederation.

At the time of the first census after Confederation, in 1871, very few Canadians attended school due to the demands of a predominantly farming- and food production-based economy. By 1901, more children were enrolled in elementary or secondary schools, although many did not attend on a daily basis. Legislation was subsequently introduced in most provinces on the minimum amount of time children must attend school full time. After 1963, all provinces enforced legislation that children must remain in school up to the age of 15 or 16. By 1996, the minimum school-leaving age was 16 in all provinces and almost all children up to that age were enrolled in school full time.

In terms of postsecondary education, since Second World War, full-time university enrolment has risen dramatically among youth aged 18 to 24, from under 3% in 1941 to 23% in 2014/2015. As Canadian society has changed, fields of study offered at postsecondary educational institutions have adapted to the evolving educational requirements of the labour force. For example, starting with the "PC boom" and the "dot-com boom" in the 1980s and the 1990s, as well as the emergence of the information society, programs in computer sciences were expanded and new fields such as information technology, network administration and webpage and multimedia design were offered.

Over the years, women have caught up to and surpassed men in university participation. By 1989, there were more women than men enrolled full time at Canadian universities, as they made gains in programs such as law and medicine, fields traditionally pursued by men. Since the 1990s, the proportion of women with a bachelor's degree or higher has grown much faster than among men.

Canada has also developed a very extensive and unique college system since the 1960s to provide training opportunities focused on work-integrated learning and matching skills with the demands of the current labour market. In 2016, 22.4% of the adult population aged 25 to 64 had a college diploma, compared with an estimated 8% among the Organisation for Economic Co-operation and Development (OECD) countries overall. Because of its large college sector, not seen in most other OECD countries, Canada has been a world leader in postsecondary education, ranking first in the OECD for the proportion of the population who are college or university graduates since the 1990s.

Note to readers

Definitions, concepts and geography

In this document, all qualifications reported are the highest certificate, diploma or degree, unless otherwise specified. 'College diploma' refers to college, CEGEP and other non-university certificates or diplomas. 'University degree' refers to bachelor's degrees or higher levels of education. These degrees can be granted by universities or by other degree-granting institutions such as colleges.

The term 'recent immigrants' refers to immigrants who first obtained their landed immigrant or permanent resident status between January 1, 2011 and May 10, 2016.

The term 'Canadian-born' refers to non-immigrants or Canadian citizens by birth. The Canadian-born population includes Canadian citizens by birth born inside and outside Canada. The Canadian-born population excludes immigrants born in Canada.

Non-permanent residents are excluded from the analysis when looking at the percentage of women among those with an earned doctorate.

In this analysis, the terms 'lone mothers' and 'mothers who are married or living common law' refer to mothers living in a census family that have at least one child between the ages of 0 and 17.

The term 'science and technology occupations' refers to the major grouping of 'natural and applied sciences and related occupations' in the National Occupational Classification (NOC).

2016 Census of Population products and releases

Today, Statistics Canada is releasing a sixth series of data from the 2016 Census. These results are on the highest level of educational attainment, major field of study and location of study as well as school attendance of the Canadian population at the national, provincial, territorial and subprovincial levels in 2016. Results on labour, journey to work and language of work are also being released today.

Several 2016 Census products are also available today on the 2016 Census Program web module. This web module has been designed to provide easy access to census data, free of charge. Information is organized into broad categories, including analytical products, data products, reference materials, geography and a video centre.

Analytical products include three articles from the Census in Brief series. The articles provide analyses focusing on the labour market outcomes and earnings of Canadians by highest level of education and field of study. The first article highlights the earnings by highest level of education of the population aged 25 to 64, while the second and third articles focus on the labour market outcomes and earnings of young bachelor's degree holders aged 25 to 34 in Canada.

Data products include education data for a wide range of standard geographic areas, available through the Census Profile, Data tables and Highlight tables.

In addition, the Focus on Geography Series provides data and highlights on key topics found in this Daily release and in the Census in Brief articles at various levels of geography.

Reference materials contain information to help understand census data. They include the Guide to the Census of Population, 2016, which summarizes key aspects of the census, as well as response rates and other data-quality information. They also include the Census Dictionary, which defines census concepts and variables and the Education Reference Guide, which explains census concepts and changes made to the 2016 Census. This reference guide also includes information about data quality and historical comparability, and comparisons with other data sources. Both the Dictionary and the Guide to the Census of Population are updated with additional information throughout the release cycle.

Geography-related 2016 Census Program products and services can be found under Geography. This includes GeoSearch, an interactive mapping tool, and thematic maps, which show data for various standard geographic areas.

An infographic entitled Canada's educational portrait illustrates key education findings from 2016.

The public is also invited to chat with our experts on this topic.

November 29, 2017 marks the final major release from the 2016 Census of Population. Please see the 2016 Census Program release schedule for a full list of the topics that have already been released.

As well, consult the Census Program web module over the coming months for the release of additional data products providing an even more comprehensive picture of the Canadian population.