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Doctoral Thesis

**Labor flexicurity practices in an Eastern-  
European second rank city**

The case of Cluj-Napoca's ICT industry

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# ABSTRACT

## Keywords

Information and Communication Technology, ICT, Techno capitalism, Knowledge society, Labor flexibility, Europe 2020, Lifelong, learning, Grounded Theory, Cluj-Napoca.

## Introduction

The emergence of Information and Communication Technology and its relevance in the last three to four decades prompts the necessity of comprehensive studies to be undertaken, to better understand the phenomenon considered the third industrial revolution in modern technology. Techno capitalism, cross-national outsourcing and knowledge society are the new parameters of the modern, global economy, where creativity and knowledge are the new currencies (Suarez-Villa, 2012). Technology is shaping not only the economy and business sphere, but also our society, as its presence in everyday life is indubitable. While most of the technologies sustain marginal business development, some technologies are disruptive in creating technological breakthroughs on the capital market (Bower and Christensen, 1996).

In the search of a comprehensive understanding over the phenomenon of the ICT industry, the present thesis approaches the subject from two theoretical perspectives. By the first approach of the comparative political and economic advantage, the attainment of Romania's capital market within the theoretical framework of varieties of capitalism (Hall and Soskice, 2001) is determined. Its determination is decisive in understanding the mechanism underlying the fast-growing industry of the ICT in Romania's market. The second theoretical approach examines the basic rights in the labor market, by classifying Romania's social policies into the theoretical framework of the welfare states (Esping-Andersen, 1990). This sheds light on a weak Romanian welfare state, that imposes the provision of social and economic security on workers (Raț, Popescu and Ivan, 2020; Vincze, Petrovici, Raț and Picker, 2019; Popescu, 2004).

The thesis is structured into two parts – theoretical and empirical. The theoretical part – as already discussed above – tackles, on one hand, the characteristics and driving forces of the new forms of

capitalism, which are rooted in technology and knowledge society, and on the other hand, explores the labor flexibility and security dimensions of the Romanian welfare state. At the section of these theoretical approaches lay the paradigm of individual labor flexicurity practices of the ICT professionals.

The empirical part is divided into four chapters. The first chapter is the methodological description of the research conducted and its value in producing the research results. The second chapter describes the quantitative data results, which is highlighting the evolution of the national, regional and local (Cluj county) ICT industry. The outcome of this section constitutes the underlying of the qualitative data analysis, which is dealt with in the third chapter, in identifying the parameters with impact on the process of interviewing. The qualitative research is elaborating on the particular labor flexibility and security practices of ICT companies and professionals, with the aim of reconciling interests on both ends. It also focuses on companies seeking high flexibility enabling them to face the challenges on the capital market, while knowledge workers adapt flexicurity practices, to accommodate work with family life. Lastly, this chapter tackles the status of women and gender biases in the high-tech industry.

The fourth and last chapter assembles all the empirical results and findings into a theoretical model, in order to describe and explain the relevance of the particular flexicurity practices in a fast-paced industry of ICT in a second rank East-European city, as Cluj-Napoca. It reveals that personalized flexibility and security practices enhance work-life balance, while boosting productivity at the workplace, engaging a highly liable agile framework in connecting co-workers even in cross-national teams.

The present empirical research is built upon the Grounded Theory in generating new approaches and theories on the implementation of labor flexicurity practices in the ICT industry. The methodology adopts a mixed analysis of both quantitative and qualitative approaches. The quantitative analysis encompasses datasets from two sources: on statistics provided by the Romanian National Institute of Statistics (INSSE) for the national level, as well as on a dataset on Cluj county's ICT companies, provided by Borgdesign (2018). The qualitative analysis applies a semi-structured interview guide to 35 ICT professionals from Cluj-Napoca and its metropolitan area. The mixed research combines the strengths of both methodologies in an attempt to reduce shortcomings of both approaches.

## Part I. Context and concepts

### Chapter 1. Varieties of capitalism

This chapter delimits the conceptual framework of modern capitalism, which is highly related to technology, innovation and knowledge society, that are all critical pillars of the ICT industry. Approaching the concepts of varieties of capitalism, techno capitalism, ICT labor frameworks and women in the technology industry are relevant in shaping the theoretical structure of the present thesis. As an organic outcome of labor practices in the Information and Communication Technology industry, tackling work-life balance issues is essential in reconciling professional life with family life.

A distinctive approach in understanding the forms of modern capitalism is using comparative political and industrial relations frameworks to emphasize the advantages of different economical practices on the labor market. The varieties of capitalism theory (Hall and Soskice, 2001) analyzes how the institutional structures trigger particular corporate strategies and vice versa, how corporate needs lobby in restructuring institutional framing.

The market success is analyzed by the varieties of capitalism theory on five coordination spheres. The first, the industrial relations coordinates bargaining between employer and employees or trade unions over wages and working conditions, the stakes being the company's productivity versus the labor force's income. The second, the education and vocational training targets suitable skills in performing work and the interest in investing in these trainings by companies or workers, in assuring competitiveness of the economy. The third sphere, the corporate governance is related to the internal structure of the firms in contracting finances from investors or from state finances. The fourth dimension is concerned with the inter-firm relations with other economic actors, such as suppliers or clients, and its coordination in securing appropriate supplies or demand for its products. The endeavors imply collaboration between firms for research and development, technology transfer or standard setting on the capital market, while coordinating issues as detention of intellectual property and the risk of exploitation in joint ventures. The fifth sphere of coordination is related to employees and the cooperation between them with the scope of advancing the objectives of the firms. Workers' competences and skills assure competitiveness of the firms on the capital market (Hall and Soskice, 2001).

Based on the systematic analysis of these five coordination spheres, two main market economy models were distinguished, on the two opposite poles – the liberal market economy (LME) and the coordinated market economy (CME). The liberal market economies are coordinating with other economic actors via competitive market arrangements and hierarchies. The LME model relies on specific institutional frameworks, which allow high fluidity of the capital market. The labor contracts are usually characterized by formal ones, with high degree of easiness in workers' layoffs, as an adjusting mechanism to the changing needs of the company. Compensation systems create uneven wages, rewarding high performance, which is due to the absence or low cohesion of trade unions in the industries. The education and training systems rely on formal education, providing future employees with general skills, which expose workers to short job tenures, but also increases their chances to quickly insert into new companies in case of dismissal. Therefore, long-term employment is rarely the case in the liberal market economies. In these markets the interactions and collaborations among the economic actors are based only on enforceable formal contracts and rigorous antitrust regulations. The formal contracts protect intellectual property of companies, licensing knowledge and patenting radical innovation. The LME model is generally represented by the U.S., Canada, U.K., Australia, New Zealand, Ireland (Hall and Soskice, 2001).

On the other hand, the coordinated market economies developed along opposite institutional approach, where inter-firms' networks and sectoral or national collaborations arise among economic actors, to face market challenges through strategic interaction and alliances. Therefore, reputation of the company is important, as dense networks are linking managers and highly skilled professionals to their counterparts in other firms, facilitating information on firms. In the CME model, employers invest in their labor force by vocational trainings, developing specific skill sets needed for particular jobs within companies, in this way securing long-term employment. The highly lucrative inter-firm relationships allow collaboration among economic actors in developing new technologies in joint ventures and business associations. The innovation in the coordinated market economies is incremental and based on tacit agreements. The CME model is represented by countries such as Germany, Switzerland, Belgium, Scandinavian countries, Japan (Hall and Soskice, 2001).

Between these two opposite models a third approach toward a hybrid model developed (Palda, 1997; Mykhnenko, 2007) in addressing East Central European (ECE) and Mediterranean economies. Nölke and Vliegenthart (2009) propose the dependent market economy (DME) model,

which is characterized by the institutionalization of international businesses. The dependent economies are usually relying on heavy offshoring and outsourcing activities, disposing of highly skilled, cheap labor force and the infusion of foreign direct investments (FDI). These economies are dependent on investments from LME and CME countries, as well as they adapt technologies and business know-how from these economies, therefore the research and development in the DME countries are not well developed, meaning that innovation is rare and with low impact. The labor force is highly skilled in the labor processes but have low degree of contribution in creative or innovative activities. The education and training system are mirroring these necessities, as they are structured to meet the labor demands of the transnational companies, meaning that training is targeted toward specific skillsets. Arguably, East Central European countries are characterized by incomplete social pacts that advantages foreign capitals over local employees. These social policies accommodate lower trade union density, which holds back the advantage of commonly negotiated wages and benefits, as well as in the absence of comprehensive collective agreements, the procedures of layoffs are a lot simplified (Nölke and Vliegthart, 2009).

The comparative advantage of the DME countries is acquired through the availability of skilled, but cheap labor force and the governmental financial mechanism of tax-reduction packages in the intense competition for foreign direct investments. While the dependent market economies model explains how the living standard has grown for the employees working in multinational companies, the population as a whole in these countries doesn't benefit of the heavy foreign investment. Consequently, a growing dualism can be observed in these countries, having elite knowledge workers, compared to the unqualified workers of other industries, having low incomes. While, in their research Nölke and Vliegthart (2009) conclude that the DME model is represented by countries as Czech Republic, Poland, Hungary and the Slovak Republic, they exclude Romania from this model, arguing that its economy per se is an incoherent "cocktail capitalism" (Cernat, 2006). However, an absolute exclusion of Romania from the DME model is inaccurate, especially when discussing the North-Western region's economy, or the development of the major economic centers. The Romanian capital market is studded with Western European companies, in search for cheap labor force and facilities (Petrovici, 2019). The complex relationships of institutions with policy makers agencies shapes the local possibilities of capital accumulation through transnational corporations, on the expense of labor and labor force (Ban, 2014). Romania's policy regime is characterized by the institutionalization of disembedded neoliberal policy regime, which favors



market and capital over labor force, redistributing income, opportunities and time away from workers, toward capital (Ban, 2016).

The Romanian economic centers (Bucharest, Cluj-Napoca, Timisoara, Iasi, Brasov, Sibiu) are genuine examples of the DME model, due to the resemblance of their economic performances with the main characteristics of the DME model, which are the highly skilled and relatively cheap talent pool, the provision of capital via FDI, zero-tax for ICT activities and the long-term presence of transnational enterprises in these economic centers. Following closely Bucharest, Cluj-Napoca is the second economic center in Romania, with the highest contribution to the ICT industry. This performance is due to its highly skilled labor force and renowned Universities (having eleven Universities, among which the Technical University and Babes-Bolyai University as well), which attracts more than 100.000 students every year (Petrovici and Simionca, 2011). Cluj-Napoca's City Hall (2015) promotes a strong support toward the development of local competitive ICT labor market and the attraction of foreign investments. Recent studies show that out of the 203.900 employees in Cluj-Napoca, 53.7% works in outsourced and offshored service industries, such as the ICT, Business Process Outsourcing, Shared Service Centers and Research and Development. In 2018, the total number of ICT employees in Cluj-Napoca amounted to 22.600 (CISD, 2020). Cluj-Napoca became a Central-East European hub for outsourcing due to globalization. This process also brought about many repetitive occupations, even in the service sector, which exposes the city's economy to automatization (Mare et al., 2019). Overall, Cluj-Napoca and its metropolitan area offer an excellent economic climate to accommodate new investments.

## Chapter 2. Welfare state

This chapter reviews the classical literature on welfare state and how social policies are implemented in the Romanian labor market. The central concern of the welfare state is the labor force decommodification, to which degree an “individual, or families, can uphold a socially acceptable standard of living independently of market participation” (Esping-Andersen, 1990, p. 37). Employers long opposed decommodification, as it strengthens workers' rights on the expense of the absolute authority of corporations. Along with the decommodification, the stratification is the procedure through which the welfare state decides on the universality and the intensity of redistribution of the solidarity imposed. Addressing this issue, governments developed social

policies to sustain minimal social security, by measures as public health care system, pensions, social assistance, unemployment insurance, child- and elderly care, maternity- and paternal leave. Complementary to these measures, the active labor market policies (ALMPs) offer support in reinserting to the labor market through public employment services and training schemes, balancing capital market and state regulations.

Based on labor force decommodification and stratification shaping the relationship among state, market and family, Gosta Esping-Andersen (1990) developed the three types of welfare systems: liberal, conservative-corporatism and social democratic regimes. Through its social welfare schemes, the liberal regime targets the poor, low-income working class, who often are state dependents. The regime is characterized mostly by means-tested assistance, covering basic needs, such as food, housing, clothing, with modest universal transfers and social-insurance plans. The financial benefits are distributed to those in needs after a comprehensive assessment of their situation, and often exposes them to social stigma. The liberal regime encourages market participation and subsidized private welfare schemes, therewith minimizing decommodification and inducing social stratification among working classes. This archetype of welfare system is attributed to Anglo-Saxon countries as U.S., Canada, U.K, Australia (Esping-Andersen, 1990).

The second welfare regime, the conservative-corporatism model is characterized by moderate degree of decommodification, as market efficiency and performance aren't dominant in these states. As this regime is committed to traditional family values, often shaped by the Church, the social support typically excludes housewives, who are discouraged to participate on the labor market, meanwhile encouraging motherhood with childcare pension. Benefiting of social support is strongly attached to class and occupational status, and the guiding principle of subsidiarity is that the state interferes only when the family's capacity fails to provide for its members. The countries portraying the conservative-corporatism welfare regime are Germany, Austria, France and Italy (Esping-Andersen, 1990).

The third welfare system, the social democratic regime sustains the highest degree of decommodification of social rights, extended from the lower working classes to the middle classes. Social reform in these countries is grounded on social democracy, which promotes equal rights of the highest standards of living among all social classes. The social support consists of universal benefits, which aren't restricted by contribution to state or means-tests (eligibility for social assistance) but are universal available to all social strata, graduated according to earnings. The

universal insurance system covers benefits as pension, child- and elderly care, income protection, motherhood, healthcare, social safety net in case of unemployment. The social democratic welfare model is a blend of the conservative and liberal model, addressing equally the capital market as the traditional family. This regime protects alike the right to work as the right to income protection, simultaneously encouraging women to work, without restricting the right to maternal leave and childcare pensions. The social democratic welfare is present in a small cluster of countries, mainly in Scandinavian countries (Esping-Andersen, 1990).

The three type of welfare capitalism of Esping-Andersen's (1990) has received criticism during the time, due to the underspecified concept of decommodification, the historical and political arguments in constructing the three welfare types, neglecting other welfare regimes like the Central and Eastern European, Southern European and the East Asian regimes (Manow, 2009; Klein, 1991). Critics classified post-socialist countries (Romania, Bulgaria, former Yugoslavia) into a distinct form of the conservative-corporatism post-socialist welfare regime (Manow, 2009). Nonetheless, the core organizing principle in these countries aren't entirely similar to those of the German Bismarckian welfare system, as these states highly depend on the supranational agencies and the goodwill of foreign capital (Ferge, 2001). As most of the East European countries, Romania has also shifted from the overarching paternalism state in the socialist period into community and individual empowerment, though a total translation still awaits (Popescu, 2004). While a total suspension of the paternalism state didn't occur, it evolved into a selective one, favoring middle- and upper social classes (decision makers of political, justice and corporate structures) over the lower working classes (Raț, Popescu and Ivan, 2020; Popescu, 2004). The exploitation processes tied to capitalism in emergent countries, still produces inequalities, that questions the rightfulness of market power over redistributive system (Vincze, Petrovici, Raț and Picker, 2019).

“We see increasingly conditional access to a limited number of provisions and subsidized services that ultimately facilitate the commodification of work through maintaining employability (via financial benefits, vocational training, counselling, etc.) and subsidizing the costs of living and raising children (via social assistance benefits, family allowances and provisions tied to schooling)” (Raț, 2019, p. 252-253).

The Romanian welfare state is characterized by the dualization of rights (Emmenegger et al., 2012), with neoliberalisation of the labor policies and social assistance, favoring upper-middle

classes with stable occupational status (Raț, Popescu and Ivan, 2020). Romanian social policies wobble between “industrial achievement” model and capitalist model, with a somewhat increased spending on pension and health care, but with limited universal public provisions for child allowances and low-income families. The core principles of the Romanian social system are strongly tied to job creation by capital investment and to the dual-earner family models, which reinforces the dualized welfare system in redistributing contribution-based horizontally to those in stable employment, but with little vertical redistribution to lower-working classes (Raț, Popescu and Ivan, 2020). The model favors employees of middle classes of transnational companies, the elite working classes of urban areas providing knowledge labor, but with heavy taxation of the labor by the social insurance system (Petrovici, 2019; Ban, 2016).

## 2.1. Labor Flexibility

Active labor market policies (ALMPs) are the extension of welfare state mechanisms on the labor market. While the classical welfare theories are in search for labor institutionalization through governmental regulation (Esping-Andersen, 1990), the flexibility approach proposes a deregulation of welfare state, often in favor of corporations (Klein, 2014). The differences between approaches can be reduced to the diverse and particular relationships between the market and the state in regulating social inequalities and class divisions produced by capitalism (Esping-Andersen, 1990).

Although the liberalization of the labor market post-socialism attracted mixed opinions on how labor security will be achieved in an investment driven economy, the implementation of flexibility policies were highly dependent on local policymakers’ collaboration with strong alliances of inland firms (Petrovici, 2014; Petrovici and Simionca, 2011). The Romanian labor market is still characterized by hybrid capitalism practices (Cernat, 2006; Nölke and Vliegenthart, 2009), which are customized to the specific needs of each regional capital structures. However, the major economic centers’ local agenda do follow a pro-grow direction, attracting foreign investments and developing highly skilled talent pools (Raț, Popescu and Ivan, 2020). These economic structures are relying on foreign capital infusions to sustain a growing economy (Nölke and Vliegenthart, 2009), and as in the previous chapter was presented, the region of Cluj’s is highly dependent on these forms of investments (dependent market economy model).

Though, the literature's perspective on the concepts of labor flexibility and security is of them being in contradiction (Maniglio, 2016), the present research take a more balanced approach, searching for the complementarity among the labor policies and practices, emphasizing how the flexibilization of labor market triggered creative, customized approaches to attain labor security (EC, 2010). Arguably, this perspective calls for caution and awareness, as the flexicurity discourse is a product of corporations' lobby on the European Union's policy levels. Nonetheless, from the point of view of the present thesis, the assumption that on the micro level of knowledge workers something good can come out as an effect of labor market liberalization, is decisive toward the creation of personal labor security habits and practices.

The flexibility-security nexus became a key target of the European Employment Strategy (EES) and a major challenge to the European Social Model for 2020 (EC, 2010; Klosse, 2003). The mission of the EU reflects the ambition of enhancing both labor flexibility and security as the aim is "to become the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion" (EU, 2000).

The most common definition of labor flexicurity is the one below:

"Flexicurity is a degree of job, employment, income and combination security that facilitates the labor market careers and biographies of workers with a relatively weak position and allows for enduring and high quality labor market participation and social inclusion, while at the same time providing a degree of numerical (both external and internal), functional and wage flexibility that allows for labor markets' (and individual companies') timely and adequate adjustment to changing conditions in order to maintain and enhance competitiveness and productivity" (Wilthagen and Tros, 2004, p. 6).

Following the Danish model, the EU Commission identified four components to be adapted by countries to weighing down the overly flexible labor markets due to capitalism arrangements. These components are the flexible and reliable contractual arrangements, comprehensive lifelong learning strategies, effective active labor market policies and modern social security systems (EC, 2007).

The EU flexicurity concept received criticism along its rise, mostly regarding its fail to lead to balanced labor practices. Particularly the contractual arrangements provoked arguments regarding the employment protection legislation (Bekker, 2018; Bekker, 2012) and the spread of flexibility on the expense of security (Woolfson and Sommers, 2016; Maniglio, 2016; Lopez et al., 2014).

Overall the criticism points toward a one-sided structural reform, which mostly stimulated the flexibilization of labor, setting aside a normative anchor for the labor force. The one-sided policy messages prompt employees to take in their own hands the assurance of employment continuity (Bekker, 2012).

Romania was among the countries (beside Czech Republic, Greece, Portugal and Spain) where national reforms extended the period during an individual could be employed by the same employer based on a fixed-term contract to three months (Clauwaert and Schömann, 2012). The liberalization of the Romanian labor market allowed high flexibility in hiring and firing, whereas the social policies didn't follow the new arrangements with safety measures in case of unemployment. Subsidized training courses focus on unskilled workers, temporary workers and poorly educated population, neglecting ICT vocational trainings in case of layoffs<sup>1</sup>. Based on the flexicurity model groups given by the European Commission (2006), Ciucă et al. (2009) classified Romania as being part of the Eastern European flexicurity model (along with PL, BG, HU, CZ, SK, IT), where employment protection legislation, participation in lifelong learning courses and public expenditure on education is very low.

## Part II. Empirical research

### Chapter 3. Methodology

The empirical research of the present thesis focuses on qualitative data analysis, complemented with quantitative data analysis. The qualitative research relies on the grounded theory approach (Glaser and Strauss, 1967), analyzing the empirical data gathered from ICT professionals through semi-structured face-to-face interviews. The quantitative research creates a framework and a basis for sampling selection and to understand the mechanism of Cluj-Napoca's and its metropolitan

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<sup>1</sup> At time of checking in April 2020, the National Authority for initial vocational training in dual system in Romania (Autoritatea Națională pentru formare profesională inițială în system dual din România, <http://anfpidr.gov.ro/w/>) and the Romanian Center for Vocational Training and Regional Development (Centrul pentru formare profesională și dezvoltare regională, <https://www.cfpdr.eu/>) didn't had any training option for the Information Technology knowledge workers.

area's<sup>2</sup> ICT industry. The research questions reflect the main areas this thesis proposes to bring contributions, by answering them.

### 3.1. Research questions

What are the practices of labor flexibility at the meso social level (enterprise)?

What are the effects of flexibility practices at the micro social level (individual) on work-life balance (WLB)?

What are the financial aspects of labor security?

What are the effects of lifelong learning practices on employability?

What forms of gender discriminations prevail in the ICT industry?

### 3.2. Research ground

The research ground was chosen considering the high relevance of Cluj-Napoca in the Romanian ICT industry. In the past decades Cluj-Napoca became a genuine cradle of knowledge, innovation, creativity, culture and education, becoming one of the most attractive tech-hub for investments in Romania, following Bucharest. Being a second rank city, it became a major player in the service industry within the Central and East European urban hierarchy (Petrovici, 2014; Gál, 2014).

The ICT sector became one of the fastest growing industries in Romania, having more than 200.000 employees in 2018, out of which more than 21.000 (around 10% of the total ICT workforce) being employed in Cluj county (INSSE, 2018). Also, Cluj-Napoca has a friendly economic environment for foreign investments, as 40% of the ICT employees are working in companies having foreign capital (Borgdesign, 2018).

The Quantitative Data Analysis section describes in detail the evolution of the ICT industry in Romania, as well as highlighting Cluj-Napoca's contribution to this performance, emphasizing opportunities for future developments in the high-tech zone. The quantitative research attempts to create the profiles of the ICT companies as well, categorizing them in size classes (346/2014 Romanian law): micro, small, medium and large companies. These profiles were then analyzed when subjects for the qualitative research were chosen.

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<sup>2</sup> The metropolitan area is formed of Cluj-Napoca, Aiton, Apahida, Baci, Bonțida, Borșa, Căianu, Chinteni, Ciurila, Cojocna, Feleacu, Florești, Gârbău, Gilău, Jucu, Petreștii de Jos, Tureni, Vultureni.

The aim of the research is to identify and define the aspects that characterize labor flexibility and labor security practices of the ICT industry in the second rank cities, like Cluj-Napoca, which have major opportunities of development in the high-tech sector in both directions of inland investment and foreign capital infusion. For the above listed reasons, Cluj county is an excellent case study, as it incorporates all the attributes of an ICT Hub.

## Chapter 4. Quantitative Data Analysis Results

The quantitative research explores the tendencies and evolution of the ICT industry on the national level, taking particular interest in Cluj-Napoca and its metropolitan area. The analysis zooms in from the national and regional level to the local level of Cluj-Napoca city and Cluj county, throughout pointing out the milestones the ICT industry made in its development in an Eastern European country. Although the quantitative approach doesn't answer to any research questions, nor do validate any hypotheses, its importance lies in describing how the ICT industry became a valued player to the national economy. This section also provides the basis in identifying relevant parameters to the qualitative research and articulating research questions.

The quantitative approach reveals an exponential growth of the Information and Communication Technology industry on the national level. The contribution of the ICT sector to Romania's GDP more than doubled from 2008 to 2018, creating 80,000 new jobs in this process. Men are over-represented in this industry with a gender ratio of 1.47 in their favor, as well as over-paid compared to women (women making 83% of what men make). In terms of the income rates, the newly created jobs display an increasing trend that led to the average wage of 5202 RON per month - two times more than the overall national average. The driving forces of this growth are the major urban centers – Bucharest, Cluj-Napoca, Timisoara, Iasi, and Brasov, which develop at fast pace.

Cluj county recorded growth in all macroeconomic indicators and became an Eastern European ICT Hub, getting by right its nickname, Silicon Valley<sup>3</sup> of Transylvania. Its market is dominated by large and micro companies in terms of the number of employees and profit, which company classes act as pressure points toward small and medium sized companies, which are often absorbed or marginalized on the competitive market of ICT. Foreign investments are very present in Cluj's

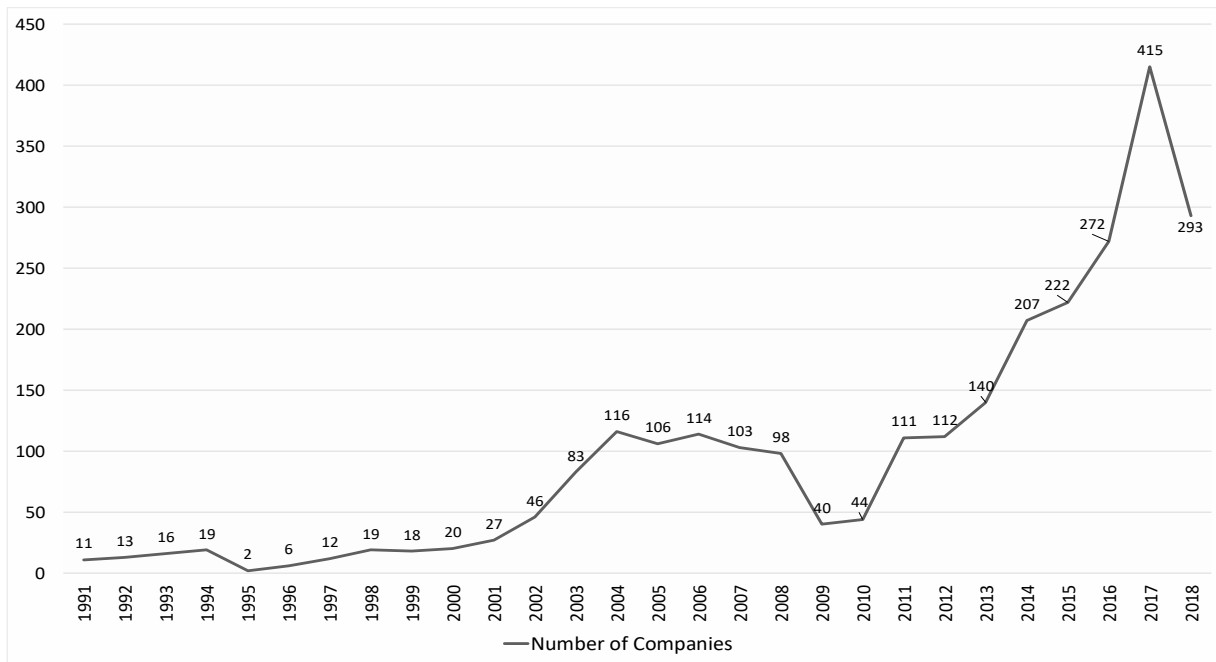
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<sup>3</sup> Silicon Valley is the cradle of many well-known high-tech companies and start-ups, being a driving force of the ICT industry.



ICT market, controlling almost half of the assets (40% of employees and turnover and 30% of profit). The year 2018 brought with it the maturing and settling of the ICT market in Cluj county, stabilizing the formation of new companies, similar domestic and foreign. Below figure showcase the formation of ICT companies in Cluj county over the years.

**Figure.** The Evolution of Company Formation



Source: BorgDesign, NACE code 62 Database for Cluj county, 2018

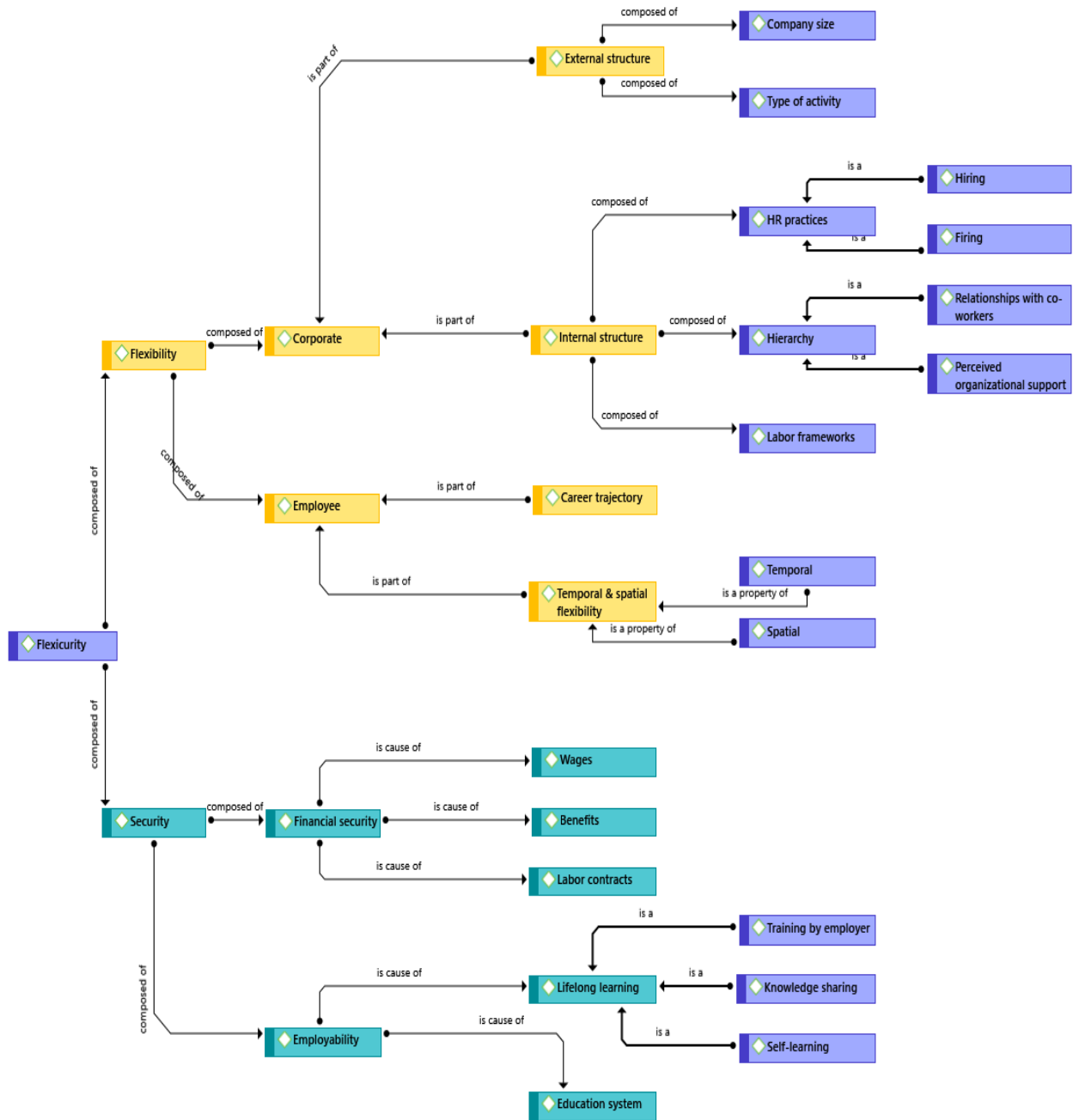
Aside its contribution in mapping the ICT market on the national and Cluj county’s level, the quantitative research is relevant in creating the right premises for the qualitative research. By its means, appropriate dimensions of the qualitative analysis were identified, such as the size classes of companies, wage distribution, gender bias, source of capital and foreign investments, which were consistently integrated when articulating the research questions and conceiving the interview guide.

## Chapter 5. Qualitative Data Analysis Results

The qualitative analysis of the present thesis will further discuss the characteristics and labor practices of the Information and Communication Technology in Cluj county, described in the quantitative data analysis section. The insights given by the interviewees shed light on a more

nuanced dynamic among ICT employers and employees. Understanding the driving forces of the market constitute the logic in answering the research questions. Breaking down the concepts into empirical approaches, allowed to regroup them in code categories, shaping articulated structures and logics from inside-out (from the heart of simple functions to generic understanding). An overview of the qualitative analysis structure can be seen in below network.

**Network. Labor Flexicurity**



Source: Author's own illustration in Atlas.ti of the semantic linkages between concepts

## 5.1. Labor flexibility

Labor flexibility is discussed on two levels, on the meso (enterprises) and on the micro (individual) levels, both dimensions answering a research question. The meso level is analyzed based on the corporate structures (external and internal structure), and how flexibility on these levels manifest. The micro level focuses on the career trajectory of professionals and on the temporal and spatial flexibility, which practices influence work-life balance.

### 5.1.1. Corporate flexibility

The flexibility of a company is translated into the ability to create competitive advantage on the market, but it's also the ability to survive when waves of changes hit in the fast-paced industries. Therefore, a fluid organizational structure is necessary to overcome the market barriers and assure company growth along with increase in its profit. Corporate structures infuse the space between the macro level of markets and the micro level of employees, molding policies into practices, shaping best practices at work environments.

This section elaborated a systematic review of the main labor flexibility practices on the meso social level of the ICT companies in an Eastern European second rank city and its metropolitan area. During the analysis two parameters were explored: the external and internal structure of companies, which are constructed by a series of elements, that contribute to corporate flexibility in a synergic way. The external structure is defined in this research by the firm size classes and the type of activity undertaken, while the internal structure is viewed from the perspective of HR practices, hierarchical relationships and labor frameworks.

The external company structures reflect a diverse and versatile capital market, with companies of all sizes and forms, having different type of activity areas. Flexibility on this level is attained through multitude structures, which enables the firms in various manners to interact and establish networks with other actors on the market (partners, clients, competitors, investors). Micro and small companies have the most fluid structures to survive the changes of the fast-paced industry of ICT, while the large enterprises have a more rigid structure, based on solid and numerous networks. The type of activities is consistent with the market's needs that a company is activating on; while outsourcing companies search for diverse markets and industries to serve, firms having their own product concentrate on widening niche markets they are already present at. Between these forms is laying flexibility, shaping the interaction among the actors of the capital markets.

The internal structure is defined by the organization of the assets and especially the workforce. HR practices of hiring and firing enables the ability of employers to adjust the human capital volume to their current needs. As well communication among the existing workforce on all hierarchical layers inside a company requires intensified attention. The level of internal flexibility is given by the rapidity of communication across the company, from the lowest level to the highest. The multidirectional interaction between team members and superior – subordinate is facilitated through agile labor frameworks (Scrum Framework), which cultivate autonomous and self-sufficient teams.

The ICT companies are highly susceptible to labor flexible practices to successfully address challenges and competitiveness on the capital market. External structures mirror the needs of developing networks and alliances with other actors on the market, simultaneously shaping the internal structure and environment as well. Therefore, the internal organization is highly liable to sustain companies' activities in relation to clients, partners, investors, competitors, with flexible HR practices and agile labor frameworks, with focus on the quality of relationships among the human capital.

These findings sustain the leading directions of the literature on organizational flexibility, which emphasize that corporate flexibility is a key element in facing the challenges of the competitive market (Wilton, 2011). Abandoning traditional organizational forms, economic entities connect over the transnational capital market and turn the economy into a more efficient place for the capital (Benner, 2002; Blair and Kochan, 2000). Cluj county's business networks have an affinity toward personal ties and informality (Petrovici, 2014), by the presence of heavy domestic capital investments. However, the existence of transnational companies in Cluj's market suggest the tendencies of a dependent market (Nölke and Vliegenthart, 2009) toward offshoring and outsourcing companies (Petrovici, 2019; Ban, 2016).

### 5.1.3. Employee flexibility

This section explores how labor flexibility is achieved on the micro social level of individuals, and how these practices generate work-life balance (WLB). Employee flexibility tackles professionals' career trajectory and how it shapes their experiences and work-related habits. Further on flexibility is discussed on the level of spatial and temporal arrangements at the workplaces, and how these practices enhance personal- and professional-life balance. This analysis reflects on the second

research question, and while doing so, it become obvious the privileged status ICT knowledge workers hold compared to workers from other industries.

Flexibility practices provide solutions for a wide range of needs in the ICT industry. While in the beginning of the rise of labor flexibility, a unilateral adaptation of it advantaged mostly the employers, lately certain flexibility practices are benefiting employees too. On the micro social level of professionals', blending labor flexibility practices with success enhance work-life balance. The variety of choices and opportunities in the ICT industry shape job hopping into career advancement (Petrovici, 2014). Liberalization of the market entailed not only the easiness of capital movement, but the rise of knowledge workers with power and influence over their own intellectual property, with a richness in personal choices. Temporal and spatial flexibility practices allow a high degree of accommodation of family responsibilities with professional commitments, though practices vary depending on companies' size and activities. While freelancers and micro firms' employees enjoy a higher flexibility due to easiness in accountability, medium and large enterprises tend to limit flexibility habits to gain control over the large number of projects and intellectual properties they detain. In between the extremities, temporal and spatial flexibility boost similar labor productivity and creativity, as well as enhancing work-life balance.

The findings emphasize the main approaches of the literature regarding the positive effects of home-based telecommuting and temporal flexibility practices on knowledge workers work-life balance (Sirgy and Lee, 2018; EC, 2017; 2010; 2002). However, the literature (Boell et al., 2013) points out that unbalanced labor flexibility practices create dissonance on the personal life level. Repeated switches and overlapping between personal and professional spaces, availability of 24/7 harm mental capacity and subjective well-being.

## 5.2. Labor Security

The basic need for working is to accomplish financial security in order to fulfill basic needs. To secure superior needs, such as self-accomplishment, one will work in accordance with the self-principles, and will attain different procedures to benefit from professional opportunities. This section analyzes two faces of the same coin, the financial aspects of professionals' working life and the continuous employment through lifelong learning (LLL) practices. Though financial security, along with labor contracts and active employment policies assure labor security, continuous learning assures security by employability.

### 5.2.1. Financial security

The financial aspects remain one of the greatest triggers on the labor market, moving nation cross capital, profit and labor force. The interviews were concentrated around three relevant aspects, related to financials: wage, benefits, and labor contracts. These concepts summon what the European Commission foresee as labor security policies transposed in private labor structures. This section responds to the third research question, regarding the financial aspects that characterize the labor security in the ICT industry.

This section echoes a one-sided perspective of the financial security practices, which are highly dependable on the employer. While the wages and benefits in the ICT industry are generous, praising employers and the labor market, other industries reflect a less fortunate position of the financial security. ICT knowledge workers' status is privileged on the labor market to the extent, that labor contracts, which legally protect employees from exploitation, are underrated compared to the high income, financial benefits and bonuses.

Therefore, in answering the research question on financial aspects that characterize the ICT labor security, in general it can be said, that financial benefits receiving from employers assure high quality of life among ICT professionals. Also, often these benefits outgrow the protection the labor contracts can offer on the labor market, enabling particular possibilities in securing own financial thriving and protection against the fluctuation of the labor market by personal savings.

While the literature indicates the necessity of a safety net through social policies (Raț, Popescu and Ivan, 2020; Bekker, 2012; Arnold and Bongiovi, 2012; Popescu, 2004), the ICT sector is characterized by the provision of financial well-being on their own by professionals, through extensive benefits attached to relatively high wages, compared to other industries (Petrovici, 2019; Ban, 2016).

### 5.2.3. Employability

This section explores the learning curves of professionals from the education system to individual lifelong learning practices. It analyses how institutionalized education is relevant in labor insertion, as well as how continuous learning enhances employability. Whilst in the past, education secured long lasting working places, employability in the post-social labor market is achieved through continuous learning.

The traditional educational system plays a controversial role regarding the labor market insertion, marked by rigidity, which urge the whole system to reinvent itself to remain relevant in the fast-paced industry of ICT. At the same time vocational trainings target specific skills and knowledge, offering a great deal of flexibility when hopping between jobs or inserting into the labor market (Birtalan and Haideț, 2019; Zahedi et al., 2016).

The appearance of vocational learning practices is closely related to serving niche needs, therefore, a complementarity between them and the traditional educational system can be observed. Though, the purpose of formal education is to lay the basis needed for labor insertion, at this moment the Romanian technical universities are obsolete in offering relevant knowledge when starting out in the ICT industry, urging a renaissance of the educational system's approach toward high-tech related teaching. On the other hand, lifelong learning practices, such as continuous trainings, vocational courses, knowledge sharing, autodidacticism are among the essential practices to ensure longtime employability, which are aligned with the directions set by the European Commission (2010) for 2020 in enhancing employability by continuous learning. Looking at the two ends of the same phenomenon, formal and informal learning practices should act as complementary, not opposite approaches on the labor market.

### 5.3. Women in the ICT industry

The dataset analyzed in the Quantitative research section shows that the ICT industry is a male dominated sector, though a separate section on this topic is a must in the qualitative analysis as well. The purpose of this segment isn't validating the feminism theories, it distances itself from assuming that gender differences are the root of discrimination, disadvantages or the main organizing principle in society (Alvesson, 2000). This analysis focuses on the power dynamics between genders, emphasizing the types of possible discriminations in the few cases found in the Cluj's ICT workplaces, during interviewing. Generally speaking, the interviewees' perception on gender discrimination is that in Cluj's ICT industry it's almost non-existent; even in management roles the presence of women is significant.

Several forms of gender discrimination were identified in the present research, which were generally linked to informal biases among same hierarchical layers (co-workers, not superiors) regarding technical and leaderships skills, which confirm the glass-ceiling effect described by the literature (McGee, 2018; U.S. Glass Ceiling Commission, 1995). Mostly, this phenomenon is not

recognizable in everyday life, as they are extremely subtle and due to the modern feminism movements are extremely diminished. It needs a targeted questionnaire to draw attention to the differences that still exist. On the other side, taking into consideration the biological and emotional differences, it is ambiguous if the gender differences should be totally erased, getting men and women even. Maternity is one of the biggest antitheses of this section, as one of the subjects explains, women have to put on the balance, having children against career (N, 29, f),

Nonetheless, the ICT sector promises a more balanced and inclusive approach toward gender differences, as it is one of the top working fields, where gender differences are at its lowest level. Cluj-Napoca is an example in this direction, as the social inclusion in all its forms are treated with priority. Not only that helpline exists nationwide for those harassed, but the ICT corporations entering the Romanian labor market set standards with their own internal helpline. The intellectual property represented by the knowledge workers of any gender assures equal treatments by companies having the main activity of Information and Communication Technology.

## Chapter 6. Final Remarks and Discussions

Closing the cycle of the adaptation of labor flexicurity policies (EC, 2010) of the European Strategy 2020 in its member states' policies, after a decade, this research proposes to reflect on the relevance of it in an Eastern European second rank city's Information and Communication Technology industry. Analyzing the fast-paced knowledge intensive ICT economy in the context of labor flexibility and security practices may be contentious, due to differences in perception regarding the ICT economy as being a prosperous field, while labor security practices are intended to protect precarious workers. Having this perception in mind, the research proposed itself to reveal new applicability of the flexicurity social policies in a new labor field. Doing so, the analysis revealed that, aside from the fact that the ICT industry is, financially, among the safest domains in Romania for professionals, employees implement tailor-made, personalized flexicurity practices. While the value of the labor flexicurity practices were repeatedly questioned in the last decade, due to its fail in protecting employees against corporate lobby in the flexibilization of the labor market (Bekker, 2018; Woolfson and Sommers, 2016; Maniglio, 2016; Lopez et al., 2014), individual practices in the ICT industry reconcile flexibility with security, in an effort to achieve work-life balance. The literature points out that tech knowledge workers across the European



member states receive less social support in terms of family care than other industries (EC, 2018). The present research argues that whereas employees of other industries rely exclusively on the protection offered by in-place social policies tied to social assistance and protection provided by labor contracts, knowledge workers of the ICT industry receive massive financial support from employers to assure high standards of living.

In elaborating this thesis, a two-sided approach was considered in answering the research questions. On one hand, the quantitative approach mapped the dynamics and tendencies of the ICT industry in Cluj county, and on the other hand, the qualitative research was founded on the outcomes of the quantitative research, paying special interest on the particular flexicurity practices adopted by the ICT professionals. The core ideology of labor flexicurity, organizes around itself all the relevant parameters of this research.

The remarkable evolution of the Information and Communication Technology in Cluj county emphasizes that this region of Romania complies with the capital model of the dependent market economy (DME) (Nölke and Vliegenthart, 2009). While the characteristics of the DME model do not apply to the Romanian economy as a whole, Cluj's prosperous economic landscape displays the major attributes of a dependent economy. It disposes of a highly skilled talent pool, which is relatively cheaper than in Western European countries, attracts foreign direct investments (FDI) and adapts to technological innovation by offshoring and outsourcing (Petrovici, 2019; Ban, 2016). In conclusion, Cluj county is suitable for research conducted on the ICT industry, with the results highly applicable to similar Eastern European second rank cities and regions. The quantitative and qualitative analysis show that a wide range of diversity exists in Cluj's knowledge economy, with ICT companies of all size classes, founded likewise by domestic investments, as by foreign capital infusion. The economic landscape reveals multifaceted professional opportunities, which goes jointly with particular flexicurity practices developed and adapted by ICT enterprises and knowledge workers, with the precise scope of successfully facing challenges on the capital market by the former and reconciling work with family life by the latter.

Complementary to the Romanian literature (Raț, Popescu and Ivan, 2020; Popescu, 2004), which emphasizes the role of the welfare state in the labor market, the present thesis proposes a new perspective on the collaboration between labor force and capital market. It proposes an approach of complementarities of the two ends, a collaboration of the capital power and labor force in adapting labor security on the flexible market. It shows, that while a radical disembedded

neoliberal policy regime (Petrovici, 2019; Ban, 2016) occurred in Romania, particular and personalized flexicurity practices emerged simultaneously in consolidating the fusion between employers' and employees' interests.

The results of the empirical research offered ground for the systematic mapping of the labor flexicurity parameters on the new industry of the Information and Communication Technology, which enriched the theoretical understanding of the subject. It revealed that while most approaches uncouple labor security from labor flexibility, a jointly approach unravel hidden convergences between tailor made labor flexibility and security practices in achieving work-life balance. This also reflects a tendency of decentralization of the labor security practices and policies on the labor market, with more responsibilities on the workers, but as well with more empowerment over personal decisions.