

Time as a Challenge for Higher Education Institutions and Employers

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Abstract—Answers and discussions on the subject of skill gaps have established that young Higher Education Institutions (HEI) graduates display high rates of job-hopping and strong resistance to signing long-term contracts with companies. These graduates are part of a generation with increasing access to online and/or freelance work, as well as working simultaneously for several companies. However, local companies, particularly in the North region of Portugal, are still strongly dependent on people able to make a long-term commitment due to the nature of their operations. This text seeks to shed light on the implications of this mismatch between an increasingly mobile, nomadic labour force and long-term recruitment needs among companies. This working in progress shall analyse data obtained through interviews held with 20 employers in the Northern region of Portugal, shedding light on this disparity as both a great source of instability and of new opportunities for local entrepreneurs to develop innovative firms able to respond to HEI graduate profiles.

Keywords— *Time; Employability; Higher Education; HEI graduates; Continuity; Stability*

I. INTRODUCTION

Time perspective is a cornerstone from which to assess youth employability, particularly in areas that have become highly competitive nowadays. Today's younger generations are increasingly prepared for novelty and prone to switching between jobs frequently. They are also proving to be more social than ever, cultivating social rhythms that appeal to flexibility and constant adaptation. Highly familiar with digital technologies and social networks, today's younger generations have been brought up with a lack of continuity, rapid innovation and novelty.

In fact, the digital revolution is the driving force behind new, disruptive industries that very much value their employees' ability to manage and respond to uncertainty. They prize increasingly soft skills that comprise the ability to anticipate, adapt and be ready for change. HEI study plans are increasingly responding to the changing market by training students to find jobs in highly volatile, global markets, which means they are able to move from one place to another within a short space of time, in search of the best professional opportunity.

Engineering is traditionally a sector with high employment rates of young HEI graduates. Despite differences between some specializations, engineers are, in general, well-received in the market, across all sectors. Every year, the North of Portugal sees high numbers of engineering graduates from various areas employed, in areas such as

automation, electronics, textile, food and chemistry, information systems, and mechanics, among others.

However, analysis have indicated that the region is suffering from turn over, as part of these graduates choose to move from one company to another, or just move to other country. There are no studies stating the in deep the reasons for these highly skilled graduates moving elsewhere. It is, however, possible to infer that one of the most significant contributing factors to young HEI graduates leaving the industries, and the region is related to the timescale for which they are expected to operate within the industry (and a single company, in particular), and concomitantly with the quality of the job offers in terms of salary and working time arrangements.

In fact, despite the industry also developing quickly and being highly dependent on flexible professionals that are prepared to react to change and uncertainty, the majority of companies in the region - whether small, medium or large - continue to rely on professionals that, once recruited, are able to make a long-term commitment to the industry, proving their resilience through several evaluative phases over months, or even years, normally beginning with an internship.

The striking issue is that the promise of long-term contracts does not attract these new generations leaving HEIs today, nor are they willing to settle down in one single company, thereby forcing industries to manage a high level of uncertainty in terms of their human resource management, particularly in areas facing a greater scarcity of professionals. Aside from turnover, industries now have to manage and anticipate the high probability of losing professionals, whether to other local companies, those in the region, outside the region, or abroad.

This working in progress paper intends to delve into the subject in order to explore how these changes in organizational culture affecting the concepts of long- and short-term contracts impact industries in the region, obliging companies and public bodies finding creative strategies with which to attract and retain highly skilled professionals. In this sense, the text will consider three key dimensions i) employers' views of time in industry and skills desired among graduates; ii) employers' perceptions of the perspectives young HEI graduates have of time; and iii) employers' perceptions of solutions to overcoming such time mismatches.

II. THEORY

Studies in engineering education have dealt with time from a management perspective. Time is thought of as something to be stored, mastered, and used efficiently [5,6]. Academic performance is often considered to be a result of time management, particularly nowadays, being susceptible to high variability and change. Additionally, important technological improvements are changing the way HEIs deal with time, particularly in the field of engineering. Digital innovations have a significant impact on work processes and change the perceptions of time of both students and professors. Answers are demanded at a faster and faster pace, and engineering has come to be one of the primary sources used to develop means and instruments through which to manage, and compress, time [7,8].

Studies on employability have long stated that HEI graduates need to be prepared to face intense labour market fluctuations. Several authors [9, p.519] state that *“definitively, there is no longer a ‘job for life’ and current graduate students have to accept the idea that they will probably have several, possibly very different careers. They have to cope with the growing uncertainty of the labour market and develop not only the required generic skills (including professional skills, personal attributes, values and ethics) but also an ability to find their way towards developing a successful career path throughout their professional life”*. Recent literature is now documenting the course of this prophecy, as young HEI graduates are more and more prepared to work in uncertain, highly volatile environments [6,7,8]. Under the umbrella of economic paradigms that accentuate the need for acceleration, HEIs have incorporated discourses surrounding – as well as the teaching of – practices related to flexibility and uncertainty, making students aware of the need to prepare themselves for a life model marked by fragmentation and variability. Culture studies provide evidence for and corroborate such trends, signalling the widespread valorisation of instantaneousness, simultaneity and time fragmentation across our global society [9].

A digital transformation is creating new career profiles that include working in transnational companies that value graduates’ mobility and ability to respond to unplanned time constraints. While work contracts tend to have a shorter duration, the human resource policy in these companies grants individuals high levels of independence, allowing them the flexibility of managing their own time as they see fit. In recent years, jobs in areas related to engineering have expanded, generating increasing career opportunities in well-paid positions [8,10,11]. Highly skilled HEI graduates become increasingly interested in working not only in transnational, versatile environments, but also as freelancers and/or having several different jobs instead of working as an employee in a single company for the rest of their lives. Some authors understand this to be a result of ever-increasing work intensification,[12] declaring that working time is easily and deliberately confused with free, or leisure, time in the digital economy, becoming permeable to indirect capitalist exploitation [13, 14,15,16]. Others understand that these processes are inevitable consequences of high levels of digitisation increasingly changing the ways in which young graduates value and use their time, demanding change in

company structures, empowering public and private bodies to plan and implement new companies that allow for greater diversity among work contracts that respond to the new young graduate availability to move and experience diverse work environments.

III. METHOD

As described in a previous study [6], the data analysed in this paper is provided by an ongoing study undertaken in [country], with the goal of mapping and foreseeing the strategies that can be developed to bring employers and higher education institutions together, to reduce the persistent skill mismatch across all areas. The empirical analysis draws on qualitative data collected in 2019 through semi-structured face-to-face interviews with 20 owners and human resource managers of companies in northern of Portugal (municipality of), developed with the cooperation of *Famalicao Made In*¹. This region is strongly industrial and composed of several types of industries (textiles, metallurgy, and agro-food) of varying ages and sizes. Due to their specificity, companies have been actively recruiting HEI graduates in recent years, specifically engineers, ICT professionals, and in some cases, management or product design HEI graduates [6]. Content analysis techniques were used to provide a detailed portrait of the type and quality of soft skills valued most highly by employers, including time dispositions and time perspectives.

IV. FINDINGS

A. Employers’ views about time in industry

Employers say they need to recruit “flexible” HEI graduates to their companies: young people highly able to adapt to variations and respond immediately to changes, with the skills necessary to adapt to various, varying schedules. According to those interviewed, companies believe they have to respond to highly competitive, uncertain environments. They need to adapt to instantaneous fluctuations in consumption that fuel changes across global rhythms. Employers talk about the existence of “accelerated” time, which is characterised by a constant need to adapt and respond to discontinuities. Companies that work in the textile and clothing/fashion industry fear the “end of collections”.

They emphasise that they are coming to grips with the need to be prepared for the instantaneous. That is, the need to respond to the intense, sometimes conflicting, change in consumer tastes, as these are constantly being reshaped by the digital economy, which, in turn, is driven by countless internet influencers. Indeed, employers seem to be aware of the diversity faced, which they now need to manage. That is why they say they want to recruit highly mobile HEI graduates who are open to varied working hours throughout the week, day, or year. One of the skills employers value the most is “maturity”, meaning the ability to respond and adapt to diverse, continuously changing work rhythms. In the next section, this paper will discuss employers’ perceptions of the ways HEI graduates consider time.

B. Employers’ evaluations on graduates’ time perspectives

Employers say that young HEI graduates are too prone to moving and leaving companies, refusing to make long term

¹ <https://www.famalicaomadein.pt/>

commitments. Though employers value young graduates' ability to change and be on the move very highly, they also admit to having considerable difficulties in dealing with the specific profiles of highly skilled graduates and retaining them in their companies via the traditional methods of integration and socialisation. In their view, young HEI graduates are too mobile. They say that "[...] Today, people are more selective in everything and are not prepared to commit so completely, from a financial perspective. They are much freer to decide. People like to feel this freedom [...] Young people, or a significant percentage of young people, do not want to have that responsibility" (company L).

Employers believe that the way in which young graduates use and perceive time does not suit company working times and their requirements to plan and for stability. Despite saying that a company's temporalities are continuously changing and that they face a demand for instantaneous answers, employers claim that they face difficulties relying on trainee employees to react to company fluctuations over time. They declare that: "Among younger generations, no one, or very few people, are interested in having a job, firstly, for life, and secondly sacrificing their time for a pay raise [...]. They would rather earn less money and have a more active social life. [...]". Employers also claim that they have difficulty counting on employees to prepare companies to react to unpredictable events and maintain certain production workflows.

The following table summarises these views.

TABLE I. EMPLOYERS PERCEPTIONS ABOUT GRADUATES TIME PERSPECTIVES

<i>Time Perception</i>	<i>Number of companies that mentioned this gap. N=20</i>
Young people adapt easily to time variations (of companies)	1
Young people move between organisations a lot	4
Companies need people who are easily adaptable to time variations	20
Companies need stability and people that can make long term commitment	10
Young people desire other time schemes	4

Source: Interviews to local employers

Employers say that in their view, young people often feel "this need to move to a new company and start a new project" (company P), they "do not want to stay in the same place, they are nomadic, they do not make long-term plans with the company" (company T). When it comes to this point, employers are critical, denouncing that young HEI graduates' temporal perspectives appear to conflict with those of companies.

This tension is a source of instability for the companies themselves: "Young people lack a sense of stability, a desire to remain, to dedicate themselves. They are very nomadic, which is good, but it is tough to deal with for a company that works continually. [...] I am terrified. Young people in their fourth or fifth year say, "the hardest thing is coming in at 8:00 am every morning". (company C). They reiterate that young people "do not think about commitments or long-term plans (company I)", stating that:

"they don't connect with companies as much and don't make as strong a commitment to the company. They don't make a long-term plan at the company and try to make themselves feel good; if they feel fulfilled, they keep going, but if they don't feel it, or if, after a certain period of time, they stop feeling it, they can change easily" (company FA).

Long-term perspective is associated with the ability to "care" about honouring employment contracts entered into with companies, as well as creating a sense of temporal commitment to the company, based on the provision of long-term support ("having a job for life"). "We see less commitment, people find it easier to change [...]".

C. Employers' perceptions about reasons for young HEI graduates' time values

For most of the employers surveyed, this "lack" of long-term planning stems from young people's social lives, which favours acceleration and immediacy. They argue that: "one of the characteristics of this new generation is that they are very impatient. [...] If things aren't done the way they want, if something happens, or a colleague or manager acts in a way they don't agree with, they walk away easily. I think they are much more volatile". (Company MR).

HEI and national policies for education and training lie at the heart of what employers claim to be graduates' missing soft skills. Indeed, employers make clear that they need people highly able to deal with unpredictability and instantaneously adapt to industry temporalities. Two large companies within our sample, however, have a different view.

They corroborate the idea that young HEI graduates value multitasking, flexibility and a diversity of uses of time, as well as job mobility. However, in contrast to the remaining employers sampled, they declare that transformations in working culture are unavoidable and that companies must meet them head-on. In their view, the temporal dispositions of young people are no longer linked to sedentariness or entering into a life-long contract with a company, waiting forever until they are rewarded with a better contract.

Despite the claims, both the former and latter groups agree, however, that companies are now facing substantially new challenges due to young HEI graduates' understandings of working time, as they can no longer count on people idealising having one, single steady job for life, nor them dedicating themselves entirely to one company waiting for achieving higher positions or earning more.

D. Employers' perceptions about solutions for time conflicting perspectives

Strikingly, the majority of the employers do not assume that the major problem has to do with the manner in which the labour market is still operating. Companies (interviews) do not think about this as problem that they are perpetuating through their traditional practices of recruitment and promotion. Indeed, in the view of the majority of the employers sampled, these trends must be bucked through the implementation of adequate soft skill training at the universities and HEI. In their perspective, "they have to be very commitment-oriented, given that, in this respect, they have very little training." (company O).

In these employers' views, HEIs are responsible for educating young HEI graduates to value dedication to the company's times and rhythms. Therefore, they insist that the use of time is part of the plethora of soft skills they expect HEI to develop in students, including "*working with long-term perspectives within a certain company*". They consider impatience, acceleration and lack of resilience to wait and embrace a long term commitment with the companies as resulting from the teaching provided by HEIs.

Only two employers from larger companies mentioned above do not believe that the solution lies in HEIs altering their teaching practices. What will really make a difference, they believe, is the manner in which companies acknowledge and cope with the changes in organizational culture taking place across our entire society [17].

These employers believe that it all comes down to human resource management. That is, the need to improve the type of offers companies make to young HEI graduates to prevent them from leaving, thereby preventing the company from losing the investment made in training them. Innovation is considered to be the main pathway for dealing with these new types of employees.

Among others, these employers assert the need to change working processes and for companies to adapt to the new challenges brought about by the rapid deterioration of market cycles linked to fast processes. Better career development, higher salaries, tailored positions, I&D improvements, and the restructuring of companies are seen as major possibilities pointed out for the future of companies in the geographical location surveyed, which still has a firm reliance on labour-intensive industries that operate continuously, and require recurring shift work (24/7 days per week).

V. DISCUSSION

Collected data allows to establish that there is an increasing gap between time perspectives of the companies' and the professionals time perspectives. This gap leads to debate the possible role of HEI in the process of building up those time perspectives, and also the role of other public bodies in providing policies with local and regional focus, that tackle with the changes in time perception that are leading people to refuse or to resist to traditional human resources practices that relay strongly on the idea that high skilled professionals are able and willing to establish steady and long duration contracts with the company.

Most part of the discourses of employers interviewed are grounded on misconceptions about the duties and the desires of the professionals that old skills they want, especially concerning time perspectives. In their view, graduates coming out of HEI are technically prepared, but lack adequate sense of long term commitment. That is the reason why employers argue that graduates lack "maturity". As stated, this region is strongly marked by turn over and brain drain. As it is a very industrialized place needing skilled labour force in several areas, companies compete greatly for professionals, particularly in engineering, and they need to retain them because they need people with training and competences that support the steadiness of the production. At the same time, young skilled professionals are socialized with the need to look after their career prospects, and take

advantage of several technological means for enhancing their image on the market.

Therefore, they look continuously for better career opportunities, and for many these "new opportunities" mean more time flexibility, and the possibility of working autonomously for several companies, at once, without having to carry the weight of the long term commitment agreements. For ascertain the consistency and the validity of these conclusions, it will be important to study more in depth employer's perceptions about professional's time perspectives, as well as HEI as primary agency of socialization and training, including teachers; as well as students and professionals working or having experience in this region. It would be also necessary to study in more depth the strategies that national and local governments, and international companies can develop in order to secure the steady development of jobs that correspond to these new and different profiles of workers, taking advantage of technological and digital revolution.

VI. CONCLUSION

This paper is based on the assumption that companies, education and training institutions and young HEI graduates themselves have all been experiencing increasing dilemmas brought about by the need to accomplish the objectives and requirements of acceleration, change and mobility while also fulfilling the objectives of stability, predictability and establishment. It intended to explore data obtained through interviews with employers from the North of the country in study gaps in order to shed light on the main critical dilemmas faced by HEI graduates, employers and HEI alike. Data shows that companies are experiencing a strong sense of acceleration and a need for urgency fostered by faster market rhythms.

Thereby, they feel they need to attract and retain highly skilled personnel that are prepared to operate faster in highly changeable environments. However, in their view, young people are "no longer" attracted by the promise of a long-term work contract and are very prone to changing jobs and moving. These mismatches represent increasing challenges for policy-making at national and local levels and may represent changes in the way HEIs address the issues of urgency and flexibility (or multitasking).

The study allows the conclusion to be drawn that educational institutions, mainly higher education entities, need to place a larger focus on skills that prepare HEI graduates to understand and react to companies' time regimes. Though a need is faced for more detailed studies to be carried out about this specific topic, the data collected so far does highlight a need faced by companies to incorporate and respond to conflicts and time challenges caused by the market and society in general, which are linked to technical acceleration.

As has been ascertained in this country, part of this response must be improving R&D companies, so that it can provide better job opportunities to young HEI graduates, beginning with those with working hours that correspond to their efforts and career ambitions. The information collected allows for the conclusion to be drawn that the path to promoting smaller, technologically based industries that have adapted to provide a tailored response to the needs and desires of its customers, can also be seen as a way through which to

contribute to overcoming the needs of a "temporal revolution", the effects of which are yet to be unveiled.

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