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Evidence given to the House of Lords Economic Affairs Committee. Treating Students Fairly: The Economics of Post-School Education. Concerns about the reduction in graduate entry-level opportunities, the implications for professional careers and a potential solution.

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Mr Ian Herbert – Written evidence (HFV0056)

Summary

Research findings by the Global Sourcing Research Interest Group at Loughborough University highlight two serious issues with graduate employability. First, entry-level jobs are disappearing in those professional disciplines, such as finance, human resources, IT and procurement, which form the bedrock of business support services within organisations. Second, there is already evidence of a consequent skills gap emerging between the entry-level jobs in the middle-office and the 'talent pipeline' to senior roles such as business partner.

This phenomenon is occurring because operational (transactional) tasks, which provide opportunities for young people to learn the skills, knowledge and behaviours required for a life-long professional career, are being eliminated through process re-engineering and robotic process automation (Lacity and Willcocks 2017). Remaining work requiring manual intervention is offshored to access cost arbitrage advances (Oshri et al. 2015).

Worryingly, the progressive decline of entry-level work in the professional 'training nurseries' which provide the first destination for graduates is largely happening under the media radar. The internal shared service centre model (SSC) in particular, operates within company boundaries, and migration to offshore locations is generally piecemeal, phased and thus, largely unnoticed. A combination of the robotic process automation (RPA) of routine tasks, artificial intelligence augmenting/replacing more cognitive activities, and cloud computing (inhouse IT capabilities being replaced by a shared global infrastructure) is already eliminating jobs. We are concerned about entry-level jobs no longer being available for graduate learn the craft of their chosen profession (see Herbert and Rothwell, 2013 – Professions are heading east forever!).

In response to these concerns, and encouraged by a steering committee industry comprising; practitioners, consultants, two professional bodies of accountancy (PAB), The Department for International Trade, educationalists and student representatives, we suggest that it should be attractive for organisations to employ undergraduates in back- and 'middle-office' work throughout the course of their degree programmes. Organisations, universities and government have a responsibility to ensure that the education that graduates are now funding directly results in at least a sufficient amount of entry-level opportunities. The outcome of inaction will be significant intergenerational pressures in the future.

Our objective in providing evidence is twofold. First, to raise awareness of a serious issue which will affect the prospects of young people, UK industry and eventually higher education (HE). Second, to offer a solution in the form of what we call Earning-to-Learn (EtoL), a framework that encourages employers to maintain suitable entry-level work onshore and make it available to students during the course of their HE studies.

The challenge for HE is to help students to make sense of a wider range of work experiences alongside academic learning, and thus, improve their work-readiness, graduate with lower debt and, in due course, access mid-career positions that require deep, organisational experience (e.g. Blackwell et al., 2001).

1. Introduction

1.1 Research by the Global Sourcing Research Interest Group at Loughborough University has identified how business support functions such as finance, HR, IT and procurement have been progressively challenged by top management to both reduce their cost base and justify their contribution to front-line services. The response from a wide range of organisations to these challenges has resulted in a fundamental transformation of the way that business support services are configured and operate. This results in a direct reduction in the number of entry-level jobs available to graduates and results in future problems in the 'talent pipeline' to mid-level roles because there are not enough people that have had the opportunity to train in the

entry-level roles. Students could get that entry-level experience whilst studying and earn in the process if organisations could be persuaded to take a socially responsible view towards job automation and offshoring and 'invest' in students as an alternative flexible workforce.

1.2 Whilst there are significant improvements in cost efficiency (Hackett Group, 2015), we believe that there are also long term implications for: talent management in organisations; career sustainability for young people; future applications to HE (and in turn the professions), and reduced social mobility as those young people with lower levels of social capital find it difficult to access entry-level professional work.

1.3 The underlying cause of our concern is the piecemeal nature of job elimination, automation and offshoring taking place in professional services (The Guardian, 2016). Worryingly, the phased nature of job reduction and offshoring means that this phenomena is going unnoticed by policy makers and educators. The long term implications of losing entry-level work are serious and, we argue, will not be reversed easily.

1.4 The fundamental commoditisation and relocation of back- and middle-office work is moving from more economically developed economies, such as the UK (Herbert and Seal, 2012) and is happening in a different manner to how manufacturing has moved from West to East in a very noticeable fashion. But, what the nature of the task, the ultimate outcome is that there is less work to go around. This is particularly pertinent for those seeking entry-level roles to start their professional careers and, in time, to progress to more senior management positions, such as business partner (Rothwell, Herbert and Seal, 2011).

1.5 In addition to the reduction in work volume, the more traditional, pyramid-style, structure of professional management is being 'hollowed out' as tasks become routinised and thus, capable of being controlled by workflow programmes that reduce the need for direct supervision and thereby, increasing the management 'span of control' (Seal and Herbert, 2013). This in turn reduces the number of supervisory roles in the middle of the hierarchy, which provide routes to more senior roles. According to the Chartered Institute of Personal Development (CIPD), in many organisations the professional structure now resembles an hourglass shape with a mid-career bottleneck into senior positions. The CIPD quotes Norman Pickavance, former HR director at Morrisons as saying "a complete and utter misunderstanding" of what is happening with skills in the UK, has left many degree holders sitting behind a check-out till, unable to progress into management (Lewis, 2016). See also, Anderson (2009).

1.6 The motivation of many corporate boards is often to both cut cost and reorient the centre of gravity of the organisation from more economically developed countries towards new markets in developing countries. At present, there is such a psychological inertia within multinational organisations that many senior executives tell us they are reluctant to temper their offshoring plans for fear of looking weak and uncommitted to corporate efficiency.

1.7 Moving good quality professional jobs also signals a shift in thinking towards a more multicultural, global, organisation that can process work on a 24/7 basis. Whilst a laudable objective, countries such as the UK should be aware that, in a similar manner to which manufacturing jobs migrated overseas from the 1960s, a similar phenomenon is now happening to white-collar work: any task that can be performed via a keyboard or via telephone can now be undertaken anywhere in the world and invariably automated (Hutzschenreuter, et al., 2011).

1.8 To add to the growing impact on professional functions, there is also an entry-level bottleneck between higher education and work. As the lower-level transactional jobs are moved offshore, the traditional 'training nurseries', where young people typically acquire the necessary skills, knowledge and behaviours at the start of their careers, are no longer available onshore. Indeed, the Association of Graduate Recruiters found that the number of jobs available with its members for new graduates decreased by 8% in 2015-16 (AGR, 2016).

1.9 The reduction in entry-level work is compounded by employers switching some recruitment to school leaver programmes and apprenticeships (Burns, 2016). Whilst the number of affected jobs is modest at present a further pressure for graduates is the rise of 'social impact' sourcing, whereby the newly deskilled tasks are redistributed to marginalised groups such as military spouses, prisoners, and other economically/socially underprivileged groups (e.g. Lacity, Khan and Carmel, 2016; Lacity, Rottman and Carmel, 2014; Nicholson, Babin and Lacity, 2016; Sandeep and Ravishankar, 2016).

1.10 If the re-engineering and relocation of work were not serious enough, robotic process automation (RPA) is now poised to rapidly accelerate the rationalisation and elimination of many of back and middle-office roles still available to graduates (Herbert and Dhayalan, 2016). Contrary to much of the popular debate about robotics in the wider sense, we believe that RPA will affect middle-level as well as transactional activities (BBC, 2017), exacerbating the polarisation of work between the skilled, well-paid jobs and less skilled, poorly paid jobs (Goos and Manning, 2007). The gamechanger here is artificial intelligence (AI) which is already learning complicated decision making routines (Willcocks, Lacity and Craig, 2017), along with cloud computing and 'software as a service' drastically reducing the need for local, inhouse, staff.

1.11 In parallel, with changing work patterns, the burden of funding higher education is being moved to students through rising tuition fees. At a cost of £9,250 p.a. students in England and Wales now graduate with the highest average debt in the world (from public universities) at around £44,500 (Kirby, 2016) and with rising interest rates applied from the start of study this can much higher.

1.12 The cumulative effect of these changes is acknowledged as having far reaching effects on the confidence of students and their families in the decision to pursue HE (Social Mobility Commission, 2016). This suggests that in a shrinking labour market, gaining relevant skills as well as academic learning is going to be increasingly important for graduate employability and hence, social mobility.

2. A new approach – Work Integrated Learning while studying

2.1 Despite the somewhat bleak scenario presented above, our research findings indicate that, with a new reality towards working while studying, there are many options for students to engage in meaningful work experience if they are supported in making sense of what might be a series of seemingly mundane tasks, but which can still provide experience of organisational systems, protocols and procedures. Traditionally, most integrated learning opportunities occur through formal periods of internship, usually between the second and third years of study (see Herbert and Rothwell, 2004). The problem is that such opportunities tend to be limited and the three conventional years of formal study do not generally involve professionally orientated work experience. For organisations students can provide a cost-effective, educated, flexible and multi-lingual workforce. It just needs some imagination and a break from the mind-set that we find in companies to the effect that student's only want to work in bars and supermarkets. To do this employers need to be encouraged by policy makers and students need to be able to see work experience as contributing to a professional career. Elite graduate programmes (though extremely small in number) already do this with top accounting firms and consultancies across the whole four years of study, but there is no reason why the principles could not be scaled up for the benefit of the many not the privileged few.

2.2 We propose that within a structured framework a series of episodic experiences that might arise with or without formal arrangements between a university and an employer, but taken together could provide a comprehensive experience of entry-level work to enable students to graduate with considerably reduced student debt, and with valuable employment skills and experience. We call this proposal 'Earning-to-Learn' (EtoL).

2.3 EtoL offers wide-ranging benefits to numerous stakeholders (such as students, organisations and wider society), as identified in our research in global organisations. Indeed, we know of students who have successfully combined learning and earning while studying, but such examples tend to remain at an individual level. The significance of EtoL compared with existing internship schemes is that:

- i. Work-experience occurs across the full timescale of a degree programme (four years with placement).
- ii. What might be a series of seemingly low-level tasks can be seen as a portfolio of experience within which students are supported in both making sense of practical work in relation to academic studies and constructing their own work identity to achieve accelerated entry into graduate level careers.
- iii. A structured scheme of work experience could constitute a basis for graduate apprenticeship funding, if this was orchestrated by a university, perhaps in conjunction with a several employers?
- iv. By leveraging new, digital technology, employers could find new ways of providing work to students, who in turn could provide a flexible, multi-lingual, pool of talent. If students could, say, work on campus, i.e. without occupying expensive space at an employer's office, then organisations tell us that it should be possible to compete with the offshore BPCs. But while RPA is a threat it can also be an opportunity to develop EtoL on RPA platforms such as managed crowdsourcing with students as the crowd (Oshri, 2017).
- v. While being able to accommodate individual students, the essential nature of the scheme is that it facilitates a strategic partnership between government, employers and HE, that covets rather than destroys entry-level work in professional functions, thereby promoting sustainable careers.

2.4 This subsection expands on the possible benefits from EtoL that has emerged during our discussions with industry, HE, professional bodies and government officials in the UK, US and India.

Organisations will benefit from access to a new, flexible workforce with the knowledge, skills and time to complement non-time critical onshore business operations in emerging areas of talent shortages. By locating the work on or near to a university campus organisations could achieve efficiency levels that could largely negate the main attraction of cost arbitrage in offshoring.

- i. It may be possible for individual organisations to access government funding via schemes such as the Higher and Degree Apprenticeship Scheme, wherein the employer pays 1/3 of the cost of the apprenticeship and the government the other 2/3.
- ii. Participation in EtoL also enables organisations to demonstrate Corporate Social Responsibility (CSR) by creating pathways into sustainable employment for young people. In the longer term, we envisage opportunities for organisations to develop skills academies and thus, a 'talent-pipeline' to senior professional roles.
- iii. Universities which participate in EtoL will attract students who might otherwise be deterred from entering HE due to fears about study debt. In addition to growing the student population, involvement in the scheme would help improve key measures of institutional performance such as retention rates, social inclusion, higher learning outcomes and graduate employability ratings, all of which are likely to have an impact

on league table performance, and consequently applications for places which in turn will feed in better ratings.

- iv. There may be additional economic benefits if by 'earning whilst learning', students feel more confident about funding their studies and the demand for bursary support is reduced.
- v. Furthermore, there may also be opportunities for universities to build on EtoL schemes by working with campus- or near-campus BPCs to develop world-leading business support systems in the same way that collaborations with manufacturers can produce leading-edge intellectual property, often primed with research income support and/or regional enterprise programmes.

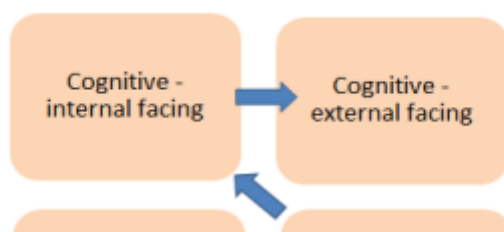
3. How would EtoL work in practice?

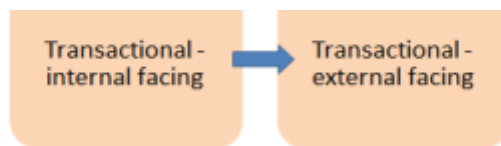
3.1 Students could be engaged on a freelance basis or recruited into larger, more structured programmes employing significant numbers of students. The work experience can take two forms, lower level/routine activities in the evenings/weekends/holidays during the study years (1, 2 and 4) and a 10-month placement doing higher-level work in year 3.

3.2 Existing tasks might include accounting, HR, IT and procurement. Initial thinking is that the scheme would mainly involve activities that are not time-critical, transactional and inward facing within an organisation. Alternatively, organisations may identify new tasks which might not have been cost effective to undertake previously. For example, cleaning historical master data, digitising manual records and working with social media communication channels (Twitter, Facebook, vis-à-vis telephone communication).

3.3 Following the success of many BPCs in applying new working practices to back-office operations, some organisations are now looking to their BPC to take the lead in applying the BPC model to front-line services and other back-office functions, e.g. customer services estates management. There are also emerging opportunities to implement new 'disruptive' technologies (e.g. new financial technology - FINTECH) which require intelligent labour to be implemented. Students could also be very good at performing a range of higher level activities that require an objective and critical approach, such as Quality Assurance and Quality Control procedures, testing spreadsheets and converting existing manual routines into robotic software macros routines and then testing them. More advanced roles, requiring greater cognition or which involve contact with external customers or divisional personnel would constitute a form of 'task progression' for students, see Figure 1 below:

Figure 1: Possible task progression for students





Source: adapted from Youngdahl and Ramaswamy (2008)

3.4 This model resonates with recent research on the nature of de-professionalization in BPCs which found that there was a wide range of skills required by individuals within the BPC environment (Lambert, 2016). It also reflects feedback from a 'Big 4' firm of accountants who highlighted the need for 'cross-over' capabilities amongst graduates between technical degrees e.g. chemistry graduates into business consulting. Furthermore, we suggest that the structured acquisition of such skills might be further underpinned by formal accreditation of EtoL schemes, either by a university and/or professional bodies.

4. Potential Student Financial Rewards

4.1 In terms of how much a student might earn from EtoL, Table 1 below provides an illustration of the potential student rewards based on a four-year undergraduate programme including a placement year and the student staying in university halls. The typical debt is reported as being around £55,000 including fees, living expenses and interest for a 3-year programme.

4.2 Whilst, universities would be keen to ensure that work does not encroach unduly on academic study, it should be noted that some full-time students already study on the basis of significant part-time working. Whilst, part-time and distance learning degrees have existed for a long time, the vast majority of students still see significant merit in experiencing campus life with its opportunities for social and sports activities that build life-long networks. The hypothesised scheme below seeks to present a reasonable balance between study, work and campus life.

Table1: Potential student rewards over four years

EtoL During Study Years	Component	£	£
Working hours during term period 10 hrs x 30 weeks x 3 years	900 hrs		
Working hours on vacation period 40 hours x 10 weeks x 3 years	1,200 hrs		
Total work during study years	2,100 hrs x £8 p.hr		16,800
EtoL during Placement year			
Salary say, £20,000 p.a. ¹	X 10 months ²	16,660	
Less, living expenses		(8,000)	8,660

Total EtoL earnings			25,460
Add possible reduction in fees through graduate apprenticeship scheme ³			<u>£29,500</u>
Total benefit of EtoL scheme for a student			<u>54,960</u>

1 No allowances have been made for personal tax and National Insurance contributions

2 Allowing for holidays £20,000 is annual salary x 10 moths work over the 2nd and 3rd years of study

3 Indicative study fees based on new fees from 2017 (£9,250 pa at most universities plus, indicative £1,250 fees for placement supervision).

4.2 We argue that via EtoL, employers stand to benefit from a highly flexible workforce capable of offering a wide range of new, sometimes leading edge skills, diverse language capabilities and in some instances an understanding of cultural norms. Not only would students fill the gaps arising from talent shortages in areas such as data analytics and RPA, but they would also offer availability outside normal office hours, allowing 'backfill' and 'follow-the-sun' working onshore.

5. Conclusions

5.1 Through the combined pressures of global competition, domestic austerity programmes and disruptive technology such as RPA, AI and Cloud Computing, the vast majority of back-and middle-office positions in the UK are under threat. The deskilling, commodisation and relocation of entry-level work which enable sustainable professional careers is serious, already happening and largely going unnoticed.

5.2 A new approach to work and funding is required to provide real opportunities for young graduates to enter the world of work in roles that will enable them to gain the experience, skills and behaviours to develop sustainable professional careers. We believe that Earning-to-Learn offers a feasible solution to both the funding issue and achieving work-readiness to compete in a global market.

6. Recommendations

6.1 Awareness should be raised across a wide range of stakeholders about the emerging issue of graduate underemployment as result of the offshoring of the traditional training positions, and the subsequent mid-career skills gap. In the context of the new higher levels of graduation debt, this is as much an ethical issue as a commercial one.

6.2 An enhanced framework of entry-level skills and behaviours should be produced to guide employers and students in seeking and evidencing skills development in entry-level roles, especially if the nature of the work is episodic.

6.3 A 'proof of concept' exercise should be undertaken with a business process centre(s) to establish the range of tasks that could be suitable, or made suitable, for students to perform. This should also determine the viability of the graduate apprenticeship scheme in an EtoL programme. This will also include evaluation of the extent to which students might work in self-governing groups to deliver services across each week.

Yours sincerely,

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For more information about the EtoL Scheme, please visit our webpage

<http://www.shared-services-research.com/earn-to-learn-scheme/>

The full report (including exemplar scenarios for students and organisations) is available at

<http://www.shared-services-research.com/wp-content/uploads/2016/03/EtoL-Proposition-Report.pdf>

21 September 2017

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