

## THF Discussion Series

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# RETHINKING THE HUMAN CAPITAL DEVELOPMENT MODEL FOR THE FUTURE OF WORK

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## **Abstract**

The future of work is a universal concern because of the many unknowns that challenge the conventional assumption and practice of the human capital development model. This essay aims to provoke a discussion on the rethinking of the human capital development model. The author suggests that developing individuals for an entrepreneur-professional-leadership career may be an alternative and a more sustainable human capital development model for the digitised economy. The creator-led (serial master) economy may be the way to go in an increasingly uncertain world.

## **Introduction**

The future of work has occupied the top of the agenda in debates and discussions among policymakers, corporate strategists, educationists, and scholars across various fields (e.g. Bishop, 2011; World Economic Forum, 2016; Brown, Hugh, & Ashton, 2010). A common theme is the concern over the acceleration of the digitisation of goods and services, which has led to the creative destruction of jobs (e.g. Kaplan, 2015; Brynjolfsson & McAfee, 2014). The US Bureau of Labor Statistics predicted that within the next ten years, many jobs will disappear because technologies will have taken over. On the lists were: Postman, Farmer, Sewing Machine Operator, Food Services Manager, Loan Processor, to name a few.

This preoccupation over “machines destroying jobs” reflects the anxiety that arises from the disruption of the long-held relationship of “education-skills-employment”. Traditionally, the education system is expected to help individuals acquire the skills desired by employers, which will, in turn, lead to their gainful employment. Essentially, individuals will be guaranteed employment security as long as they continue to keep their skills relevant. However, this proven formula is rapidly becoming obsolete.

A contributing factor to what Brown, Lauder, and Ashton (2011) have framed as the ‘broken promise of education, job and income’ is the global auction of skills in the neoliberal economy. In their book, Brown et al. (2011) highlighted the four major forces that have converged to culminate in this phenomenon (p.7-9):

- (1) *Education explosion* that has led to the creation of educated workforces in both developed and developing nations;
- (2) *Quality-cost revolution* in the production of goods and services, which has led firms to broaden their quest for high-skilled, low-cost workforces across national borders;
- (3) *Digital Taylorism* facilitated by technologies speeding up the deskilling of the previously skilled workers; and
- (4) *The war for talent* by global companies gravitated towards talent as limited to graduates from top universities. This, in turn, contributed to the widening of income inequality.

The observation by Brown et al. (2011) is primarily based on their studies of transnational corporations (TNC) and the conventional notion of labour as individuals seeking full-time employment in hierarchical careers within corporations. Moreover,

the authors' conception of the labour market structure of knowledge workers reflects the conventional work arrangements of the contemporary knowledge economy. Based on the conventional labour market structure, the distribution of the workforce is as follows: the most valued workers, dubbed "creators," constitute the top 10–15%. Below them are large pools of "demonstrators" and "drones" (p. 81). Briefly, creators are encouraged to think, innovate, and create, while demonstrators are expected to implement the pre-determined packages of products and services. As for drones, they are simply tasked with performing monotonous work that does not require much thinking. The question that should be posed is whether such a conception is truly representative of the future labour market structure. Would the future labour market structure be dictated solely by TNCs? Should we begin to visualise a more realistic future labour market structure in line with the digitised economy?

What has triggered widespread concern is this: the trend of machines replacing jobs is challenging the conventional approach towards human capital development and deployment. The current skills supply approach relies upon indicators by employers and industries, which is based on the assumption that enterprises — the creators of jobs and employment — are most aware of their skills needs. The panic revolving around the hollowing out of middle-skilled jobs, the concern over underemployment, and the fear of employment insecurity are the outward manifestations of the thinking underlying this traditional notion of human capital development. Should employers constitute the only reference point for the planning of future human capital? The ownership of skills may well be in the hand of individual and not solely within the decision of firms.

In sum, there is a need to re-evaluate the human capital development model that looks towards employers and industries as reference points and revolves around the conventional conception of full-time, hierarchical careers in corporations. This essay aims to provoke a discussion of the approach towards human capital development by comparing the conventional education-skills-employment approach with an alternative model – one in which people are creators. The essay will end by laying out further questions in relation to the re-orientation of the human capital development model in order to cater to the world of dynamic change, with some thoughts on Singapore's SkillsFuture initiatives<sup>1</sup>.

### **Conventional Approach: Education-Skills-Employment-Model**

According to the classical economic perspective, people are deployed by enterprises as inputs in the process of producing products and services (Becker, 1975). Hence, the primary role of education is to develop a competitive and employable labour force<sup>2</sup>. Although some contemporary economists have begun to treat human capital development as investment for future yield, instead of pure labour input (Little, 2003), the concept of the return to skills through wage employment is fundamentally unchanged. Both approaches still rest on the premise of employer-centric skills demand and individual yields return to skills through full time employment.

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<sup>1</sup> SkillsFuture is a national movement that seeks to empower every Singaporean to take charge of their learning, skills and careers to achieve personal aspiration throughout life.

<sup>2</sup> Other purposes of education may include citizenship and character development.

Most labour markets are made up of three broad groups of occupations: Professional, Manager and Executive (PME), Technicians and Associate Professionals (TAP), and Rank-and-File (RnF). This is reflected in the various statistical occupation classifications such as OECD's ISCO-88 and Singapore Standard Occupation Classification. Essentially, the classification is based on skill expectations and the nature of work to be performed. Most countries, and Singapore is one of them, seek to ensure that their delivery of education supports the aforementioned stratification of the labour market (Fasih, 2008).

The current labour market arrangement stems from the adoption of an employer-centric approach in determining skills, which harks back to the organisation of work originating from the industrial era. The assumption is that employers, as creators of employment, know best about skill needs. However, such an assumption is being increasingly challenged by the reality that enterprises are constantly going through major restructuring in order to remain competitive, which means that they are, at best, able to articulate their immediate skill needs. Furthermore, the original concept of industry boundaries from which this labour market arrangement springs is blurring due to the emergence of technology-enabled business models. For instance, AirBnB, is challenging the dominance of hotels in the traditional accommodation industry by offering alternative accommodation through the concept of 'shared-economy'. Similarly, Uber, using information communication technologies and the combination of shared-economy, is also disrupting the private transportation industry, particularly taxi conglomerates. Finally, Udemy (which facilitates access to just-in-time learning online to every corner of the world) is reshaping institution-dominated learning and also allowing practitioner-experts to share their knowledge and expertise online.

The predictions of skill needs is always challenging. This is especially the case when we cannot accurately forecast how businesses will transform. Some governments in the advanced economies have resorted to picking industries for further investment in technologies and innovation (e.g. Netherlands' Top Sectors; Germany's industries 4.0). By doing so, policymakers hope to keep a tab on the pulse of skills demand, while banking on the innovation-led internationalisation of products and services to generate jobs. Although this strategy may give one a certain handle on the creation of a skilled workforce for immediate and near-term industrial needs, an adaptive approach that demands a fundamental review of the future of the labour market structure would be more useful for the long term.

The new economy, described by some as "uberised," has brought on fear and cheer. Some are concerned about the disappearance of the well-established social and economic systems of wage employment and job security. Others view it as a harbinger of new opportunities that will ultimately culminate in the development of a new labour market structure, along with a new education-skills-employment model (e.g., Degryse, 2016; McKinsey Global Institute, 2015; Kilpi, 2014). What all these analysts share in perspective is that the labour market of the future will be quite different from today and the future of economy may not be firm-centric.

On the future of the labour market structure, Esko Kilpi (2014), a Finnish futurist on knowledge work and digital work environment, posited that the organisational form of the industrial era will gradually give way to a work architecture

of a network, firms will not be the core in the creation and allocation of work. He argued that the current industrial organisational form is too rigid and restrictive for a highly-connected economic environment. McKinsey Global Institute (2015) also cautioned the relative decline of the large industrial organisational structures, as epitomised by the TNC, in their report — “Playing to Win: The New Global Competition for Corporate Profits”. The report highlighted the relative decline brought on by a more competitive world, a more unpredictable environment, and the certainty of lower growth.

If the future scenario were to follow the depictions of the aforementioned analysts, then crucial and related questions pertaining to the role of the education system in contributing to the future labour market structure should be considered and addressed. How should countries develop the skills of their labour force in a scenario in which human beings and machines co-exist extensively? Is there a need to nurture a labour market with a far larger pool of creators than is the case in the current model?

### **Alternative Approach to Education-Skills-Employment**

In the previous section, we have discussed the conventional human capital development model and its limitations. We will now explore the potential of an alternative approach.

The dominant employment form of our contemporary industrial economy is a bureaucratic career — full-time employment within an organisation. However, due to the restructuring of business models with the corresponding changes in operation and production arrangements, this form of employment is becoming more insecure. Nonetheless, displaced individuals continue to seek out the next bureaucratic career. At times, their endeavour to change careers may even lead to the worsening of their circumstances due to numerous factors. For example, a fresh start with entry-level jobs usually leads to a drop in income. In a volatile economic environment, employers will continue to seek out various modes of skills utilisation in order to remain agile, such as outsourcing, crowd-sourcing, or offering temporary employment. Therefore, the availability of full-time wage employment is no longer a guarantee.

The other challenge faced by individuals is the matching of the skills in demand and the skills that one has to offer. In a bureaucratic career, individuals take instruction from firms on skills in demand, that is, skills are firm-specific. With the volatility of the job market, increasingly, individuals will have to get ready at all time for skills in demand beyond that specified by the employers. The ownership of skills is an individual responsibility.

With the new architecture of work arrangement in the Internet era, there is an increasing demand for high-skilled experts — a “serial master” who is a creator (Gratton, 2011, p. 18) and has deep expertise and competency in his/her domain of practice. Moreover, he/she is able to integrate and connect across fields and sectors to create new products and services. Continuous learning and creation will be the hallmark of a serial master. He/she is morphing his/her knowledge into creative products and services. Branding (self and endorsement) is critical to a serial master. With the “Internet-of-Thing”, the serial master will be able to develop an “omni-

channel” career — one that extends beyond fixed employment with one employer (Author). An example of an omni-channel career is a linguist who specialises in providing editing services. She supports graduate students through academic writing advisory with a university and also offers academic writing courses at education institutions and on online platform such as Udemy or Lynda. The serial master may continue to have the career choice between a bureaucratic career and tap onto other channels to distribute his/her skills. Some of the professions that have developed along this path can be found in the creative, consulting, InfoComm, and even education industries.

Over time, it is predicted that serial masters may take on a micro-entrepreneur career form, which is a combination of an entrepreneur-professional-leader career (EPL) (Pink, 2002; Gratton, 2011, Kilpi, 2015). Being an entrepreneur involves the branding and marketing of one’s expertise, as well as the seeking out opportunities to add to one’s credentials. As a professional, one will need to engage in networking and work arrangements of a collaborative nature across different fields. Finally, the leadership component refers to the area of deep expertise where he/she continues to ‘learn-practise-enhance’. The advantage of the EPL career form is the autonomy of skills mastery, and potentially a better approach towards income security.

Unfortunately, this EPL form of career is still not promoted today, because the conception of the bureaucratic career, underpinned by the perspective of people as labour inputs, continues to prevail. Therefore, amidst the economic restructuring, it may be worthwhile for policymakers to think beyond stepping up the public employment system to help the displaced get into employment and consider how they can help the highly-skilled move into an EPL career. Conducting studies to identify the list of potential of EPL careers may be the first step. Secondly, the enhancement of career advisories beyond jobs to those of EPL. Thirdly, it is important to create an awareness in the individual for preparation in an EPL career.

Although critics have argued that the e-lancing<sup>3</sup> arrangement will worsen inequality and heighten the precariousness of the pipeline of work, thus leading to further job insecurity, the economic realities of massive business restructuring and headline-making retrenchments suggest otherwise. In lieu of waiting for the next full-time employment, individuals should take ownership of their skills and become serial masters in specific areas and learn-work-practise to develop their brand and credentials. In fact, globally, the share of workforce engaged in freelance careers is on the rise (“The Future of Work: There is an App for That”, 2015). Two on-demand firms cited in the report, Handy (matching jobs for independent contractors and Tongal (platform for video makers), the former has 5000 sign-ons and the latter has 40,000 video makers signing on. Being a serial master gives one a better chance of success in skills development and skills utilisation. Arguing for a work arrangement characterised by network connectivity, Esko Kilpi in an interview (Boyd, 2014, para 4-5) put it sanguinely:

It is not the corporation that is the centre, but the intentions and choices of individuals. This view of work focuses attention on the way ordinary, everyday

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<sup>3</sup> Freelancing via online platforms.

work-tasks should enrich life and perpetually create the future we truly want through continuous creative learning. Work and learning are the same thing... Success is increasingly a result from skilful participation: it is about how we are present and how we communicate. Through new interaction-technologies and ubiquitous connectivity, we have totally new opportunities of changing the way we work together.

Today, professional bodies, along with international networking and online platforms, offer far more opportunities to individuals than before. Individuals are no longer constrained by national boundaries. Thanks to the Internet, skills experts are able to distribute their skills worldwide. A case in point is an edu-preneurial career opportunity offered by one private institution locally to help subject-matter experts develop online content and distribute it worldwide. Institutions also bring in edu-preneurs to conduct face-to-face lessons in the ASEAN region. They take on a variety of roles from content development, learning facilitation, and worksite mentoring to workplace consulting. Online portals such as Udemy and Lynda.com offer similar content distribution channels for deep experts with contents on demand. Their reach is potentially worldwide.

If the scenario of the future of work as identified by futurists is true, the future of the labour market structure *need not* and *should not* resemble the developer-demonstrator-drone hierarchy depicted by Brown et al. (2011). Because technologies can take over most of the work done by demonstrators and drones, education should focus on nurturing creators. Nurturing creators should be the fundamental basis of the new human capital development model. Human capital development should no longer be confined to the wishes of employers. Instead, individuals should be empowered to develop, use, and distribute their skills on their own initiative.

### **Furthering the Discussion**

At this juncture, it is relevant for us to review the current human capital development model. We must first acknowledge that the conception of human capital as mere labour inputs needs to evolve to become one whereby human capital development is centred on nurturing creators (or serial masters). We cannot assume that the labour market in the near horizon — the next 10–15 years — will remain unchanged.

While efforts have been placed in managing short-term job creation and helping displaced workers into jobs, an equally, if not more important mission on hand should be to plan and prepare for the future labour market structure. It is imperative that policymakers and key stakeholders (businesses and trade unions) begin to envision the future labour market structure and the education system needed to achieve a creator-led economy. This will, by no means, be an easy task as industrial and social policies need to move in tandem in order to facilitate the transition.

In Singapore, our policies are moving in the right direction of empowering individuals to take charge of their career and skills strategies. With the rollout of My-SkillsFuture portal in 2017, a one-stop education, training and career guidance online portal that will empower every Singaporean to plan their learning and working life. It will be critical for the portal developers to recognise the need to support the

development of serial masters (skills mastery) by facilitating individuals' pursuit of lifestage careers beyond bureaucratic careers. Hence, the support of an EPL career should be an integral part of the SkillsFuture Agenda.

Degrays's (2016) reminder on the great restructuring is most apt in reminding us of the need for change in our perspectives, assumptions and approaches:

We are in the early throes of a Great Restructuring. Our technologies are racing ahead but many of our skills and organisations are lagging behind. So, it is urgent that we understand these phenomena, discuss their implications, and come up with strategies that allow human workers to race ahead with machines instead of racing against them (p. 21).

The future of work is promising. To be better prepared, we need to tripartite partner-government-trade unions-businesses to come together to rethink and redesign the human capital development model for a creator-led economy.

#### **Note**

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