Ups and downs in the electronics industry: Fluctuating production and the use of temporary and other forms of employment
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Issues paper for discussion at the Global Dialogue Forum on the Adaptability of Companies to Deal with Fluctuating Demands and the Incidence of Temporary and Other Forms of Employment in Electronics

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Preface

This issues paper has been prepared by the Sectoral Policies Department (SECTOR) for the Global Dialogue Forum on Adaptability of Companies to Deal with Fluctuating Demands and the Incidence of Temporary and Other Forms of Employment in Electronics, to be held in Geneva from 9 to 11 December 2014.

At its 317th Session (March 2013), the Governing Body endorsed the proposal to “address, at a global dialogue forum, the adaptability of companies to deal with fluctuating demands and the incidence of temporary and other forms of employment in electronics”. At its 320th Session (March 2014), the Governing Body decided to invite eight Employer and eight Worker representatives, after consultation with their respective groups in the Governing Body, to attend the forum, as well as representatives of any interested Governments.

This paper was prepared by David Seligson (SECTOR), with major inputs from Gale Raj-Reichert and Xiaolei Qian, contributions from several other departments of the International Labour Office (ILO), and the assistance of Huw Thomas and Youbin Kang. The paper is published under the authority of the ILO.
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</tbody>
</table>
1. The electronics industry

1.1. Overview and structure

1. The global electronics industry is one of the largest industrial sectors in the global economy, generating more revenue than any other goods-producing sector.\(^1\) While exact figures on the total number of workers in the electronics industry globally can be difficult to come by, a study conducted for the ILO Better Work Programme in 2010 estimated it to be 18 million.\(^2\) In 2011, the Sustainable Trade Initiative estimated the number to be over 15 million.\(^3\) The global electronics industry is highly competitive, innovative and fast-changing, with short product cycles,\(^4\) and largely employs a just-in-time production model. In order for companies to stay competitive in such an industry, “mastering this pace of change is vital for success. Excess inventory or transit time, delays of expensive components, or any finished or semifinished product containing them, anywhere in the value chain, results in value loss.”\(^5\)

2. In 2010, the United States contributed 27 per cent to global value added. Over the years, developing countries have increased their contribution to global value added from 11 per cent in 2000 to 30 per cent in 2010. Over the same period, China increased its contribution from 4 per cent to 23 per cent (see table 1).\(^6\)

---


\(^4\) The more technologically dynamic and highly valued components, such as semiconductors and hard disc drives, experience a 1 per cent decrease in value per week: see J. Curry and M. Kenney: “The organizational and geographic configuration of the personal computer value chain”, in M. Kenney and R. Florida (eds): *Locating global advantage: Industry dynamics in the international economy* (Stanford University Press, Stanford, 2004), pp. 113–141.

\(^5\) ibid., p. 114.

### Table 1. Percentage contribution to global value added in the electronics industry in 2010

<table>
<thead>
<tr>
<th>Country</th>
<th>Contribution to global value added</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>27</td>
</tr>
<tr>
<td>China</td>
<td>23</td>
</tr>
<tr>
<td>Japan</td>
<td>12</td>
</tr>
<tr>
<td>Germany</td>
<td>5</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>5</td>
</tr>
<tr>
<td>Taiwan, China</td>
<td>5</td>
</tr>
</tbody>
</table>

Source: Manyika et al. (2012).

3. Measuring by output, China is the biggest producer of electronic goods, with a third of the world output (see figure 1).

#### Figure 1. Output in electronics (US$ billion)

![Output in electronics](image)

Notes: ISIC 3.1, 30 and 32: International Standard Industrial Classification of All Economic Activities, Rev. 3.1, divisions 30 and 32. Figures are for 2009, with the exception of: a 2008; b 2007; and c 2006.


1.2. **Global supply chains**

4. Electronic goods are extremely tradable, even when compared to products of labour-intensive industries such as apparel, textiles and toys. This has contributed to extensive use of outsourcing and subcontracting. In the 1980s, multinational enterprises (MNEs) began to separate management from production activities in order to focus on core

7 ibid.
competencies, such as research and development (R&D), product design, and brand management and marketing. With help from technological advancements, particularly in communications and transport, and the standardization, commoditization and automation of certain production functions, MNEs were able to separate various stages in production processes and to relocate manufacturing activities offshore. Labour-intensive activities in particular were transferred to lower-cost locations. In the United States, for example, 368,000 jobs in the electronics industry were moved to overseas locations from 2000–10. Over the years, these actions have led to vast and complex global supply chains and an industry with an extensive and dispersed global sourcing (see figure 2 for an example). The work and employment practices, especially among the contract manufacturers, are similar throughout the industry. They are shaped by the service orientation of this type of production, with characteristics including flexible employment, relatively low wages and a high proportion of women, migrant and ethnic minority workers.

Figure 2. Example of linkages between firms in a global supply chain

Notes: CS: component supplier; CM: contract manufacturer; S: supplier.
Source: Nadvi and Raj-Reichert (forthcoming) “Governing health and safety at lower tiers of the computer industry global value chain”.


9 Manyika et al., op. cit.

10 Sturgeon and Kawakami, op. cit.

11 Lüthje et al.: From Silicon Valley to Shenzhen: Global production and work in the IT industry (Lanham, Maryland, Rowman & Littlefield, 2013).
5. Trade data on intermediate goods (parts and components) illustrates the extent of cross-border outsourcing and offshoring in the electronics industry’s global supply chains (see figure 3).

Figure 3. **World exports of electronics goods** (US$ billion at current prices and current exchange rates)  

![Graph showing world exports of electronics goods](image)

Source: UNCTAD Stats [accessed 15 April 2014].

6. Electronics companies from developed countries first relocated to Malaysia, Singapore, Taiwan (China) and Thailand during the 1970s and early 1980s, followed by China, Indonesia and the Philippines, and more recently India and Eastern European countries, such as the Czech Republic, Hungary, Poland and Romania. The signing of the North American Free Trade Agreement also led to the development of large manufacturing facilities in Mexico in the 1990s. The majority of subcontracted and outsourced electronics manufacturing continues to be done in Asia, mainly due to its low labour and other costs, established supply base and proximity to key final markets. Today, China is the world’s largest producer of computer hardware and undertakes 80 per cent of basic

---

12 The figure shows final goods under standard international trade classification (SITC) groups 751, 752, 761, 762, 763 and 775; and parts and components under SITC groups 759, 764, 772 and 776.


16 Van Lient, op. cit.
component production. It also undertakes a large portion of the final assembly of products, the most labour-intensive processes in the industry.\(^7\)

7. The electronics industry is generally comprised of three groups of firms: brand firms, contract manufacturers and component suppliers. Brand firms subcontract and outsource a considerable amount of their manufacturing activities and use a range of suppliers for parts and components. In many ways, they organize global supply chains by determining how production is organized, which suppliers are able to participate and under what conditions, such as price, quality and delivery requirements.\(^8\) Table 2 shows selected large electronics firms.

<table>
<thead>
<tr>
<th>Company</th>
<th>Latest reported annual revenue (US$ million) (^1)</th>
<th>Employees (^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samsung Electronics</td>
<td>220,185</td>
<td>286,284</td>
</tr>
<tr>
<td>Apple</td>
<td>170,910</td>
<td>80,300</td>
</tr>
<tr>
<td>Foxconn</td>
<td>131,138</td>
<td>1,200,000</td>
</tr>
<tr>
<td>Hewlett-Packard</td>
<td>112,298</td>
<td>317,500</td>
</tr>
<tr>
<td>IBM</td>
<td>99,751</td>
<td>431,212</td>
</tr>
<tr>
<td>Hitachi</td>
<td>95,988</td>
<td>320,725</td>
</tr>
<tr>
<td>Microsoft</td>
<td>86,833</td>
<td>128,000</td>
</tr>
<tr>
<td>Sony Corporation</td>
<td>71,509</td>
<td>140,900</td>
</tr>
<tr>
<td>Panasonic</td>
<td>71,331</td>
<td>271,789</td>
</tr>
</tbody>
</table>

Sources: \(^1\) Bloomberg Businessweek. \(^2\) Company websites [accessed 23 Sep. 2014].

8. The second type of firms, contract manufacturers, is a small group of first-tier suppliers.\(^9\) Contract manufacturers are highly capable suppliers that undertake manufacturing, assembly and testing of parts and final products for other companies.\(^10\) In recent years, brand firms have consolidated their supply bases and outsourced more manufacturing, design, and pre- and post-manufacturing responsibilities, such as purchasing, logistics and

---


\(^9\) All except Foxconn are brand firms.

\(^10\) Contract manufacturers are also classified as electronics manufacturing services providers (EMSs), original equipment manufacturers (OEMs), or original design manufacturers (ODMs), depending on their activities. In some cases, contract manufacturers have become brands themselves (original brand manufacturers, OBMs), producing and selling own-brand products, often to their domestic markets.

\(^21\) Gereffi, 2004, op. cit.
marketing, to this group of key suppliers. Since their rise in the 1980s, contract manufacturers have grown into very large global firms in their own right. Table 3 shows selected large contract manufacturers.

Table 3. Selected large contract manufacturers (2013–14)

<table>
<thead>
<tr>
<th>Company</th>
<th>Latest reported annual revenue (US$ million)</th>
<th>Country of origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foxconn</td>
<td>131 138</td>
<td>Taiwan, China</td>
</tr>
<tr>
<td>Quanta Computer</td>
<td>29 212</td>
<td>Taiwan, China</td>
</tr>
<tr>
<td>Flextronics</td>
<td>26 109</td>
<td>United States</td>
</tr>
<tr>
<td>Compal Electronics</td>
<td>22 985</td>
<td>Taiwan, China</td>
</tr>
<tr>
<td>Wistron Corporation</td>
<td>20 705</td>
<td>Taiwan, China</td>
</tr>
<tr>
<td>Jabil Circuit</td>
<td>18 337</td>
<td>United States</td>
</tr>
<tr>
<td>ASUSTeK Computer</td>
<td>15 372</td>
<td>Taiwan, China</td>
</tr>
<tr>
<td>Inventec</td>
<td>15 299</td>
<td>Taiwan, China</td>
</tr>
<tr>
<td>Sanmina-SCI</td>
<td>5 917</td>
<td>United States</td>
</tr>
<tr>
<td>Celestica</td>
<td>5 796</td>
<td>Canada</td>
</tr>
</tbody>
</table>

Source: Bloomberg Businessweek.

9. Contract manufacturers themselves manage vast supply chains through the purchase and sourcing of parts and components from a large group of component suppliers. Component suppliers range from large global firms that design and produce technologically advanced components, to very small firms that produce parts and components. Some of the component suppliers (such as Microsoft and Intel) are platform leaders and are highly profitable. Others produce key components and, although engaged in relatively low-value-added activities, are critical for the functioning of the global supply chain in the electronics industry.


24 Contract manufacturers are the largest purchasers of electronics components on the world market (Sturgeon and Kawakami, 2010).

25 Firms whose technologies are used in other firms’ products and which stand apart from other component suppliers owing to their considerable technological prowess, high share in the market, value added and production of R&D-intensive components; see Sturgeon and Kawakami, op. cit.; Curry and Kenney, op. cit.

26 Hard disc drives and dynamic random access memory (DRAM) modules, secondary components such as semiconductor chips and printed circuit boards, and commodity components such as power supplies, keyboards, and cables and connectors; see Curry and Kenney, op. cit.
1.3. Regional specializations

10. A country’s engagement in the electronics industry supply chain can be gauged by the level of imported parts and components that are subsequently re-exported: the higher the percentage, the higher the country’s engagement. Figure 4 shows this data for the year 2009.

Figure 4. Re-exported intermediate imports as a percentage of total intermediate imports in electronic and optical equipment in 2009

Source: OECD–WO Trade in Value Added (TiVA) [accessed 16 Apr. 2014].

11. The East Asia region has become important both as a production location and as a final market for electronic goods. While countries such as Japan and the Republic of Korea dominate with brands in consumer electronics, Taiwan, China, specializes in contract manufacturing for American and Japanese brands. China provides a key low-cost location for outsourced manufacturing of computers and mobile phones. 27 More recently, Chinese brands, including Lenovo, Huawei, Ningbo Bird and ZTE, have gained market share, particularly in personal computers and mobile phones. 28 In 2011, China overtook the United States to become the largest market for personal computers. 29

12. In Central and Eastern European countries, manufacturing facilities are focused on supplying the European market. While labour costs in the region may not be as low as in some Asian countries, its close proximity to Western Europe gives it a transportation cost

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27 Sturgeon and Kawakami, op. cit.; Marsh, op. cit.

28 Manyika et al., op. cit.

advantage. Hungary is the largest electronics producer in Central and Eastern Europe, with 25 per cent of the region’s output. The Czech Republic is also a major player; Foxconn, which has been in the country since 2000, now has its largest European site there. Bulgaria, Romania and Ukraine have recently emerged as new production locations, mainly due to the relatively lower wages there.

13. South-East Asia is well known for its manufacturing of consumer electronics, semiconductors, hard disk drives and other electronic components, with Malaysia, Singapore and Thailand as major producers. Mobile phone manufacturing has also grown in this region. The East Asia and South-East Asia regions combined have doubled their mobile phone manufacturing since 2001; in 2011, they undertook more than 80 per cent of global production. While the regions’ low labour and manufacturing costs attract manufacturing operations, the lack of skills development has prevented the industry from successfully moving up the global value chain. Newly emerging low-cost countries in the region are Indonesia and Viet Nam.

14. In Latin America, Mexico is host to an electronics cluster that supplies the North American market. Figure 5 shows the dominance of the United States as a recipient of Mexico’s exports in office and telecommunications equipment (Standard International Trade Classification (SITC) divisions 75 and 76 and group 776).

---


33 Manyika et al., op. cit.


35 K. Matsuzaki, IndustriALL Global Union: Background document on ICT, Electrical & Electronics for the Steering Committee Meeting on ICT E&E, Ho Chi Minh, Viet Nam, 9 April 2014.
Figure 5. Exports of office and telecoms equipment (SITC divisions 75 and 76 and group 776) by Mexico to select destinations in 2012 (per cent)

Source: WTO Trade Statistics Database [accessed 16 June 2014].
2. Production fluctuations and how the electronics industry can adapt to them

2.1. Production fluctuations

15. Consumer electronics have short product life cycles, ranging from three to 18 months, with a quick end-of-life time frame. As a result, suppliers of these products face increasingly fast time-to-market orders. For example, when the Apple iPhone was introduced in 2007, the time to market was six months; in 2012, it had shrunk to less than two weeks.

16. Figure 6 shows the typical life cycle of a product in the electronics industry. It begins with a peak at the time of the product’s launch, followed by a gradual levelling off during a maturity phase, and ends with a quick end-of-life phase, which may result from planned product replacements.

Figure 6. Typical life cycle for a short-lived product


17. Figure 7 is an example of a production cycle, showing changes in quarterly shipments of Apple Mac computers to the United States.

Figure 7. Percentage change in quarterly shipments of Apple Mac computers to the United States, 2005–14


18. Increases in the number of new products introduced are creating challenges for suppliers. In addition, suppliers often face late orders and changes to orders in midstream as a result of inaccurate market forecasting, avoidance of product overstocking and uncertainty. This can create a “bullwhip effect” up the supply chain. Assembly factories must manage these last-minute orders with high ramp-ups during production peaks.


5 The bullwhip effect normally begins with customer demand that is lower or higher than anticipated, which leads retailers to under- or over-order the product, and which leads wholesalers to under- or over-order from suppliers. These orders result in larger and larger swings in stocks and production among suppliers up the supply chain through attempts to offset the unanticipated volume of orders. See the Financial Times lexicon: lexicon.ft.com/term?term=the-bullwhip-effect.

19. Long lead times, seasonal demand, high product variety and short product life cycles contribute to market forecasting errors. A further factor that creates difficulties in market forecasting is economic downturns (see figure 8 showing the effect of the 2008–09 economic crisis on exports). The electronics industry in general is export-oriented, and therefore employment in the industry is heavily influenced by factors occurring in far-away locations. Fluctuations in demand hit subcontractors at the end of the supply chain especially hard. Because electronics are essential to a wide range of other sectors and economic activities, an economic downturn that affects other areas has a spillover effect, making the electronics industry especially vulnerable to recessions. Furthermore, many electronic products are considered luxuries, which means that consumers often postpone purchasing them during a recession.

Figure 8. World exports of electronic goods, 2008–12 (US$ billion)

![World exports of electronic goods, 2008–12 (US$ billion)](source)

Source: WTO Trade Statistics [accessed 16 June 2014].


2.2. Buyer–supplier coordination

20. Production fluctuations lead to increased demand volatility to suppliers upstream. Suppliers need accurate advance information with enough lead time to purchase raw materials and components. When orders are delayed or changes are made midstream, suppliers can face production peaks that can lead to increased use of temporary workers. The brand firms have little knowledge about the use of temporary workers by their suppliers. A recent study showed that, out of 39 electronics brand companies surveyed, only 12 monitored the use of temporary workers by their suppliers. 10

21. Better planning on the part of buyers and better communication, for example through sharing centralized customer demand information with suppliers, can help eliminate the causes of the bullwhip effect. 11 For example, Samsung uses RosettaNet to share information on stock levels with retailers in the United Kingdom and operates a Merchandizing Control System to calculate the volumes of products sold into stores and out to consumers. 12 Cisco has managed its production peaks by having in place stand-by capacity to assemble high-value products in the United States in response to increased orders from up-market American customers. Cisco also holds inventory of low-value, high-demand items in lower-cost locations outside of the United States to respond to sudden increases in consumer demand elsewhere. 13

2.3. Annualized schemes

22. In several countries in Western Europe, companies utilize an annualized hours scheme to reduce their reliance on temporary workers. Such schemes schedule the working time and pay for direct employees over a relatively long time period, typically for a full year. Workers’ wages are fixed and are based on an agreed number of hours for the whole period, not on the hours worked each week. As a result, a worker might work more hours during certain periods and be compensated by reduced hours and time off during other periods. 14 According to a survey of companies with over 250 employees in Germany conducted between 2008 and 2011, 91 per cent reported having utilized an annualized hours scheme during that time. 15 However, negative implications of this scheme include


11 Kaipia et al., op. cit.


13 ibid.


the use of more evening, night and weekend shifts during production peak times, and short notice periods for the intensification of work schedules.  

2.4. Using temporary and other forms of work

Producers who wish to remain competitive … try to pass on to suppliers the uncertainty that they encounter in the market place. … Orders are placed late, requiring a good deal of flexibility by all involved, including workers. This model creates slow periods of production, when there are few orders to fill, as well as very heavy periods. In sum, this encourages the hiring of workers on temporary contracts and the use of excessive overtime to complete an order on time.

23. It is more common for factories to deal with peaks and troughs in the production cycle by either hiring or laying off temporary workers or adjusting their working hours, rather than by hiring or laying off permanent workers.

24. Fixed-term contracts are regulated by law in 65 per cent of countries. Over half of countries limit the cumulative duration of successive contracts and almost half require valid reasons to use fixed-term contracts, as can be seen from table 4.

25. Labour laws in a number of countries have been relaxed to make it easier for companies to hire temporary workers and for longer periods, especially in response to the weak growth in jobs since the global economic crisis that began in 2008.


17 See Chapter 3.1 below for definitions.


### Table 4. Regulations governing fixed-term contracts (FTCs): A global overview

<table>
<thead>
<tr>
<th></th>
<th>FTCs regulated by law (percentage of countries)</th>
<th>Valid reasons for the use of FTCs required (percentage of countries)</th>
<th>Maximum number of successive FTCs specified (percentage of countries)</th>
<th>Mean maximum number</th>
<th>Limits on the cumulative duration of successive FTCs specified (percentage of countries)</th>
<th>Mean maximum duration (months)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Income groups</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LDCs</td>
<td>84.2</td>
<td>36.8</td>
<td>26.3</td>
<td>2.0</td>
<td>42.1</td>
<td>33.0</td>
</tr>
<tr>
<td>LMICs</td>
<td>57.9</td>
<td>47.4</td>
<td>15.8</td>
<td>2.0</td>
<td>47.4</td>
<td>49.3</td>
</tr>
<tr>
<td>EEs</td>
<td>59.3</td>
<td>55.6</td>
<td>25.9</td>
<td>2.0</td>
<td>66.7</td>
<td>42.0</td>
</tr>
<tr>
<td>HICs</td>
<td>63.3</td>
<td>43.3</td>
<td>40.0</td>
<td>2.9</td>
<td>60.0</td>
<td>38.0</td>
</tr>
<tr>
<td><strong>Region</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Africa</td>
<td>76.9</td>
<td>38.5</td>
<td>26.9</td>
<td>2.0</td>
<td>46.2</td>
<td>37.0</td>
</tr>
<tr>
<td>Americas</td>
<td>30.8</td>
<td>53.8</td>
<td>23.1</td>
<td>2.0</td>
<td>46.2</td>
<td>32.0</td>
</tr>
<tr>
<td>Arab States</td>
<td>80.0</td>
<td>0.0</td>
<td>20.0</td>
<td>2.0</td>
<td>40.0</td>
<td>48.0</td>
</tr>
<tr>
<td>Asia</td>
<td>58.8</td>
<td>29.4</td>
<td>17.6</td>
<td>2.0</td>
<td>35.3</td>
<td>50.0</td>
</tr>
<tr>
<td>EU15*</td>
<td>71.4</td>
<td>64.3</td>
<td>64.3</td>
<td>3.0</td>
<td>78.6</td>
<td>30.5</td>
</tr>
<tr>
<td>Other Europe</td>
<td>70.0</td>
<td>65.0</td>
<td>20.0</td>
<td>2.5</td>
<td>80.0</td>
<td>48.8</td>
</tr>
<tr>
<td><strong>All countries</strong></td>
<td><strong>65.3</strong></td>
<td><strong>46.3</strong></td>
<td><strong>28.4</strong></td>
<td><strong>–</strong></td>
<td><strong>55.8</strong></td>
<td><strong>40.5</strong></td>
</tr>
</tbody>
</table>

Notes: LDCs: least developed countries; LMICs: low- and middle-income countries; EEs: emerging economies; HICs: high-income countries.

The latest year for which data is available is 2013 for 43 countries, 2012 for 30 countries, 2011 for 12 countries and 2010 for ten countries. * Data for Ireland was not available, therefore the figures reflect the remaining 14 countries.

Sources: ILO Eplex database; ILO World of Work Report 2014.
26. While statistics on non-standard forms of employment are relatively scarce, the figures available show that the use of temporary employment has increased in many countries. For example, in Japan, the number of part-time and temporary workers more than tripled between 1999 and 2007, from 1.07 million to 3.8 million; in India, contract labour in manufacturing increased from 13 per cent in 1994 to 30 per cent in 2006; in China, the number of agency workers doubled between 2008 and 2012, from 30 million to 60 million; and in the countries of the Organisation for Economic Co-operation and Development (OECD), temporary jobs grew by 55 per cent from 1985 to 2007, while permanent jobs grew by only 21 per cent. In the European Union (EU), 12 per cent of all workers were on fixed-term contracts in 2010. The EU countries with the highest percentage of fixed-term contracts (for all sectors) were: Poland (22 per cent), Spain (18 per cent), Portugal (16 per cent) and the Netherlands (15 per cent). In 2010, it was estimated that around 1 per cent of workers in the EU were temporary agency workers.

27. While information on the global or regional use of temporary employment in the electronics industry specifically is scarce, individual country estimates indicate an increase in the use of temporary employment, in particular agency work, in electronics factories. For example, in Mexico, around 60 per cent of the electronics industry workers were temporary agency workers in 2009; during production peaks, factories have had as much as 90 per cent of their workforce as temporary agency workers. In Thailand, more than half of the 500,000 workers in the electronics industry are temporary agency workers. In a mobile phone manufacturing cluster in Srirerumbudur, Tamil Nadu in India, temporary contract workers constituted between 46 and 80 per cent of the workforce in three factories surveyed.

2.5. Incidence and regulation of temporary and other forms of work

2.5.1. China

1. The electronics industry and its challenges

28. The electronics industry is very important for the Chinese economy. Despite a slump in 2009, electronic products still accounted for more than 30 per cent of the total trade. Figure 9 shows that, in 2013, exports of electronic products amounted to US$780.7 billion,


25 ibid.

accounting for 35.3 per cent of the country’s total exports; over the same period, electronics imports amounted to $549.5 billion, 28.2 per cent of total imports.  

Figure 9. Export and import of electronic products in China, 2009–13 (US$ billion)

Source: Ministry of Industry and Information Technology of the People’s Republic of China (MIIT), Statistical bulletin for the electronic information industry.

29. China faces challenges emerging from rising costs of labour and raw materials, labour shortages, and uncertainty over the exchange rate for the Chinese yuan.

30. In the course of 30 years of economic reform, China became the world’s second-largest economy, an achievement attributed in large part to its demographic dividend – a large working-age population providing a large labour supply. However, after 2015, the population between the ages of 15 and 64 in China is estimated to decline, by approximately 165 million or roughly 20 per cent by 2050.  

2. Wages

31. Rising labour costs have become one of the major challenges for manufacturers across the industry. In 2013, 27 regions raised the minimum wage standards, with an average increase of 17 per cent. In addition to wages, social welfare contributions or benefits provided to employees have increased. 


employees account for part of the rising costs. Considering the impact of demographic change, demands from the workforce for social protection and benefits such as rewards for seniority are likely to increase over time. To react to the challenges represented by increased costs and competition to hire and retain workers, companies have developed various strategies, such as automation, relocating to inland areas, lowering material costs and investing in building their workers’ loyalty.

3. Mobility

32. China’s labour force is highly mobile. There is a trend of shortened employment periods coupled with frequent job changes. One study has shown that, on average, migrant workers remain at a job for 2.2 years – half as long as they did eight years ago; furthermore, migrant workers born after 1980 stay at a job for 1.5 years, while those born after 1990 stay on average for ten months.  

33. When migrant workers decide whether to remain in or leave a job, the expectation of higher wages is still a critical factor; however, they have also cited other considerations, such as a lack of career development opportunities and health concerns about working conditions.

4. Employment types

34. The Labour Contract Law of the People’s Republic of China covers three types of employees – contracted employees, dispatch employees and part-time employees – corresponding to the three major types of employment relationship.

35. Contracted employees are hired directly by, and sign their labour contracts with, the employer. Three types of contract are defined: fixed-term, open-ended and project contracts. 

36. Dispatch employees are employed by the Worker Dispatch Service, which is required to sign a fixed-term contract with dispatch workers for a minimum of two years.

37. Part-time employees may have more than one labour contract, provided that they work not more than four hours per day on average or 24 hours per week for the same employer. They may make oral agreements with the employer, must be paid at least the legal minimum wage for the region, and are terminable at will with no severance terms.

38. Although the term “temporary workers” was abolished in the 2008 amendments to the Labour Contract Law, the Ministry of Labour had clearly stated as early as 1996 that


31 China Family Culture Research Committee (CFCRC): Survey on the marriage, dating and life status of new-generation migrant workers (新生代进城务工者婚恋生活状况调查) (Beijing, 2012). The survey covered 19 cities in 10 provinces; 2,517 questionnaires were collected.


33 idem, art. 58.

34 idem, arts 68–69.
temporary workers should enjoy the same rights as formal employees. The 2008 Employment Promotion Law granted migrant workers labour rights equal to those of urban workers.

39. The Labour Contract Law, revised in late 2012, defines dispatch services as supplementary, and only to be used for temporary, auxiliary or substituting positions. The updated law further provides definitions of these positions, and also provides that the number of dispatch workers must be limited to a certain ratio of the total number of employees.

40. Following the 2012 amendments to the Labour Contract Law, the Chinese Government released Interim Provisions on Labour Dispatch, effective from 1 March 2014, stipulating that dispatch workers must not exceed 10 per cent of the total employees in the entity using dispatch workers.

5. Case study: An enterprise perspective on recruitment practices and challenges

Background

41. Factory M, located in the Yangtze River Delta, manufactures electronic products for international buyers. In mid-2012, it had a workforce of approximately 5,000. Throughout the year, the factory had constant and high demand for workers – in an average month, 1,500 new workers were needed – due to production increases and a high worker turnover. To meet its recruitment targets, the human resources (HR) department used a range of hiring channels.

42. This case study looks at the hiring practices, as well as the challenges and potential risks associated with different recruitment channels. Information was collected from factory HR data, as well as interviews with management, workers, and the labour brokers and schools that provided dispatch and student workers.

Recruitment planning

43. Figure 10 presents an overview of the monthly task of estimating labour demand.


36 Temporary positions exist for no more than six months; auxiliary positions provide services to the core business jobs; and substituting positions are jobs to provide coverage for contracted employees who are absent from work for a period of time.

37 Labour Contract Law, art. 66.


39 ELEVATE Global Limited: Research report, unpublished as of 1 August 2014. Materials and information about the factory in the case study were collected by ELEVATE in 2012. The study was designed to evaluate the HR practices and recruitment processes used by the factory, drawing from extensive interviews with factory management and workers.
44. Based on the forecast order from the Sales Department, the Production Department mapped out the production plan and resource needs, taking into account five key elements: worker turnover rate, defect rate, good-quality rate, machinery status and material status. Industrial engineers and production managers then worked out the estimated human resources needed in terms of working hours, and translated it into a number of workers.

45. A list of the demand for additional human resources was generated at the end of each month to define the number of workers required in the following month. One challenge faced by Factory M was unanticipated demand for short-term labour. As a result, the factory management specified a number of extra workers as a buffer to be included in the total recruitment target. In addition to the formal channel to generate labour estimates, the HR department also relied on frequent and informal information exchanges with industrial engineers in order to understand the needs.

Recruitment process

46. The recruitment procedure was highly efficient, taking only three days from interviews to reporting for duty. The most common bottlenecks in the process arose as a result of difficulties in obtaining a sufficient number of candidates.
47. Factory M experienced problems after the 2012 Chinese New Year: one third of its workforce did not return after the holiday, and a production ramp-up started in March. As a result, the factory found itself in need of approximately 3,500 workers.

48. To attract new workers, the factory used several methods:

- free transportation between the job fairs and the factory;
- welcome gifts for new workers;
- a bonus of ¥400–500 for internal referrals; and
- a higher monthly premium for labour brokers to incentivize them to present more candidates.

49. New workers were engaged in four ways: through labour brokers, internal referrals, job fairs and schools. Workers hired either through internal referrals – whereby existing workers introduced their family, friends or acquaintances – or job fairs signed their contracts directly with the factory. Those sent by labour brokers were dispatch workers who signed their contracts with the brokers, who by law were their employers. Student workers from schools worked at the factory only for a set period to complete their internship, a compulsory part of their education programme.

50. Table 5 presents a monthly breakdown of workers hired between February and July 2012 by recruitment channels. It shows that a majority of new hires were dispatch workers. Later that year, as the factory headquarters decided to stop hiring additional dispatch workers, the percentage of workers hired through job fairs saw a sharp increase. However, the HR manager interviewed implied that, despite the new company policy, they might still have considered using labour brokers during the next production ramp-up or post-Chinese New Year hiring season.

<table>
<thead>
<tr>
<th></th>
<th>Labour brokers</th>
<th>Internal referrals</th>
<th>Job fairs</th>
<th>Schools</th>
<th>Total No. of workers hired</th>
<th>Recruitment target</th>
<th>Percentage of target met</th>
</tr>
</thead>
<tbody>
<tr>
<td>February</td>
<td>58% 415</td>
<td>40% 281</td>
<td>2% 15</td>
<td>–</td>
<td>0% 0</td>
<td>711</td>
<td>1600 44%</td>
</tr>
<tr>
<td>March</td>
<td>66% 1780</td>
<td>30% 815</td>
<td>4% 98</td>
<td>–</td>
<td>2% 2</td>
<td>2695</td>
<td>3500 77%</td>
</tr>
<tr>
<td>April</td>
<td>61% 798</td>
<td>14% 187</td>
<td>23% 294</td>
<td>2% 21</td>
<td>6% 56</td>
<td>1300</td>
<td>2300 57%</td>
</tr>
<tr>
<td>May</td>
<td>35% 324</td>
<td>25% 232</td>
<td>33% 305</td>
<td>6% 56</td>
<td>10% 69</td>
<td>917</td>
<td>1500 61%</td>
</tr>
<tr>
<td>June</td>
<td>64% 453</td>
<td>10% 71</td>
<td>16% 113</td>
<td>10% 69</td>
<td>5% 45</td>
<td>706</td>
<td>1200 59%</td>
</tr>
<tr>
<td>July</td>
<td>–</td>
<td>35% 320</td>
<td>60% 550</td>
<td>5% 45</td>
<td>915</td>
<td>900</td>
<td>102%</td>
</tr>
</tbody>
</table>

= nil or negligible.

Costs and efficiency of different hiring channels

51. The four hiring channels are associated with different costs, worker turnover, time and risks, as can be seen in figure 11. Table 6 shows how the cost structure varies across the hiring channels. Hiring through job fairs might incur the lowest cost, provided that enough candidates can be secured. The ongoing cost of having interns was significantly higher than hiring by other channels. However, it should be noted that these costs refer only to direct recruitment costs. Since there is no information on wages and social insurance
arrangements, a full-scale comparison of the total labour costs for different types of workers is not possible.  

Figure 11. Comparison of recruitment channels

![Comparison of recruitment channels](image)

Table 6. Hiring costs by channel

<table>
<thead>
<tr>
<th>Channel</th>
<th>One-off fees</th>
<th>Ongoing fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour brokers</td>
<td>–</td>
<td>¥30 (or ¥50 in the busy season) per worker per month for a year</td>
</tr>
<tr>
<td>Internal referrals</td>
<td>¥400–500 per successful referral</td>
<td>–</td>
</tr>
<tr>
<td>Job fairs</td>
<td>Booth rental of ¥450 per day</td>
<td>–</td>
</tr>
<tr>
<td>Schools</td>
<td>–</td>
<td>¥100 per student per month</td>
</tr>
</tbody>
</table>

Labour brokers and dispatch workers

52. Labour brokers were used mainly because they could supply a large number of workers at short notice. According to the brokers interviewed, they use three methods to recruit workers: large-scale labour brokers subcontracting smaller local labour agencies; brokers working with provincial and regional labour bureaux to source workers; and brokers contacting schools to find student workers. These options involved multi-tiered intermediaries in the hiring process, which created ambiguity in the information received by the workers and incurred additional costs. Furthermore, the brokers themselves admitted that some channels they used were unstable and risky.

Schools and interns

53. Interns at Factory M constituted less than 10 per cent of the total workforce. Nevertheless, as interns worked for a short period of time and had lower turnover rates than regular workers, they were a resource to be utilized when the factory faced a temporary increase in demand.

54. Internships are a compulsory part of training at vocational schools, and schools are not supposed to charge management fees to factories or students. Four schools which sent interns to Factory M participated in interviews.

40 Nevertheless, there is anecdotal evidence of labour brokers not providing full coverage of social insurance to dispatch workers. This may be one of the reasons why dispatch workers are used.
55. Only one out of the four schools complied with the regulations on managing interns: it sent teachers to remain at the factory to look after the interns, and did not charge the factory any monthly management fees. Other schools collected ¥100 per student per month. Interviews with interns indicated that schools provided insufficient information and guidance, and that there was a lack of support and poor communication between interns and the factory.

Conclusions from the case study

56. Efficient production planning and accurate labour estimates are essential for good human resource strategies. When a factory bases its planning on the maximum number of working hours, as the production managers did at Factory M, there is a risk of excessive working hours, as no buffer is included to deal with potential changes or delays in production.

57. Using dispatch workers and interns helps to meet short-term labour demand. However, the factory has less control and could be exposed to risks – labour rights might be violated by brokers or schools, interns might be left unprotected, and there may be lack of support and communication with these workers. Such issues might then lead to dissatisfaction, disputes and lower productivity among workers, which would raise production costs and impact negatively on the workforce.

2.5.2. Japan

58. Japan has one of the largest shares of temporary agency workers in the world. In 2007, nearly 1.6 million workers, or 2.8 per cent of the workforce, were hired through temporary staffing agencies. Before the global economic crisis, the largest increase in the use of non-regular workers was among electrical machinery assembly and repair workers, from 4 per cent in 2002 to 11.9 per cent in 2007. In 2013, of the 600,000 employees in the manufacturing of electronic components, devices and electronic circuits, 130,000 were non-regular workers; in the manufacturing of information and communication equipment, 40,000 of the 270,000 workers were non-regular. For example, Canon employed 70 per cent of its workforce through temporary staffing agencies in 2007, up from 50 per cent in 2000 and only 10 per cent in 1995.


42 ibid.

43 Non-regular workers include dispatch workers, contract employees and entrusted employees. Entrusted employees are similar to contract employees (relatively long fixed-term, full-time, direct employment), but the term is often used to refer to retirees who have been rehired by their employer after retirement.


45 Excluding executives.


47 Coe et al., 2011, op. cit.
59. In a survey into the reasons why businesses choose different types of non-regular workers, reducing labour costs was the main reason given by companies. 48 It was found that temporary workers were the first to lose their jobs as part of cost-cutting by several Japanese electronics firms during the 2008 global financial crisis. 49

60. Since the mid-1980s, the Japanese Government has progressively relaxed the laws and regulations concerning temporary worker agencies. The list of sectors that were allowed to use temporary agency workers and the duration of temporary contracts was progressively expanded from the mid-1980s onwards. During the late 1990s, the Japanese Government amended labour laws during a stubborn recession to make it easier for companies to hire laid-off and unemployed, mainly young Japanese people as part-time workers. In 1999, amendments to the Worker Dispatch Act and the Employment Security Act led to the full legalization of temporary worker agencies. 50 These amendments encouraged companies to hire non-regular employees. 51 As part of the reforms, the positive list of sectors permitted to use temporary agency workers was replaced with a shortlist of jobs for which their use is not permitted. 52 In 2004, temporary agency workers were allowed in the manufacturing sector for the first time. Their contracts in the manufacturing sector were initially limited to one year and were increased to three years in 2007. Now there are no limits to the number of renewals of temporary agency worker contracts and fixed-term contracts. 53

2.5.3. Malaysia

61. The electronics industry in Malaysia is concentrated on relatively labour-intensive, standardized, lower-skilled assembly and testing activities. There has historically been a positive correlation between the rise of contract manufacturing in Malaysia and growth in foreign migrant workers. 54

62. Malaysia has the highest number of foreign migrant workers in the South-East Asia region. The estimates of registered and unregistered foreign workers ranged from 2 to 4 million in 2010, with around 1.8 million workers officially registered. 55 The Malaysian Government allowed for the entry of foreign workers as part of its industrialization policies to meet

48 Asao, op. cit.


50 Coe et al., 2011, op. cit.

51 Asao, op. cit.

52 ibid.


demand for lower-skilled labour.  

It was estimated that the percentage of foreign labour in the country rose from 2 per cent in 1993 to 10 per cent in 2000.  

63. For the electronics industry, Malaysia receives migrants from Bangladesh, Cambodia, India, Indonesia, Myanmar, Nepal, Philippines and Viet Nam. Migrant workers are employed on three-year contracts that can then be extended by a year at a time, for a maximum of five years in total. Around 70 to 80 per cent of migrant workers in the electronics industry are women.  

64. In 2008, interviews with first- and second-tier suppliers in the electronics industry in Penang showed widespread use of foreign workers contracted through temporary worker agencies. The use of foreign workers was more common in large factories, as smaller firms found hiring foreign workers to be more costly than hiring local workers. More recently, a factory in Penang reported that, on average, 15 per cent of its annual workforce were hired as temporary workers. However, temporary foreign workers in Malaysia are not necessarily used only to deal with production fluctuations. Because of a high rate of employee turnover among local workers, foreign workers with three-year contracts provide a stable workforce for large factories. Hence, in Malaysia the use of temporary foreign workers is not tied to production fluctuations but to a lack of domestic workers willing to work for low wages. Foreign workers are also cheaper and may be paid as little as half

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62 Information based on personal communication, 17 June 2014.  

63 Raj-Reichert, 2011, op. cit.  

of domestic wages. Some foreign workers have had substantial portions of their wages deducted to pay off a debt to a recruitment agency.

65. Labour laws in Malaysia were relaxed to fulfil the high demand for low-skilled workers, who were not available domestically. Amendments in 2005 allowed temporary workers to be direct employees of recruitment agencies instead of the companies they worked for. Although there are disputes about the legality of this policy, licences had been provided to 277 labour outsourcing agencies by 2010. Companies in Malaysia have a quota on the number of foreign workers permitted. When a factory has met its quota, it can turn to temporary worker agencies that have their own quotas for additional workers. It is common for large factories to use several agencies at a time in order to receive higher numbers of foreign workers.

66. The Malaysian Government has signed memoranda of understanding with a number of countries to prohibit foreign workers from joining trade unions and to allow employers to withhold their passports. In January 2009, the Malaysian Government put a stop to the entry of new foreign workers. New contracts were rescinded and companies were urged to lay off foreign workers before the end of their contracts. This was done under a policy called “foreign workers first out” in order to make jobs available to Malaysian workers. However, due to the quick economic recovery in 2009, a total of 98,916 new foreign-worker visas were approved in 2010, 54,844 of which were for the electronics industry.

2.5.4. Mexico

67. In 2006–07, it was estimated that around 60 per cent of workers in the electronics industry were temporary agency workers, supplied by 62 private employment agencies. Some companies have hired up to 90 per cent of their workforce as temporary agency workers during production peaks. Private employment agencies have installed branch offices

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66 ibid.


68 This policy is said to contradict the Private Employment Agencies Act of 1981, which stipulates that agency workers are employees of the company and as a result regular labour laws apply to them; see SOMO, 2013, op. cit.

69 ibid.; Verité, 2010, op. cit.

70 SOMO, 2013, op. cit.


72 Kanapathy, 2010, op. cit.

inside some electronics companies, effectively meaning that the plants have outsourced their HR management.  

68. It is common practice for workers on temporary contracts to sign one contract after another over a long period. Some have worked for the same electronics companies for years, even a decade, on short-term agency contracts.  

At one plant, for example, temporary agency workers reported that they were on 15-day contracts; during production peaks, contracts were one to two months long.

69. The following are some of the reasons given by companies for using temporary agency workers:

- In 2009, 75 per cent of workers in a Nokia plant were on 28-day contracts, with some workers on contracts as short as seven days. Nokia stated that its use of temporary contracts was due to its production model and that the practice was commonplace in Mexico.

- In 2012, Nokia laid off 780 workers. Close to 50 per cent of them were rehired as temporary workers on six-month contracts through the Manpower employment agency. Nokia reported that it needed to use the agency to help “achieve unpredictable production targets”.

- In 2011, a Lenovo factory hired 65 per cent of its workers as temporary agency workers throughout the year from three employment agencies. These workers were on contracts of three months or less. Lenovo reported that it used temporary workers due to production fluctuations and the inability to anticipate the amount of products consumers would buy.

- In 2007, Sanmina-SCI reported that it needed 48 per cent of its employees as temporary agency workers in order to have the flexibility to remain competitive.

70. Mexican labour law permits companies to use fixed-term contracts for projects that are time-limited, to replace a regular worker temporarily or to cover temporary increases in workloads. There are no limits on the number of renewals or extensions of fixed-term contracts. The use of temporary agency workers is regulated separately. Temporary agency workers are not supposed to perform the same activities conducted by regular workers in a company. Companies are not allowed to transfer regular-worker contracts to a temporary-

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74 Lüthje et al.: From Silicon Valley to Shenzhen: Global production and work in the IT industry (Lanham, Maryland, Rowman & Littlefield, 2013).

75 H. Salazar Salame: Worker rights protection in Mexico’s Silicon Valley: Confronting low-road labor practices in high-tech manufacturing through antagonistic collaboration, doctoral thesis submitted to the Massachusetts Institute of Technology, 2011.


77 CEREAL: Electronics multinationals and labour rights in Mexico: Second report on working conditions in the Mexican electronics industry, 2007; idem: Labour rights in a time of crisis: Third report on working conditions in the Mexican electronics industry, 2009; idem, 2011, op. cit.; idem: After the reform: fifth report about the labor conditions of Mexico’s electronics industry, 2013.
worker agency. There are also no limits on the number of renewals of temporary worker assignments or their cumulative duration. 78

2.5.5. Hungary

71. In 2010, Hungary employed around 92,000 workers in the electronics industry. 79 It is the country’s second-largest industry, representing 22 per cent of total manufacturing. 80 In 2006, it was estimated that around 14 per cent of workers in the electronics industry were temporary agency workers. 81

72. In a 2010 study carried out on four electronics factories, it was estimated that the number of temporary agency workers was equal to or greater than the number of permanent workers in three out of the four companies. At one plant, an average of around 31 per cent of its workforce of approximately 2,500 were temporary agency workers in 2011. During low production periods, the factory had 15–20 per cent of its workforce as temporary agency workers, and during peak periods up to 60 per cent. 82

73. Profiles of two other electronics companies in Hungary in 2008 provide more detailed information about the use of temporary agency workers in this sector. The first factory employed 6,000 workers in 2008, of which around 3,000 were temporary workers supplied from eight different agencies. That factory had a more constant use of temporary agency workers (between 45 and 50 per cent of the workforce) than the second company. During slow production periods, manufacturing volumes were at 65 per cent of production peak times. According to the HR department, temporary agency workers were used to address production volatility. The second company employed 5,300 workers in 2008. Depending on the production cycle, between 25 and 50 per cent of the workforce was made up of temporary agency workers. The company claimed to use them for greater flexibility and the ability to handle the volatility of production.

74. Both factories employed temporary agency workers whose contracts were repeatedly renewed. One worker at the second company reported being on a two- to three-month contract that was renewed over several years. The agency workers’ wages were around 25 to 30 per cent lower than those of direct employees with similar qualifications and job responsibilities, mainly because they did not receive annual and performance bonuses. 83


81 Bormann and Plank, 2010, op. cit.

82 Perényi et al., op. cit.

75. Before 2006, Hungary was one of a very few countries in the EU with no requirements for the equal treatment of temporary agency workers and regular employees, and no limits on the length of time for which temporary agency workers could be employed. In 2006, the Hungarian Labour Code was amended to allow for equal wages and benefits for temporary workers hired directly by a company after six months of employment.

76. Hungary does not impose restrictions for the first fixed-term contract and there are no limits on the number of renewals; however, there must be legitimate grounds for contract extensions and the duration of a fixed-term employment relation may not exceed five years.

77. In its implementation of EU Directive 2008/104/EC on temporary agency work, Hungary allows deviations to the equal treatment provision through collective labour agreements. It also prohibits the replacement of a permanent contract with a temporary agency contract within six months of a worker’s separation from the company or during the trial period.

84 ibid.


87 European Commission: Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the application of Directive 2008/104/EC on temporary agency work (Brussels, 2014).
3. Opportunities and challenges in the use of temporary and other forms of employment

The classic stereotype of a full-time permanent job ... is an increasingly infrequent reality ... The supposedly “atypical” has become typical; the “standard” has become the exception. Views are strongly divided about whether and how this matters for the attainment of decent work for all and, if so, what if anything should be done about it. 1

3.1. Temporary and other forms of employment: Definitions and discussions

78. Temporary work contracts may be fixed-term, task- or project-based or casual. 2 Companies may employ workers directly on temporary contracts or through temporary labour agencies. In addition, young people may work as interns or apprentices. 3

79. The Report for the recurrent discussion on fundamental principles and rights at work submitted to the 101st Session of the International Labour Conference (2012) 4 notes that “[t]he increase in non-standard forms of employment ... and the exposure of export-led sectors to high levels of competition all highlight important challenges in the full application of FPRW to all individuals which require innovative responses”. The Report uses the term “non-standard employment” to cover “employment relationships in which workers are not employed directly by the user company, but by a subcontractor or private employment agency; various types of short-term contracts; and, finally, part-time work and home work”.

80. The Private Employment Agencies Convention, 1997 (No. 181), emphasizes that workers recruited by private employment agencies must not be denied the right to freedom of association and collective bargaining. Agencies are not allowed to charge workers any fees, unless explicitly authorized. Furthermore, the Convention calls for adequate protection of agency workers in relation to, inter alia, minimum wages, working time, and occupational safety and health. An ILO workshop held in 2009 concluded that temporary agency work, if appropriately regulated, “contributes to improved functioning of labour markets, fulfils specific needs for both enterprises and workers, and aims at complementing other forms of employment”. 5

81. The Part-Time Work Convention, 1994 (No. 175), calls for part-time workers to receive the same protection as full-time workers in respect of the right to organize and to bargain


collectively, occupational safety and health, and discrimination. Furthermore, it states that part-time workers should not receive proportionately lower wages.

82. The Employment Relationship Recommendation, 2006 (No. 198), emphasizes the importance of having a national policy on establishing the existence of an employment relationship, on distinguishing between employed and self-employed workers and on combating disguised employment relationships.

3.2. Employment creation

83. It has been claimed that temporary employment creates more jobs. 6 However, an OECD study in 2006 7 found no positive correlation between temporary work and employment rates between 1994 and 2004 (with the exception of Ireland). A further argument is that temporary employment (for workers on fixed-term contracts and temporary agency workers) can be an opportunity, or stepping stone, for students or young workers entering into permanent employment, by providing training and building their skills. 8 One study in Germany indicated that the stepping-stone effect for temporary agency workers seems to be lower than for other types of temporary employment. 9 A similar lack of stepping-stone effect for fixed-term workers was noted in Spain, where, during the mid-2000s, only 6 per cent of fixed-term contracts led to permanent employment. 10 In the Philippines, a labour force survey showed that only 11 per cent of temporary agency workers moved into regular work, 36 per cent were not rehired and less than 1 per cent of employers intended to convert agency jobs into regular positions. 11 In China, where colleges produce over 7 million new graduates every year, private employment agencies facilitate their transition from education to work and provide young people with their first work opportunity, at the same time facilitating domestic migration. 12

3.3. Worker preference for temporary employment

84. There are differing views on workers’ preferences for temporary work. Some emphasize the positive sides of temporary employment, arguing that women with children, young

6 International Confederation of Private Employment Agencies (CIETT): Adapting to change: How private employment services facilitate adaptation to change, better labour markets and decent work (Brussels, 2011).


students and older people choose temporary work because of the flexibility it provides. Temporary work can also provide supplemental income. It can be used to gain experience and increase employability and can help workers to “get to know” an employer. Studies in support of these arguments, however, have been conducted mainly on workers in developed countries.

85. Others find that the decision to enter temporary employment is a constrained choice, and that workers, in particular those at the lower end of the labour market, prefer permanent employment. An increased availability of jobs through temporary worker agencies can leave some workers with no alternatives. Temporary agency workers can feel powerless over decisions on where they will be placed, the short notice of their placements and the lack of stability of their contracts. In companies with a high incidence of temporary work, permanent employees may fear that they will themselves become temporary workers one day.

86. A 2010 study in Japan on workers’ reasons for choosing irregular work (part-time, fixed-term or dispatch employment) showed that part-time workers appreciated the flexibility and work–life balance, whereas fixed-term and temporary agency workers would rather have had regular employment.

3.4. Impact on costs and quality for firms

High shares of low-paid temporary workers have a negative impact on the probability that firms invest in R&D.

... Secure workers will be more willing to cooperate with management in developing labour-saving processes and in disclosing their (tacit) knowledge to the firm. More generally, workers who are easy to fire have incentives to hide information about how their work can be done more efficiently.

87. A study conducted on the relationship between temporary employment and innovation found that Western European countries with historically strong labour protection and low

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14 CIETT, 2011, op. cit.

15 Coe et al., 2010, op. cit.

16 ibid.


20 ibid.
labour flexibility exhibited higher labour productivity gains through the use of more capital and innovation. Moreover, with more emphasis on innovation, companies were better adjusted in labour markets with rising wages.  

88. High worker turnover rates reduce a company’s return on its investment in training. Furthermore, workers on temporary contracts are more likely to be interested in acquiring general skills that they can use for their next job as opposed to acquiring firm-specific skills.  

A study by KPMG concluded that reducing worker turnover is a key priority in enhancing suppliers’ competitiveness.  

89. Long-lasting employment relationships have several positive consequences:  

- reduced costs of monitoring and control;  
- loyalty of workers reduces the likelihood of leakage of trade secrets;  
- greater opportunities for long-term accumulation of knowledge that can contribute to innovation;  
- management receives more productive and critical feedback from the shop floor.  

90. A study conducted in Spain showed that a 20 per cent reduction in manufacturing productivity between 1992 and 2005 was due to the high use of temporary workers. This was attributed to the lower levels of investment companies make in temporary workers.  

91. The use of temporary workers may be linked to higher product failure rates or lower quality of production. Research has shown higher failure rates to be more common during ramp-ups of new products. A study on Spanish manufacturing firms from 1991 to 2005 found that firms with a large percentage of temporary workers were significantly less productive than other firms. While data on failure rates are usually not made public by companies, anecdotal evidence suggests a possible relationship between the use of temporary workers and production quality in the electronics industry. In 2013, Bloomberg Businessweek published a story on the frantic search for temporary workers for an

21 ibid.  
22 ibid.  
24 Kleinknecht et al., op. cit.  
electronics plant in Malaysia that needed to meet the short production deadline for iPhone 5 cameras. The production line had to be closed one month later, due to a high failure rate.\(^{28}\)

### 3.5. Employment security and work–life balance

92. In Western Europe, individuals on fixed-term contracts have been shown to face greater career instability, a higher risk of unemployment, lower upward mobility and a higher risk of remaining in fixed-term employment over the long term.\(^{29}\) Moreover, during economic crises, temporary workers are the first to be laid off. This was the case during the 2008 global financial crisis, when temporary jobs in the EU fell by 6.3 per cent, compared with a 1.3 per cent loss of permanent jobs.\(^{30}\) A similar result was seen in Malaysia after the Asian financial crisis of 2001–02: a dramatic drop in temporary foreign workers, very often among those working in the electronics industry.\(^{31}\)

93. Furthermore, during an economic recovery, temporary workers may be the first to be rehired due to employers’ reluctance to hire permanently during uncertain economic times.\(^{32}\) Employment recovery through temporary work, however, does not provide a sustainable economic recovery. It is less likely to create increased consumption, as temporary workers are generally insecure about their future income.\(^{33}\)

94. Workers on temporary contracts lack certainty about whether their contract will be extended or renewed. Insecurity over income presents difficulties for managing a household, as well as for family planning. It is particularly problematic for workers who

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\(^{33}\) ILO, 2013, op. cit.
have dependants. Temporary workers find themselves in in-between positions, with hopes of returning to regular employment, and constant fears of being sent back to the agency. 34

95. On the other hand, it has been argued that temporary employment can improve work–life balance, especially for workers who may not follow a traditional, continuous career path, but instead participate in the labour force in a patchwork manner during different phases of their lives. 35

96. Research has shown negative effects on temporary workers’ mental and physical health. In general, this is due to lower job satisfaction and poorer working conditions. 36 A study on workers in Germany between 2007 and 2011 found that fixed-term workers employed by companies directly had lower levels of social well-being and, as a result, weaker social inclusion than permanent workers. 37 Moreover, temporary agency workers had lower levels of social well-being than directly employed fixed-term workers.

97. There is also a strong gender aspect to temporary work. Women tend to remain on temporary contracts longer than men. Job insecurity for women may lead to family conflicts, relationship pressures, domestic violence, increased stress and other negative health implications, and may result in their children becoming independent prematurely. Moreover, in many countries, women on temporary contracts in the electronics industry often do not get their contracts renewed if they become pregnant, get married or reach a certain age. 38

98. Temporary agency workers may also face unpredictable working hours. For example, in 2011, agency workers at a plant in Hungary reported that they were informed of their shifts only a few hours beforehand by text message. 39 In the Czech Republic, it was common for workers to remain in their dormitory for a week without work. 40

99. Because of their employment insecurity, temporary workers are less likely to complain or raise concerns about working conditions. 41 Not only can this lead to unchecked problems


35 Scherer, op. cit.

36 ibid.

37 Gundert and Hohendanner, op. cit.


41 H. Salazar Salame: Worker rights protection in Mexico’s Silicon Valley: Confronting low-road labor practices in high-tech manufacturing through antagonistic collaboration, doctoral thesis submitted to the Massachusetts Institute of Technology, 2011.
in factories, but it also means that client firms do not receive accurate information about problems with suppliers in order to work with them to correct them.

3.6. Wages

100. Workers on temporary contracts have been shown to be paid less than permanent employees. For example, temporary workers have earned as little as 40 per cent of the wages of permanent workers in countries such as Germany, Mexico, South Africa and Spain. 42

101. The reasons why temporary workers receive lower wages vary. At one plant in Hungary, temporary agency workers were employed on only 70 per cent of the monthly working hours, and as a result received lower wages than regular workers. 43 At another plant in the Czech Republic, temporary agency workers were given 300 probationary working hours (in order to receive a one-year contract) during which they were not paid full wages. 44 At another plant in Hungary, temporary agency workers who did not have work during factory downtimes did not receive any compensation during that time. 45 Temporary workers may also miss out on wage increases (from not gaining seniority at work), lack pension payments, and often lack compensation for redundancy or for death on the job. 46

102. In one Chinese electronics factory, labour brokers were found to be charging workers an introduction fee, ranging from ¥100 to ¥400. There were no set rules to define the actual amount. One worker reported that male workers had to pay twice as much as female workers. 47 In the same factory, most dispatch workers were paid through brokers. Workers interviewed were unaware of their legal rights and unsure whether brokers had deducted fees from their wages, although the law prohibits this practice. 48

3.7. Rights at work, collective bargaining and social dialogue

103. Temporary workers may face various violations to their rights. They are often prohibited from, or encounter difficulties in, joining a trade union and exercising their rights to organize and to bargain collectively. In the Republic of Korea, temporary workers make up almost half of the workforce but less than 2 per cent of them are unionized, whereas overall, almost 10 per cent of workers in the country are unionized. The increased share of

43 Perényi et al., op. cit.
44 Andrijasevic and Sacchetto (forthcoming), op. cit.
45 Perényi et al., op. cit.
48 ibid.
temporary workers has been seen as a major reason for the decline in union density. Temporary foreign workers may face serious human rights violations by having their passports retained by temporary worker agencies or companies. Many have had agency fees for recruitment, travel or housing deducted from their wages or have entered into debt. Some workers have been unable to leave their jobs because they must earn enough money to repay their debts. Temporary agency workers can also face financial difficulties when they are forced to vacate their dormitories quickly after being laid off.

104. Interns, too, may be vulnerable. In one Chinese electronics factory, some student workers were found to be without a copy of their contract. One of the interns interviewed was majoring in education, an obvious mismatch between his qualifications and the job, but was not given any other options for the internship. Another intern mentioned that her wages were retained by the school, which would only pay her after she had completed the internship, upon deduction of her tuition fees.

105. Companies generally invest less in training and skills development for temporary workers. This can have long-lasting detrimental effects on young workers, who miss out on developing the skills that they will need throughout their working lives. Temporary workers also often report that they receive inadequate training on occupational safety and health.

106. Non-standard employees in general have less coverage under collective bargaining. Those directly employed (part-time or fixed-term workers) are not as firmly associated with the employer, while agency workers are very often excluded from unions and it is difficult to identify a party to negotiate for them. The situation is especially difficult in countries where enterprise bargaining is predominant. However, there are also positive examples where collective agreements have been extended to cover temporary workers. These include bargaining outside workplaces, extending negotiated outcomes to non-negotiating parties and involving the user enterprises in the bargaining process.

49 ILO: *Fundamental principles and rights at work: From commitment to action*, op. cit.


52 Andrijasevic and Sacchetto (forthcoming), op. cit.

53 ELEVATE Global Limited, op. cit.

54 *The Economist*, op. cit.


107. Fixed-term work in the EU is regulated by Directive 1999/70/EC. Its purpose is to apply non-discrimination to fixed-term work and to prevent the abusive use of successive fixed-term contracts. (It does not apply to temporary agency work, which is regulated by Directive 2008/104/EC.) The directive on fixed-term work addresses key policy issues, including basic working conditions and pay. While equal treatment is part of the law in most Member States, it is not always fully implemented, particularly when it comes to preventing the abusive use of temporary contracts. In the Czech Republic, for example, temporary agency workers at one electronics plant received multiple short-term contracts and from different temporary worker agencies to avoid reaching the duration threshold for equal pay and basic working conditions. However, the directive allows agreements by trade unions and companies to deviate from the clause on equal treatment. For example, in the United Kingdom, temporary agency workers receive equal treatment after 12 weeks of employment. In Sweden, workers permanently employed by labour agencies do not have to be paid wages equal to regular workers during periods in between assignments. Payments in between assignments also do not have to be equal to the payment received at their last assignment.

108. A stakeholder meeting of the Electronics Industry Citizenship Coalition in 2010 made a number of recommendations concerning temporary agency work. They include:

1. developing a common industry framework to define when temporary work needs to become permanent;

2. reducing periods of excessive use of temporary workers (a maximum of 30 per cent of workers outside production peaks was suggested); and

3. increasing data transparency on the use of temporary workers.

109. Social dialogue contributes to the development of economic and social policies that take into account the interests of all parties, and can provide practical solutions. For example, in November 2012, the Volkswagen automotive group signed an agreement with their European and global works councils and IndustriALL Global Union to regulate temporary


59 Andrijasevic and Sacchetto (forthcoming), op. cit.

60 Holdcroft, 2012, op. cit.

61 The Electronics Industry Citizenship Coalition (EICC) is an industry organization with nearly 100 member companies; see http://www.eiccoalition.org/ [accessed 2 Aug. 2014].


63 ILO: Fundamental principles and rights at work: From commitment to action, op. cit.
work. The Charter on Temporary Work for the Volkswagen Group notes that temporary work is needed for flexibility, but limits the use of external personnel to 5 per cent in any Volkswagen plant. It stipulates equal pay for temporary workers and emphasizes temporary work as an opportunity for permanent employment.

110. In Baden-Württemberg, Germany, the employers’ and workers’ organizations for the metal and electrical industry negotiated a pilot agreement whereby, after 18 months, temporary agency workers must be considered for a permanent contract if there are no valid reasons why they must continue on a temporary contract. In addition, there is a separate sectoral collective agreement on temporary agency workers in the German electrical and metal industry. This agreement stipulates that agency workers’ incomes must be supplemented in order to reduce the wage differential between temporary and permanent workers. The supplementary payments increase the longer an agency worker remains at a company. In Belgium, a Collective Agreement on Temporary Work and Temporary Agency Work was concluded in 2013. It allows for the use of temporary agency workers for a maximum of six months to fill a particular vacant post; thereafter, employers may offer a permanent contract, but it is not mandatory. This is intended to prevent the abuse of temporary agency worker contracts being renewed continually over the long term.

64 The charter uses “temporary work” as a synonym for “temporary agency work”.

