## Smart mobile phones in Brazil: Industrial Policy and Labour Governance

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The Brazilian economy did not actively participate in the global supply chains (GSCs) as they were concerned with import substitution and with the creation of productive capacity in final goods. The low integration of the Brazilian economy into GSCs has been argued to be due to industrial protectionism, which has high import tariffs for the technology sector (Rorig et al., 2017). Further, the policies in Brazil seek to foster domestic industries that are entirely vertically integrated and that export final goods produced in country, and the importance of imports or import content, as an industrial strategy is not really recognised. This is surprising as Brazil has an intermediate degree of industrialization with relatively sophisticated and diversified industrial parks and their integration into supply chains might bring benefits to the country, although it should not be regarded as a panacea. Since 1990s, Brazilian industries, more specifically the electro-electronic and metal-mechanical ones, are to an extent integrated into GSCs, though there is still a lot of protectionism. It was observed that between 1995 and 2011 the domestic value added to exports declined from 92.2 per cent of total exports to 89.2 per cent, indicating that there is some extent of vertical integration in the supply chains. Similar trends could also be observed in other sectors like 'electronics and optical', where there is more foreign content (Rorig et al., 2017).

In addition, the legal framework in Brazil has improved since 2000s for the electronic industry, in terms of providing instruments of finance and support for the diffusion of this industry (Lima, 2012), and a number of industrial and technological sectoral polices (2003 to 2007) and the Productive Development Policy (2008 to 2010) were implemented. This has also led to the entry of multinationals into the Brazilian market. In this context, this paper looks at the 'smart mobile phone' segment wherein multinationals like Foxconn, Huawei, Samsung and other companies have made in-roads into the Brazilian market.

The paper focuses on three main questions. First, why Brazil did not engage in the GSCs and reap the benefits of integration as was observed in other emerging countries. What was the motivation for Brazil to engage with foreign companies in the case of 'smart mobile phones'? What were the terms of engagement or participation for these companies? What benefits and incentives did these firms enjoy? What was the local content of the smart mobile phones and what was the value added as a result of engaging in the GSCs? Second, did the entry of these firms in GSCs lead to creation of employment and to skill or technological upgrading for the workers or enterprises? Did it lead to improvement in the quality of employment (improved wages, social protection, better contracts)? What are the different practices and frameworks that are adopted by these different firms in ensuring work and income security to the workers? To what extent is this influenced by the nature of unions that the company engages with? Third, Brazil is said to have an efficient system of labour inspection as part of the GSCs. To what extent is it actually effective? Do the companies follow the core labour standards? What are the working conditions, including health and safety risks, working time, regulatory frameworks including social protection and codes of conduct in the workplace?

The analysis will be based on a structured quantitative and qualitative survey of 205 workers in four companies (Foxconn, Samsung, Flex and Cellcon), which was conducted between November 2017 and February 2018 in Sao Paulo region of Brazil. In addition, we also had extensive interviews with union leaders who were engaged in these companies to have a

better insight of the initial struggles that the unions had for representing the interests of the workers and being accepted as a union for the company to fighting for the rights of the workers.